

2008-2009 Catalog

Getting Started



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2008 -2009 Academic Calendar

This calendar is subject to change. Please see the Web site at www.hfcc.edu for future dates and calendar changes.

Spring 2008

May 6	Classes Begin
May 6	Late Registration/Schedule Adjustments
May 7	Last Day for Late Registration/Schedule Adjustments
May 7	Last Day for a 100% Refund
May 12	Last Day for a No-Record Drop
May 26	Memorial Day - College Closed
June 9	Last Day to Drop Full Term Classes
June 23	Classes End
June 25	Grades for Spring Due at 6 p.m. from Instructors

Summer 2008

June 24	Classes Begin
June 24	Late Registration/Schedule Adjustments
June 25	Last Day for Late Registration/Schedule Adjustments
June 25	Last Day for a 100% Refund
June 30	Last Day for a No-Record Drop
July 28	Last Day to Drop Full Term Classes
August 11	Classes End
August 13	Grades for Summer Due at 6 p.m. from Instructors

Fall 2008

August 21	Classes Begin
August 21	Late Registration/Schedule Adjustments
August 22	Late Registration/Schedule Adjustments
August 23	Late Registration/Schedule Adjustments
August 25	Late Registration/Schedule Adjustments
August 26	Late Registration/Schedule Adjustments
August 27	Last Day for Late Registration/Schedule Adjustments
August 27	Last Day for a 100% Refund
September 1	Labor Day – College Closed
September 3	Last Day for a No-Record Drop at the Registration Office
September 3	Last Day for a No-Record Drop by Web Advisor or Touch Tone Registration
September 3	Last day for a 50% Refund
September 15	12-week Classes Begin
October 15	Second 8-Week Classes Begin
November 6	Last Day to Drop Full Semester Classes
November 26	All Classes End Following Evening Session
November 27	Thanksgiving Holiday- College Closed
November 28	Thanksgiving Holiday- College Closed
November 29	Thanksgiving Holiday- College Closed
November 30	Thanksgiving Holiday- College Closed
December 1	All Classes Resume
December 8	Regular Class Meetings End Following Evening Session
December 9	Final Exams
December 10	Final Exams
December 11	Final Exams
December 12	Final Exams
December 13	Final Exams
December 15	Grades for Fall Due at 6 p.m. from Instructors
December 17	Grades are Available to Students by WebAdvisor or TREG 24 Hours After Submitted by Instructor

Winter 2009

November 3	Winter Open Registration Begins
January 5	College Re-opens
January 12	Classes Begin
January 12	Late Registration/Schedule Adjustments
January 13	Late Registration/Schedule Adjustments
January 14	Late Registration/Schedule Adjustments
January 15	Late Registration/Schedule Adjustments
January 16	Last Day for Late Registration/Schedule Adjustments
January 16	Last Day for 100% Refund
January 19	Martin Luther King Jr. Day- College Closed
January 23	Last Day for a 50% Refund
January 23	Last Day for a No-Record Drop by 4 p.m.
January 26	12-week Classes Begin
March 7	Regular Class Meetings End Following Evening Session
March 8	Spring Break – No Classes
March 9	Spring Break – No Classes
March 10	Spring Break – No Classes
March 11	Spring Break – No Classes
March 12	Spring Break – No Classes
March 13	Spring Break – No Classes
March 14	Spring Break – No Classes
March 15	Spring Break – No Classes
March 16	All Classes Resume
March 16	Second 8-Week Classes Begin
April 1	Last Day to Drop Full Semester Classes
May 4	Regular Class Meetings End Following Evening Session
May 5	Final Exams
May 6	Final Exams
May 7	Final Exams
May 8	Final Exams
May 9	Final Exams
May 9	Graduation
May 11	Grades for Winter Due at 6 p.m. from Instructors
May 13	Grades are Available to Students by WebAdvisor or TREG 24 Hours After Submitted by Instructor

This catalog in no way constitutes a contract. Information in this catalog is accurate as of December 1, 2007, and every care has been taken to ensure its accuracy; however, the College cannot be responsible for errors and reserves the right to change policies in effect at the time of publication. The catalog was compiled and edited by the offices of the Vice Presidents of Academic Affairs for Arts and Sciences, and Career and Technical Education; the Media Services Department; and the Enrollment Development Office.

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Applying for Admission

Henry Ford Community College welcomes applications from those holding high school diplomas, General Education Development (GED) certificates, and college credits or degrees. Students may enroll in one course, a series of courses, or a program leading to a certificate or degree. Whatever the goal, HFCC wants each student to have a successful experience.



Current High School Students

Students enrolled in high school may attend HFCC concurrently through the Dual Enrollment or Advancement Plus programs. The credit earned through these programs can be used by students to get a head start at HFCC, or the credits can be transferred to another college after high school graduation. For degree-seeking admission, apply anytime after the start of your senior year.



High School Graduates

Students who have graduated from high school or completed a home school program can be admitted to HFCC. HFCC admits thousands of students from high schools all over southeastern Michigan and beyond each year.

Transfer Students

Students who previously attended another college or university are considered transfer students. Students transfer to HFCC for the quality programs, affordability, convenience, and many other reasons.

Non-Degree Seeking Students

Students who want to take classes for their job, for personal interest or other reasons besides obtaining a degree or certificate may apply as non-degree students.

Guest Students

Students currently attending another college or university and who wish to take one or more courses may attend HFCC as a guest student. HFCC enrolls hundreds of guest students every year, primarily in the spring and summer semesters.

International Students

HFCC welcomes applications from international students. In Fall 2007, students from more than 50 countries were enrolled at HFCC.



How to Apply

Applying for admission as a degree- or certificate-seeking student and registering for classes is an easy six-step process.



Step 1 – Apply for Admission

The best way to apply for admission is on the Web at www.hfcc.edu/apply. The only exceptions are Dual Enrollment or Advancement Plus students, who must complete a paper application and obtain the appropriate signatures from high school personnel.

Paper applications can be obtained by calling the HFCC Welcome Center at **1-800-585-HFCC**, e-mailing enroll@hfcc.edu, or on the web at hfcc.edu/getting_started/prospective_students.

Students may need to submit transcripts and other official documents depending on their admission category. See page 242 for the complete admission policy and requirements.

ACT or SAT Test

ACT and SAT scores are not required for admission to Henry Ford Community College; however, these exam scores may be used for admission to specialized programs and the Henry Ford II Honors Program.

Step 2 – Course Placement

The student takes the ASSET or COMPASS test, which assesses writing, reading, and numerical skills.

Michigan Merit Scholarship recipients are not required to take HFCC placement exams. These students should present written proof of their award to the Assessment Center on the main level of the Learning Resources Center, LRC-117A.

Also, students who have taken the ACT and received a score of 21 or higher should contact the Assessment Center at **313-845-6399** to see if their scores exempt them from taking Course Placement to place into the Mathematics or English courses they wish to take.



Step 3 – Orientation

The student completes an online orientation at www.hfcc.edu/orient.

Step 4 – Meet with a Counselor

A counselor will help the student with course selection, career goals and other information for a successful start.

Step 5 – Register for Classes

The student registers for classes through WebAdvisor, or in person at the Admission, Registration and Records Office in the lower level of the Learning Resources Center.

Step 6 – Pay for Classes

There are a number of convenient options to help with paying tuition at HFCC, including cash, check, charge card or the EZPay Program. Visit www.hfcc.edu/fa for more information on how to pay for a high-quality HFCC education.

After these easy steps are completed, relax and wait for classes to begin!



Transferring HFCC Credits to Another College

Approximately half of HFCC graduates continue their education at other major institutions. Henry Ford Community College strives to make the transfer process seamless for students.



Articulation Agreements and Transfer Guides

The College has nearly 200 articulation agreements with 14 universities. Articulation agreements guarantee that students who follow the programs outlined in the agreements and complete their associate's degree will receive full credit when they transfer.

HFCC also maintains more than 400 transfer guides indicating equivalencies at 33 universities for individual courses.

The vast majority of HFCC graduates who transfer to four-year institutions say that HFCC prepared them well for their transfer. They also save thousands of tuition dollars by earning an associate's degree at HFCC first. That money can be used towards earning a bachelor's degree and beyond.

Easily transferable credits. More academic and career choices. Affordable tuition. No wonder HFCC ranks among the top community colleges for university transfer students in southeastern Michigan!

For more information, consult the articulation guides and transfer guides available in the University Transfer, Advising, and Career Counseling Center.

Accreditation

Accreditation ensures that credits from Henry Ford Community College will transfer to other accredited colleges and is an excellent measure of the high-quality education available at HFCC.

Henry Ford Community College is accredited by The Higher Learning Commission, a Commission of the North Central Association of Colleges and Schools, 30 North LaSalle St., Suite 2400, Chicago, IL 60602-2504. Phone: **1-312-263-0456**. Web Address: **www.ncahigherlearningcommission.org**. HFCC is also accredited by the Michigan Commission on College Accreditation.

Many individual academic programs at HFCC are accredited by their national associations and other governing bodies. You can see the complete list on page 231.



Transfer Credit Guarantee

Henry Ford Community College will refund the tuition of any HFCC graduate for any course passed at HFCC with at least a C grade* if that earned course credit does not transfer to a college or university within two years of having taken the course. Such classes must be listed as transferable on the transfer institution's official curriculum guide sheets on file in the University Transfer, Advising, and Career Counseling Center.

*A grade of C minus may not qualify. Also, developmental courses do not generally transfer.



MACRAO Transfer Agreement

The Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO) has established the MACRAO Transfer Agreement, which offers transferability of up to 30 semester credit hours to meet many (and in some cases all) of the General Education Requirements at participating Michigan four-year colleges and universities. Henry Ford Community College students may complete the MACRAO Transfer Agreement as part of an associate's degree or as a stand-alone package. In order to complete the MACRAO Transfer Agreement, HFCC students must take 30 semester credit hours of 100-level and above college coursework, in the following areas:

- 6 credit hours: English Composition (ENG 131 and ENG 132)
- 8 credit hours: Science and Mathematics (including at least one laboratory course)
- 8 credit hours: Social Science
- 8 credit hours: Humanities (courses other than English composition)

To qualify for the MACRAO Transfer Agreement, a minimum of 12 credit hours (of the 30 credit hours required) must be completed by the student at Henry Ford Community College.

A student who wishes to have the MACRAO designation on his/her academic transcript should complete a MACRAO application form in the Office of Admissions, Registration and Records at the time a request for the transcript is made. After the appropriate certification has been approved, the MACRAO endorsement will be placed on the applicant's transcript and mailed. A list of approved courses which satisfy the MACRAO Agreement can be obtained in the Office of Admission, Registration and Records.

Earning a Bachelor's Degree

One of the most important choices that community college students make is deciding whether to pursue additional education after completing their associate's degree or certificate program. Fortunately, HFCC offers students several excellent options.

Henry Ford Community College has a very high transferability rate of courses to four-year colleges and universities. The content and quality of HFCC courses are equivalent to four-year universities, so students can be confident that HFCC courses will "count."

It makes good financial sense to complete an associate's degree at HFCC and then transfer to a four-year university.

The tuition cost of completing 60 credit hours at HFCC is approximately \$6,900. Other colleges and universities in Michigan charge up to \$39,600. Students can use the money they save towards completing their bachelor's degree and beyond.

In addition, students can participate in one of the college's distance-learning partnerships with universities in Michigan and Ohio. These innovative collaborations offer both savings and convenience – students save thousands of dollars in tuition while earning a four-year degree on site at Henry Ford Community College (See page 8 for details).



HFCC and Franklin University

Graduates can opt to earn a bachelor's degree from Ohio-based Franklin University without leaving the HFCC campus. Degrees are available in one of 12 major areas:

- Accounting
- Applied Management
- Business Administration
- Computer Science
- Digital Communication
- Health Care Management
- Human Resources Management
- Information Technology
- Management
- Management Information Sciences
- Marketing
- Public Safety Management



Interested students should first complete their two-year, 60-credit associate's degree at HFCC, followed by approximately 24 credit hours of "bridge" courses on the HFCC campus. Students then complete their bachelor's degree by electing 40 semester credit hours of Franklin University's online "Capstone Courses".

Although online courses are taught by Franklin University professors, students have the benefit of HFCC's distance-learning resources such as computer assistance, counseling, academic support, and library facilities. Each student in the program is paired with a Student Services Associate at Franklin University who provides continuous support from admission to graduation.

Many students enjoy the flexible scheduling inherent in distance-learning programs. However, interested students are strongly recommended to choose the one-credit hour elective course "Orientation for the Distance Student" at the onset of the degree program to determine whether this form of learning is appropriate for them.

Students interested in HFCC's distance-learning programs will find admissions and other information for Franklin University on the Web site at www.alliance.franklin.edu.



Registering For Classes: Steps to Success

Registering for classes is easy and convenient. Below is a listing of the registration process for different categories of students at HFCC:

- New Degree-Seeking Students
- New Non-degree-Seeking Students
- Guest Students
- Returning Students (have registered before at HFCC)



New Degree-Seeking Students

Degree-seeking students are expected to enroll in a specific HFCC program of study. These students should follow these easy steps for admission and registration:

1 Complete an HFCC Admission Application

Students should fill out an admission application and return it to the Admissions, Registration and Records Office with a check or money order for \$30 and one of the following to be admitted:

- Current high school students are required to submit a high school transcript.
- High school graduates need to supply a copy of their high school diploma.
- GED holders need to provide a copy of their General Educational Development certificate (GED) and test scores.
- Transfer students should forward official copies of their college transcripts.
- International students must provide proof of graduation from a school equivalent to a U.S. high school.
- Non-U.S. citizens must provide proof of current visa status.

The best way to apply for admission is on the web at www.hfcc.edu/apply. Paper applications can be obtained by calling the HFCC Welcome Center at **1-800-585-HFCC** or e-mailing enroll@hfcc.edu.

Students will be notified by mail of their acceptance status.

Note: Health Careers and Nursing applicants must meet special requirements and follow special procedures. Call **313-845-6399** for details.

2 Participate in Course Placement

In order to help students make the best choices in selecting classes, all degree-seeking students are required to participate in Course Placement. Course Placement helps students and their counselor or faculty advisor assess their reading, writing, and math skills. Course Placement is free of charge. Students cannot fail Course Placement.

After the College receives the student's HFCC admission application, the student may participate in Course Placement at the Assessment Center, located on the first floor of the Learning Resources Center (LRC). Students choose from either an untimed computerized assessment or a timed, written multiple-choice test.

The sooner students complete Course Placement, the sooner they will be advised and allowed to enroll, giving them the best selection of classes and times. No appointment is necessary. Course Placement is available on a walk-in basis. Students should allow about two hours to complete the process. For more information about Course Placement, students should call the Assessment Office at **313-845-6399**.

Note: Michigan Merit Scholarship recipients are not required to participate in HFCC Course Placement.

3 Participate in Orientation

Orientation is the next step in the new student process. Students may view the orientation on-line in the Assessment Center. Orientation takes about one hour and no appointment is necessary. Orientation is also accessible on-line at www.hfcc.edu/orient.

4 Meet with a Counselor

A counselor in the University Transfer, Advising, and Career Counseling Center will help the student with course selection, career goals and other information for a successful start.

5 Register for Classes

The student registers for classes through WebAdvisor, TREG (telephone registration) **313-317-4100**, or in person at the Admission, Registration and Records Office in the lower level of the Learning Resources Center.

6 Payment of Tuition and Fees Information

Your last step! See page 10, for "Payment of Tuition and Fees" Information.

Payment of Tuition and Fees

The HFCC tuition and fee payment policy helps assure that all students have access to the college's educational opportunities.

To become eligible to register for a new term, you must pay your prior term balances in full. After selecting courses, your tuition and fees must be fully paid by Friday at 4:30 p.m. of the week you register.

HFCC offers easy, convenient payment methods. You may pay your balance by cash, check or credit card (MasterCard, Visa or Discover) at the Cashier's Office.

You can also mail your check to:

**Henry Ford Community College
Cashiers Office
5101 Evergreen Rd.
Dearborn, MI 48128**

The Cashier's Office is available Monday-Thursday, 8 a.m. - 6:30 p.m.; Friday, 8 a.m. - 4:30 p.m. The office is closed on Friday during the Summer semesters. If you have questions, call the Cashier's Office at **313-845-9641**.

Explore your payment options at: www.hfcc.edu/cashiers

For greater convenience, you can also pay on-line.

- Pay by credit card at the HFCC Web site using WebAdvisor at: my.hfcc.edu/webadvisor
- If your balance is \$600 or more (\$300 or more for Spring and Summer semesters), try the EZ-Pay installment plan. Enroll on the HFCC Web site at: www.hfcc.edu/cashiers or myhfcc.edu/webadvisor
- Make a payment directly from your checking or savings account using EZ-ACH at: www.hfcc.edu/cashiers

If you are sponsored by an employer, forward your company/corporate certificates and correspondence to the Cashier's Office as soon as possible. If you expect any delay in receiving your certificate, contact the Cashier's Office immediately.

If you are a Financial Aid student, you are not subject to the above policies. Submit your FISAP and follow through with the financial aid process. However, student account balances are immediately due in full if you become ineligible for aid, lose your aid or fail to accept sufficient aid. For more information, call Financial Aid at **313-845-9616**.



Non-Payment of Tuition and Fees

HFCC requires that students be prompt in paying all tuition and fees to remain in good standing.

If tuition and fees are not paid in accordance with the College's Fee Payment Policy, you may be subject to collection (with additional penalties, fees, and credit reporting). A delinquent student account balance will block all future term enrollments and access to your transcripts until the account is paid in full.

If your delinquent student account is due to a Return to Title IV Federal Financial Aid, you will be disqualified from additional Federal Financial Aid at HFCC and at other colleges and universities. To resolve such balances, contact the HFCC Cashier's Office immediately.

For more information about financial aid options at HFCC, please go to page 236.





New Non-degree-Seeking Students (Personal Interest)

Persons who wish to take credit courses for enrichment, personal development or to continue their education can be admitted as non-degree-seeking students.

Note: Financial aid is not available to non-degree-seeking students.

Non-degree-seeking students should follow these easy steps for admission and registration:

1 Apply for Admission

The best way to apply for admission is on the Web at www.hfcc.edu/apply. The only exceptions are Dual Enrollment or Advancement Plus students, who must complete a paper application and obtain the appropriate signatures from high school personnel.

Paper applications can be obtained by calling the HFCC Welcome Center at **1-800-585-HFCC**, or e-mailing enroll@hfcc.edu.

Note: A non-degree-seeking student must be a high school graduate or have a General Educational Development certificate (GED). To take classes, students must meet all course prerequisites listed in the HFCC catalog. Some classes may require placement testing. Graduates of foreign educational institutions must meet English language proficiency standards.

2 Register for Classes

After admission, students can register for classes. Please follow the Returning Student process listed on page 11.

3 Payment of Tuition and Fees

Your last step! See page 10, for “Payment of Tuition and Fees” information.

Previous balances must be paid in full before registering for a new term. After selecting courses, your tuition and fees must be fully paid by Friday at 4:30 p.m. of the week you register.

Guest Students

Guest students are those attending other colleges who wish to take courses at HFCC for transfer credit.

Note: Financial aid is not available to guest students.

Guest students should follow these easy steps for admission and registration:

1 Apply for Admission

Obtain a validated Michigan Uniform Guest Application from the Registrar’s Office at your resident college or university. Complete the application, obtain the appropriate signature and seal of your college, and submit it to the Admissions, Registration and Records Office at HFCC. Alternatively, guest students may follow the non-degree-seeking student admission process.

Note: Students attending out-of-state colleges should follow the non-degree-seeking student process.

2 Register for Classes

After the guest application has been processed, the student may register for classes. Please follow the Returning Student process.

3 Payment of Tuition and Fees

Your last step! See page 10, for “Payment of Tuition and Fees” information.

Previous balances must be paid in full before registering for a new term.

After selecting courses, your tuition and fees must be fully paid by Friday at 4:30 p.m. of the week you register.

Returning Students

Returning students should follow these easy steps to register:

1 Register for Classes

Register for classes on the WebAdvisor, www.hfcc.edu/currentstudents, by TREG (touch-tone telephone) at **313-317-4100** or in person through the first week of class.

Only former students who have enrolled in any semester since 1990 can register by touch-tone telephone registration or www.hfcc.edu. Students who attended classes before 1990 must register in person at the Admissions, Registration and Records Office.

2 Payment of Tuition and Fees

Your last step! See page 10, “Payment of Tuition and Fees” Information.

Previous balances must be paid in full before registering for a new term. After selecting courses, your tuition and fees must be fully paid by Friday at 4:30 p.m. of the week you register.



Schedule of Classes

Students should see the Schedule of Classes each semester for specific times and dates of registration. The schedule is on the Web at www.hfcc.edu/schedule or is available at the Welcome Centers.



Book Buy Back Procedure

Ready to sell back used textbooks? Looking to save money on new ones? The College Store helps students by providing an extensive selection of used books, sold at 75% of the new book price. Always in demand, this stock of used books is replenished with a Book Buy Back program that takes place each semester.

Book Buy Back is held the week of final exams during fall and winter semesters, and at specially announced times during the spring and summer terms. The College Store does not purchase books from students at any other time.

Course books being used at HFCC may be sold back for up to 50% of the current new book price. Even if certain textbooks are not in demand at HFCC, the book buyer may offer a price based on national demand.

Due to overstocks and edition/title changes, not all books can be bought back. Workbooks also are not eligible for the Book Buy Back program.

Buying Books

When it comes to selecting and purchasing textbooks, HFCC offers students plenty of convenient choices.

Students can buy their books in person or use College Store Online at www.hfcc.edu/collegestore.

Students can pay for textbooks with flexible options: VISA, MasterCard, Discover, financial aid, scholarships or company-sponsored vouchers. Students using financial aid, loans, or scholarships for College Store purchases must present a current student schedule or award letter and picture ID for each purchase. Visit collegestore.hfcc.edu for more information.

When it comes to selecting and purchasing textbooks, HFCC offers students plenty of convenient choices.



With College Store Online, students simply submit their order online and the College Store will have it ready for pick up. The College Store will also ship books to students for a fee.

Students can buy their books in person or use College Store On-line (www.hfcc.edu/collegestore), the convenient on-line textbook ordering service offered by the College Store.

Students can pay for textbooks with flexible options: VISA, MasterCard, Discover, financial aid, scholarships or company-sponsored vouchers. Students using financial aid, loans, or scholarships for College Store purchases must present a current student schedule or award letter and picture ID for each purchase. Visit collegestore.hfcc.edu for more information.

VISA

MASTERCARD

DISCOVER®





On-line Services at HFCC

HFCC has a wide variety of computer and on-line services to help students achieve their goals. Major services include:

- Novell Network
- MyHFCC WebAdvisor
- Wireless Access
- Computer Labs
- UCompass Educator

A description of each follows.

Novell Network

What is Novell? Why do I need it?

Novell is the main operating system for the HFCC campus computer network. To use any computer on campus or obtain wireless access, you must log into the Novell Network by entering your User ID and password.

What is my Novell Network User ID?

Your User ID is assigned the first time you enroll for classes. It allows you to access all student computer services at HFCC. To get your User ID go to www.hfcc.edu/webadvisor. Click "What's My User ID?" and follow the prompts to find your User ID.

What is my Novell Network password?

Your Novell password is the four-digit month and date of your birth, i.e., June 5 = 0605.

How do I change my Novell Network password?

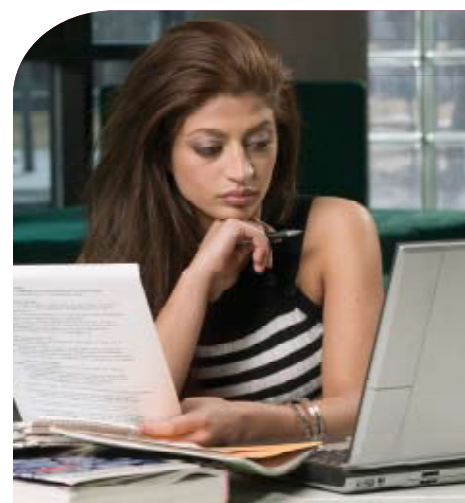
The Novell network, wireless, and UCompass use exactly the same account and password. When you change the Novell network password, the UCompass password changes as well. To change your Novell network and UCompass password via the Internet point your browser to <https://my.hfcc.edu>, click on "Change My Password"; sign in, and follow the instructions.

For more information on changing your Novell Network, wireless, and UCompass password, visit <https://my.hfcc.edu/passwords>. **Students are strongly encouraged to change their passwords and set their challenge phrases.**

Where do I go for help with the Novell Network?

For help with your Novell Network login or password, visit the Online Help Desk. From the HFCC Web site, www.hfcc.edu, click "For Current Students," then "Computer Help Desk" on the right-page menu.

If you wish to put in a trouble ticket, click the "TroubleTicket" button and complete the appropriate form.



WebAdvisor

What is MyHFCC WebAdvisor?

WebAdvisor is a secure, web-based tool that allows HFCC students to safely access their college-related information.

Why do I need MyHFCC WebAdvisor?

Current students use WebAdvisor to:

- Register for classes (returning students only; new degree-seeking students register in person)
- Drop and add classes (prior to the beginning of a semester)
- Pay for classes
- Retrieve grades
- View transcripts
- View and print class schedules
- Check financial aid status
- View account summary

How do I get to MyHFCC WebAdvisor?

From a Web browser, go to www.hfcc.edu/webadvisor and proceed to the student log-in screen.

What is my WebAdvisor ID?

You are assigned a unique WebAdvisor ID the first time you enroll for classes. It allows you to access all student computer services at HFCC. To find your WebAdvisor ID go to www.hfcc.edu/webadvisor. Click "What's my user ID?" You will be asked to provide your last name and either your social security number or your student number. After you submit this information, a screen will appear that gives your WebAdvisor User ID.

What is my WebAdvisor password?

Your password for all online and network tools is initially the four-digit month and date of your birth. For example, if your birthday is June 5 your password will be 0605.

When you enter this 4-digit number, you will immediately be asked to change your password to one of your choice. The password must contain both letters and numbers and must be a minimum of 6 characters and a maximum of 10. You will be asked to enter the password twice, for verification. You have the option of entering a password

hint as well. Use this new password only when you log into WebAdvisor. Your UCompass, wireless portal, and Network password will remain the same, the four-digit month and date of your birth.

In the event that you forget your password for WebAdvisor or want to change it for any reason, you can change it by clicking on "What's My Password?" on the WebAdvisor menu. You will be given three options: select "Reset My Password." Once you have provided your name and either social security number or student number, your new password will be sent to your e-mail address.

Registering for Classes Using MyHFCC WebAdvisor

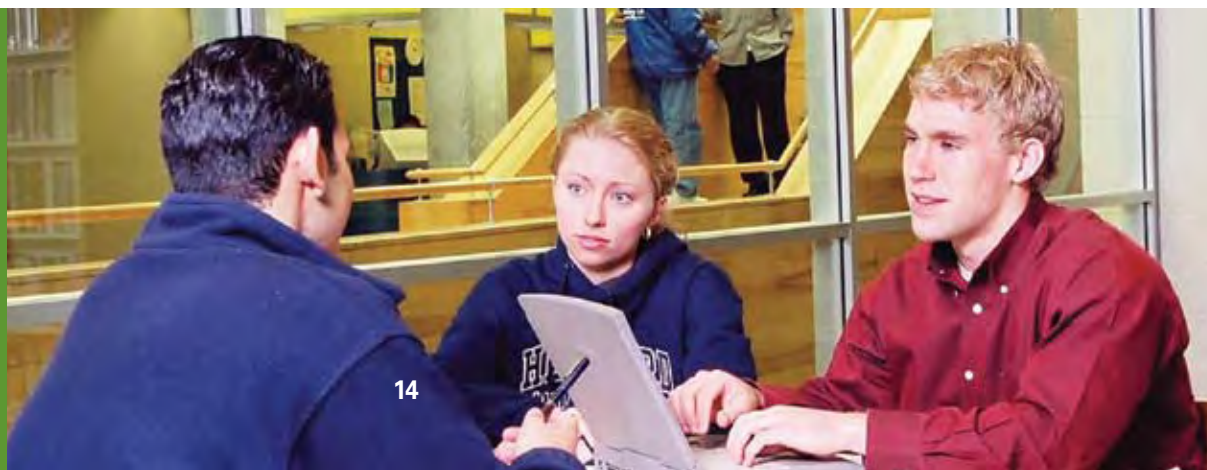
Before using WebAdvisor's registration feature, you should know exactly what sections and classes you intend to take. You can search for the schedule on WebAdvisor or use the Schedule of Classes.

When you are ready to register, click on Register for Classes. At the bottom of the page, click on Express Registration. Once the grid appears that allows you to enter your class selections, make entries only in the far left-hand column labeled "Synonym." The Synonym is the six-digit number that identifies the particular class section you wish to select. It tells the database which semester you wish to register for and the course and section of that course you have chosen. Do not fill in any additional information – just the synonym. Once you click on "Submit" at the bottom of the page and select the semester schedule you wish to see, your schedule for that semester will appear with your name and student number on it. This page can be printed for your record.

Please note: At certain times during each semester, the volume of traffic on WebAdvisor is substantial. This slows down the system. If you are experiencing delays in screens appearing or changing, please be patient. If you double click, thinking that the system is not responding, you are likely to be exited from the system and will have to start over again. As long as the figure at the top right-hand corner of the screen is revolving, the system is processing your request.

Where do I go for help with MyHFCC WebAdvisor?

For help with your WebAdvisor login or password, e-mail myhfcc@hfcc.edu.





UCompass Educator and Online Courses

What is the UCompass Educator Course Management System?

The UCompass Educator Course Management System is HFCC's online classroom system. Only students enrolled in online courses or courses that use UCompass Educator as a supplement to traditional classroom instruction use UCompass. Your UCompass account is available on the first day classes begin on campus. The web address to log into UCompass is <http://henryford.ucompass.com>.

What is my UCompass Educator ID?

Your UCompass ID is the same as your WebAdvisor ID.

What is my UCompass Educator password?

Your UCompass password is the four-digit month and date of your birth, i.e. June 5 = 0605.

How do I change my UCompass Educator Password?

The Novell network and UCompass use exactly the same account and password. When you change the Novell network password, the UCompass password changes as well. To change your Novell network and UCompass password, point your browser to <https://my.hfcc.edu>, click on the "Change My Password" link, sign in and follow the instructions.

For more information on changing your Novell Network, wireless, and UCompass password, visit <https://my.hfcc.edu/passwords>.

Where do I go for help with UCompass Educator?

For help with UCompass, contact the HFCC Office of Instructional Technology.

Phone: **313-845-9663, extension 4 or 5**. Students can also e-mail: support@henryford.ucompass.com. For password issues, e-mail helpdesk@hfcc.edu.

See the Online Learning section on page 248 for complete information about taking one or more of HFCC's high-quality on-line courses.

Wireless @HFCC

Henry Ford Community College now provides wireless access for all faculty, staff, and registered students. Currently, the wireless network is available in the Library, Student Center, Technical Buildings, Health Careers Education Center, Learning Technology Building, Liberal Arts Building, Science Building and the ASCC Building from 6 a.m. until 10 p.m. daily. This service provides Access to Web based resources only. Browser based e-mail is supported. Printing is not available on the wireless network.

Complete instructions on accessing the Wireless Network can be obtained at <https://dvc.hfcc.net/helpdesk/000171.htm>.



Computers are Available for HFCC Students on Campus

Location	Who Can Use	Days	Times	Contact	Notes
Eshleman Library Media Lab, level 2	All current HFCC students	Monday-Thursday	7:30 ^{AM} - 9 ^{PM}	313-845-6386	Software: Microsoft Office and other course- related software. Printing: 10¢ per page.
		Friday	7:30 ^{AM} - 4 ^{PM}		
		Saturday	8 ^{AM} - 5 ^{PM}		

Important information for Eshleman Library Media Center

The Media Center has more than 50 computers which can be used by enrolled students to complete assignments, type papers or access the Internet. Media Center staff can help students logon the first time and give limited

help thereafter, but users are expected to have a basic knowledge of computers, software and the Internet. To make computers available equally, time limitations are imposed. Students can also use Internet based services like UCompass and WebAdvisor in the computer lab.

Location	Who Can Use	Days	Times	Contact	Notes
Business and Economics Division Lab, LA-332	Current Business and Economics students	Lab availability varies each semester	See current schedule posted at LA-332	313-845-9645	
Computer Information Systems (CIS) Lab, T-194	Current CIS students	Lab availability varies each semester	See current schedule posted at T-194	313-845-9255	Lab hours subject to change.
Graphic Design Lab, F-160	Current Graphic Design students	Lab availability varies each semester	See current schedule posted at F-160	313-845-6476	
Music Technology Computer Lab, F-112	Current Music students	Lab availability varies each semester	See current schedule posted at F-112	313-845-6476	
Nursing Computer Lab, H-125	Current Nursing students	Fall /Winter terms only		313-845-6306	Lab is closed during Spring/Summer term.
		Monday	9 ^{AM} - 12 ^{NOON}		
		Tuesday-Thursday Friday	8 ^{AM} - 4 ^{PM} 8 ^{AM} - 2 ^{PM}		

Labs for Class Registration & Financial Aid use

Location	Who Can Use	Days	Times	Contact	Notes
Class Registration LRC lower-level Lobby of LRC-013	For students registering for classes only.	Monday-Thursday Friday	8:30 ^{AM} - 6 ^{PM} 8:30 ^{AM} - 4 ^{PM}	313-845-6403	This lab is for class registration only.
Financial Aid LRC lower-level LRC-030	New and current students for financial aid use only.	Monday-Thursday Friday	8:30 ^{AM} - 6 ^{PM} 8:30 ^{AM} - 4 ^{PM}	313-845-9616	This lab is to complete the online FAFSA and other financial aid documents only.



Degrees, Certificates & Continuing Education Units

Associate Degrees

Henry Ford Community College awards the following Associate Degrees:

- Associate in Applied Science
- Associate in Arts
- Associate in Business
- Associate in General Studies
- Associate in Science

To earn an Associate Degree, students must complete the General Requirements for an Associate Degree, General Education Requirements, and Specific Degree Requirements. These requirements are listed in the following sections.

In order to improve programs, HFCC may occasionally change the requirements for a degree. If degree requirements have changed, students may elect to

- graduate under the current program/degree requirements (year of graduation)
OR
- Graduate under previous program/degree requirements within three (3) years of any program/degree change.

General Requirements for an Associate Degree

- 1 Earn a minimum of 60 semester hours of credit with a 2.00 cumulative grade point average (GPA) or higher.
- 2 Complete General Education and Specific Degree Graduation Requirements outlined on the following pages.
- 3 Complete all required and elective courses for the program found in the Program of Study section of this catalog. (This information is available on myHFCC WebAdvisor under Program Evaluation.)
- 4 A maximum of six credit hours in developmental courses (numbered 099 or lower) may be used as elective credit. Developmental courses do not meet General Education, Specific Degree Requirements, or Program Requirements.
- 5 Complete a minimum of 20 semester hours of credit at HFCC. The balance of credit may be transferred in from other sources (usually accredited colleges). Students must work with the HFCC University Transfer, Advising, and Career Counseling Office and/or the Admissions, Registration and Records Office to establish an official record of transfer credit at the College.

- 6 A maximum of 40 semester hours of credit from any HFCC associate degree may be applied toward meeting the requirements of another degree. In other words, to earn a second associate degree at HFCC an additional 20 semester hours of credit must be earned or all second degree requirements must be met, whichever is greater. The same rule applies for all subsequent degrees.
- 7 A maximum of six semester hours of credit may be transferred after leaving HFCC to complete degree requirements. All degree requirements must be met. A minimum of 20 semester hours of credit must be earned at HFCC.
- 8 A student holding a bachelor's degree from a regionally accredited college or university will be given transfer credit equivalencies that meet the General Education Requirements for graduation.
- 9 All financial obligations to the College have been met.

General Education Requirements

All students receiving an Associate Degree are required to meet General Education Outcomes. Henry Ford Community College defines General Education as courses and/or learning experiences that enable students to attain the knowledge and skills needed by every college graduate. General Education establishes a foundation of skills and understandings to enable success in employment and further education. In line with its belief that General Education competence should be defined by the College to meet the needs of external communities in which its graduates must function, HFCC has collected and restated expectations identified by employers, alumni, and four-year colleges. The General Education Outcomes reflect those expectations. To receive an Associate Degree from the College, students must earn a passing grade in at least one of the courses (or pair of courses) listed for each General Education Outcome.

Students who enroll for the first time at HFCC in Fall 2005 or later are required to meet the General Education Outcomes listed below for graduation. Students first enrolled before Fall 2005 have the option of meeting the requirements listed below or those listed in Appendix D. However, all students applying to graduate after May 2008 must satisfy the General Education Outcomes listed below.

General Education Outcome #1

American Society, Events, Institutions and Cultures

Students will be able to demonstrate an understanding of American society, with emphasis on: major ideas and

events that have influenced American society, OR social and political institutions that shape American society, OR diverse populations and cultures that compose American society.

Courses Meeting General Education Outcome #1

ENG 235	American Literature Before 1900	3 Cr. Hours
ENG 236	American Autobiographies	3 Cr. Hours
CRJ 131	Intro to Criminal Justice/Law Enforcement	3 Cr. Hours
HIST 151	American History I	3 Cr. Hours
HIST 152	American History II	3 Cr. Hours
POLS 131	Intro to Amer Govt and Political Science	3 Cr. Hours
SOC 131	Intro to Sociology	3 Cr. Hours
SSC 131	Survey of Social Sciences	3 Cr. Hours

General Education Outcome #2

Computer Literacy

Students will be able to utilize a computer and its software to accomplish practical tasks, including word processing and Internet usage.

Courses Meeting General Education Outcome #2

ACT 112**	Computers in Architecture	1 Cr. Hour
AH 125 *	Survey of Computer Med Info Sys	3 Cr. Hours
ART 275	Advanced Projects (Graphic Design)	3 Cr. Hours
BCA 140	Microcomputer Apps for Business	3 Cr. Hours
CIS 100	Intro to Information Technology	3 Cr. Hours
CIS 221	Instructional Tech for Elem Educators	3 Cr. Hours
CIS 223	Instructional Tech for Sec Educators	3 Cr. Hours
HCS 131	Computers and Health Care	3 Cr. Hours
HIT 161*	Medical Information Processing	2 Cr. Hours
MFMT 103	Industrial Computer Orientation	2 Cr. Hours
TAFD 115	Computer Apps for Skilled Trades	2 Cr. Hours
CLT 100	Computer Literacy Test	0 Cr. Hours

Students who have already learned the required Computer Literacy competencies may meet the requirements by signing up for CLT 100 and passing the Computer Literacy Test. CLT 100 consists of only one class session when the Computer Literacy Test is given.

* Course is not offered after Winter 2006.

** Course is not offered after Winter 2008.

General Education Outcome #3

Critical Thinking

Demonstrate critical thinking and problem solving skills in addressing a problem or situation described verbally, graphically, symbolically or numerically.

Courses Meeting General Education Outcome #3

Any non-activity based course numbered 100 or higher will meet the requirements of General Education Outcome #3.

General Education Outcome #4 & #5

Information Literacy

Identify, locate, evaluate, and effectively use information to solve problems.

Written Communication

Demonstrate proficiency in reading and writing in Standard English at the College level.

Courses Meeting General Education Outcome #4 & #5

ENG 131	Introduction to College Writing	and	3 Cr. Hours
ENG 132	College Writing and Research		3 Cr. Hours
<i>OR</i>			
ENG 131	Introduction to College Writing	and	3 Cr. Hours
ENG 135	Business and Technical Writing	and Research	3 Cr. Hours

Important notes on courses that meet General Education requirements:

- 1 Courses required in the curriculum for particular programs may also fulfill General Education requirements. Students should carefully compare the course requirements for their program with General Education requirements to ensure that they enroll in the most efficient manner possible.
- 2 Particular programs may recommend that students take specific courses meeting General Education requirements for the purpose of transfer to other colleges and/or universities. Students should check the transfer requirements for the college and/or university they plan to attend to ensure they enroll for the appropriate required courses. See the HFCC University Transfer, Advising, and Career Counseling Center for information on transfer requirements.

Specific Degree Requirements

In addition to the General Requirements for an Associate Degree and the General Education Requirements, specific degree requirements must be met to achieve an Associate Degree offered by the College.

Associate in Arts Degree

Programs leading to the Associate in Arts degree are intended for students who plan to transfer to a four-year college or university to complete a bachelor's degree. The programs include:

- Art Foundation
- Ceramics
- Child Development
- Criminal Justice – Corrections/Probation and Parole
- Criminal Justice – Law Enforcement
- Graphic Design
- Interior Design

Liberal Arts
 Music
 Pre-Elementary Education
 Pre-Secondary Education
 Pre-Special Education
 Religious Studies
 Telecommunications
 Theatre

The requirements of the Associate in Arts degree include:

	<u>Credits</u>
1 General Education Requirements	9-12
2 Degree Specific Graduation Requirements	
<i>Wellness Group</i>	one course
COUN 114, HPE 140, HPE 142, HPE 153, HPE 260, HPEA 117, HPEA 217, HPEA 126, HPEA 155	
<i>Humanities Group</i>	8
Art, Dance, English (except ENG 131, 132, 135), Foreign Language, Journalism, Music, Philosophy, Science in Western Culture, Telecommunications, Speech, Theater, World Religion	
<i>Science and Mathematics Group</i>	8
Astronomy, Atmospheric Studies, Biology, Chemistry, Geology, Mathematics, Physical Science, Physics	
<i>Social Science Group</i>	8
Anthropology, Criminal Justice, Economics, Geography, History, Political Science, Psychology, Social Science, Sociology	
<i>NOTE: Courses that meet the General Education Requirement on American Society, Events, Institutions, and Cultures may also fulfill the Social Science Group Requirement.</i>	
3 Program Requirements and Electives	
<i>See specific program requirements.</i>	
Total Credits: 60 or more	

Associate in Science Degree

Programs leading to the Associate in Science degree are intended for students who plan to transfer to a four-year college or university to complete a bachelor's degree. The programs include:

Engineering
 Environmental Studies
 Pre-Pharmacy
 Pre-Professional Biology
 Pre-Professional Chemistry

The requirements of the Associate in Science degree include:

	<u>Credits</u>
1 General Education Requirements	9-12
2 Degree Specific Graduation Requirements	
<i>Humanities Group</i>	6
Art, Dance, English (except ENG 131, 132, 135), Foreign Language, Journalism, Music, Philosophy, Science in Western Culture, Telecommunications, Speech, Theater, World Religion	
<i>Science and Mathematics Group</i>	24
Astronomy, Atmospheric Studies, Biology, Chemistry, Geology, Physical Science, Physics, Mathematics (minimum 2 lab courses required)	
<i>Social Science Group</i>	6
Anthropology, Criminal Justice, Economics, Geography, History, Political Science, Psychology, Social Science, Sociology	
<i>NOTE: Courses that meet the General Education Requirement on American Society, Events, Institutions, and Cultures may also fulfill the Social Science Group Requirement.</i>	
Program Requirements and Electives	
<i>See specific program requirements.</i>	

Total Credits: 60 or more

Associate in Applied Science Degree

Programs leading to the Associate in Applied Science degree are intended to prepare students for specific occupational careers in a wide range of fields. The programs include:

Architecture/Construction Technology
 Automotive Service (ASSET)
 Automotive Service Management - Technical Concentration
 Automotive Technology
 Building Construction Trades
 CAD Technology - Industrial Drafting
 CNC (Computer Numerical Control)
 CNC (Computer Numerical Control)/Manufacturing
 Productivity Systems
 Computer Information Systems
 Computer Information Systems - Information Assurance
 Computer Information Systems - Network Administration
 Culinary Arts
 Electrical Technology
 Energy Technology - HVAC
 Energy Technology - Power/Building Engineer
 Firefighter/Paramedic
 Fitness Leadership
 Hotel/Restaurant Management
 Manufacturing Trades
 Medical Practice - Clinical Management
 Multi-Skilled Facility Maintenance Technician
 Nursing

Nursing - Advancement of LPNs to RNs
 Paramedic
 Physical Therapist Assistant
 Plant Maintenance Trades
 Radiographer
 Respiratory Therapist
 Surgical Technologist

Skilled Trade and Apprenticeship Education students who have completed their apprenticeship requirements may earn an Associate in Applied Science Degree in Plant Maintenance Trades or Manufacturing Trades upon satisfactory completion of the General College Requirements.

The requirements of the Associate in Applied Science degree include:

		<u>Credits</u>
1	General Education Requirements	9-12
2	Program Requirements and Electives <i>See specific program requirements.</i>	
Total Credits: 60 or more		

Associate in Business Degree

Programs leading to the Associate in Business degree are intended to prepare students for various occupational careers in business. The programs include:

Accounting
 Administrative and Information Management
 Automotive Service Management - Business Concentration
 Business Administration
 Business, General
 International Business
 Legal Assistant
 Management
 Medical Practice/Facility Business Management

The requirements of the Associate in Business degree include:

		<u>Credits</u>
1	General Education Requirements	9-12
2	Program Requirements and Electives <i>See specific program requirements.</i>	
Total Credits: 60 or more		

Associate in General Studies Degree

The Associate in General Studies degree provides students with the opportunity to explore a wide range of different courses from both academic and career programs.

The requirements of the Associate in General Studies degree include:

Credits

1 **General Education Requirements** 9-12

2 **Degree Specific Graduation Requirements**

Wellness Group one course

COUN 114, HPE 140, HPE 142, HPE 153, HPE 260, HPEA 117, HPEA 217, HPEA 126, HPEA 155

Humanities Group one course

Art, Dance, English (except ENG 131, 132, 135), Foreign Language, Journalism, Music, Philosophy, Science in Western Culture, Telecommunications, Speech, Theater, World Religion

Science and Mathematics Group one course

Astronomy, Atmospheric Studies, Biology, Chemistry, Geology, Physical Science, Physics, Mathematics

Career Education Group one course

Business and Economics, Health Careers, Nursing, Technology, Trade and Apprentice

3 **Electives**

Total Credits: 60 or more

Certificate Programs

Programs leading to a Certificate of Achievement are available. These programs are highly specialized and intended to provide skills that will increase students' opportunities for employment or promotion. There are three types of certificates: Basic, Complex, and Advanced.

Level 1 Basic Skills Certificate

The learning domain must be limited to a single technology or skill area, and the certification candidate should be able to

- accomplish basic tasks in the domain without assistance
- solve common problems within the domain
- assist in more advanced tasks
- describe the technical structure of the domain.

At HFCC, the following academic conditions apply to Level 1 Certificate:

- The certificate includes a maximum of 18 credit hours.
- Twenty-five percent of coursework may be transferred in with written approval of the appropriate Associate Dean.
- A cumulative GPA of 2.0 is required of all certificate coursework.

Level 2 Complex Skills Certificate

The learning domain must encompass either multiple technologies/skill areas or a complex single technology, and the certification candidate should be able to

- serve as a resource for others
- solve moderately complex problems without assistance
- perform advanced tasks within the domain.

At HFCC, the following academic conditions would apply to a Level 2 certificate:

- The certificate includes 12-48 credit hours.
- Twenty-five percent of coursework may be transferred in with written approval of the appropriate Associate Dean.
- A cumulative GPA of 2.0 is required of all certificate coursework.

Level 3 Advanced Skills Certificate

The learning domain must encompass multiple technologies or skill areas, and the certification candidate should be able to

- troubleshoot complex problems
- confidently traverse the scope of the domain, from the most basic material to complex issues involving interfaces outside the domain
- present “significant experience”
- complete a hands-on assessment/lab exam/project.

At HFCC, the following academic conditions would apply to a Level 3 certificate:

- Certificate candidate would be required to have a related Associate degree or higher, or a minimum of two years of recent, verifiable work.
- The certificate includes 5-30 credit hours.
- Twenty-five percent of coursework may be transferred in with written approval of the appropriate Associate Dean.
- A cumulative GPA of 2.0 is required of all certificate coursework.

Continuing Education Units

Continuing Education Units are awarded in recognition of completion of certain non-credit courses and programs. CEU credits do not apply to certificate or degree requirements. Information regarding CEU credits is available from the Center for Lifelong Learning.

Programs

- Accounting
- Administrative and Information Management
- Advanced Pathways
- Animation
- Architecture/Construction Technology
- Art Foundation
- Automotive Service (ASSET)
- Automotive Service Management – Business Concentration
- Automotive Service Management – Technical Concentration
- Automotive Technology
- Automotive Technology Certificate
- Automotive Technology – Auto Air Conditioning, Brakes, Alignment
- Automotive Technology – Auto Tune-Up
- Automotive Technology – Dynamometer Technician
- Biology – Pre-Professional
- Bookkeeping
- Building Construction Trades
- Business Administration
- CAD Technology – Industrial Drafting
- CAD Technology – Industrial Drafting - CATIA
- Ceramics
- Chemistry – Pre-Professional
- Child Development
- Child Development Certificate
- CNC (Computer Numerical Control)
- CNC (Computer Numerical Control)/Manufacturing Productivity Systems
- CNC (Computer Numerical Control)/Manufacturing Productivity Systems – Advanced
- CNC (Computer Numerical Control)/Manufacturing Productivity Systems – Basic
- Computer Information Systems
- Computer Information Systems – Application Developer
- Computer Information Systems – Information Assurance
- Computer Information Systems – Network Administration
- Computer Information Systems – Web Development
- Computer Networking Academy – CCNA
- Computer Networking Academy – CCNP
- Computer Networking Academy – Network Infrastructure Essentials
- Computer Software Applications
- Criminal Justice – Corrections/Probation and Parole
- Criminal Justice – Corrections/Probation and Parole
- Criminal Justice – Law Enforcement
- Culinary & Baking
- Culinary Arts
- Culinary Arts Supervision
- Culinary Skills
- Customer Service Professional
- Education Paraprofessional
- Electrical Technology
- Electrical Technology – Analog Electronics
- Electrical Technology – Automation Controls
- Electrical Technology – Basic Electronics
- Electrical Technology – Digital Electronics
- Energy Technology – Boiler License Review Basic
- Energy Technology – Heating and Cooling Advanced
- Energy Technology – Heating and Cooling Basic
- Energy Technology – HVAC
- Energy Technology – Plumbing - Pipefitting Advanced
- Energy Technology – Plumbing - Pipefitting Basic
- Energy Technology – Power Engineering High Pressure Boiler - 3rd Class Steam Refrigeration License Review Online
- Energy Technology – Power Engineering Low Pressure Boiler - Heating Plant Operator
- Energy Technology – Power Engineering Steam - Refrigeration (1st & 2nd Class) License Review Online
- Energy Technology – Power/Building Engineer Advanced
- Energy Technology – Power/Building Engineer
- Engineering
- Environmental Studies
- Firefighter/Paramedic
- Fitness Leadership
- Fitness Leadership Certificate
- General Business – No Concentration
- Graphic Design
- Hospitality Professional Management
- Hospitality Service Career
- Hotel/Restaurant Management
- Illustration
- Industrial Distribution – Business Concentration
- Industrial Distribution – Technical Concentration
- Interior Design
- International Business
- Legal Assistant
- Management
- Manufacturing Trades
- Medical Assistant
- Medical Insurance Specialist
- Medical Practice – Clinical Management
- Medical Practice/Facility Business Management
- Medical Receptionist
- Multi-Skilled Facility Maintenance Technician
- Multimedia Design
- Music
- Nursing
- Nursing – Advancement of LPNs to RNs
- Nursing Care Skills
- Office Administration
- Office Skills – Fundamentals
- Paramedic
- Pharmacy Technician
- Physical Therapist Assistant
- Plant Maintenance Trades
- Pre-Elementary Education
- Pre-Pharmacy
- Pre-Secondary Education
- Pre-Special Education
- Print Design
- Radiographer
- Religious Studies
- Renewable Energy
- Respiratory Therapist
- Small Business Management & Entrepreneurship
- Supervision
- Surgical Technologist
- Telecommunication
- Theatre
- Web Design
- Welding Technology – Advanced for Certification
- Welding Technology – Basic
- Welding Technology – GTAW/GMAW
- Welding Technology – Tool and Die

Areas of Study

- Anthropology
- Astronomy
- Dance
- Economics, Finance & Investing
- English
- Geography
- Geology
- History
- Liberal Arts
- Mathematics
- Philosophy
- Physics
- Political Science
- Psychology
- Science
- Sociology
- World Languages

Programs of Study

Accounting

Associate in Business - Business and Economics Division

William Harvey 313-845-9694 wharvey@hfcc.edu
 Charles Lacey 313-845-9657 clacey@hfcc.edu

ACCTG.AB...
 Reuther Liberal Arts Building 326
 Reuther Liberal Arts Building 319C

Description

The goal of Henry Ford Community College's associate degree in Accounting is to assist students in gaining the necessary knowledge and competencies to succeed in acquiring an entry-level accounting position and/or transferring to a four-year college or university to major in accounting. Students will learn accounting theory and practice and will gain an understanding of business operations.

Students may elect the Accounting degree as a foundation for the education requirements to sit for the Certified Public Accountant (CPA) exam.

Students who plan to transfer to another institution should consult the articulation agreements with and/or transfer guides for the transfer institution.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Lawrence Technological University
- Siena Heights University
- University of Detroit Mercy
- University of Michigan - Dearborn
- Walsh College
- Wayne State University

Minimum Number of Credits To Graduate (Including Options/Electives): 60

Courses	
Required Core Courses	Cr. Hours
BAC 131 - Principles of Accounting	4
BAC 132 - Principles of Accounting	4
<i>Complete one of the following courses:</i>	
BAC 141 - Computerized Accounting - QuickBooks	2
BAC 146 - Computerized Accounting - Peachtree	3

Complete 6 credit hours from the following courses:

BAC 231 - Asset Accounting	4
BAC 234 - Equity Accounting	4
BAC 235 - Tax Accounting	3
BAC 262 - Cost Accounting	3

Required Support Courses

Required Support Courses	Cr. Hours
BBA 131 - Introduction to Business	4
BCA 140 - Software Applications	3
BEC 151 - Principles of Macro Economics	3
BEC 152 - Principles of Micro Economics	3
BLW 253 - Business Law and the Legal Environment	4
MATH 115 - College Algebra or higher numbered MATH course*	5
SPC 131 - Fundamentals of Speaking	3

Note:

* The following courses may not be used to fulfill the requirement: MATH 121, MATH 221, and MATH 225.

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Business degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Recommended Course Sequence Option One

Term 1	Term 2	Term 3	Term 4
BAC 131	BAC 132	BAC 141	BAC 234
BBA 131	BEC 152	BAC 231	BLW 253
BCA 140	ENG 131	ENG 132	SPC 131
BEC 151	MATH 115	POLS 131	

Recommended Course Sequence Option Two

Term 1	Term 2	Term 3	Term 4
BAC 131	BAC 132	BAC 141	BAC 262
BBA 131	BEC 152	BAC 235	BLW 253
BCA 140	ENG 131	ENG 132	SPC 131
BEC 151	MATH 115	POLS 131	

Note:

Students may select either BAC 141 or BAC 146.

Administrative and Information Management

Associate in Business - Business and Economics Division

Diana Baran 313-317-1583 dboran@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

ADMIS.AB...
 Reuther Liberal Arts Building 330
 Reuther Liberal Arts Building 328

Description

Henry Ford Community College's associate degree in Administrative and Information Management (AIM) provides instruction, preparation, and guidance needed by administrative professionals in today's competitive work environment. The increased requirement of information, the expansion of computer technology, and the need for management support have transformed the office setting. The AIM program opens a career path for students interested in entering the administrative/management-support field and provides individuals already in the profession with the opportunity to upgrade their skills. This degree program requires a minimum of 60 or 62 credits and an exit typing speed of 40 words per minute.

Graduates of the AIM program will be prepared for career opportunities such as executive assistant, administrative assistant, office manager, office supervisor and administrative professional.

While working toward the AIM degree, students may choose to earn a Certificate in Computer Software Applications and/or a Certificate in Office Administration.

After earning 12 credits, students whose declared major is AIM are eligible to apply for the Frederick P. and Violet Sharpe Scholarship. Students should call the HFCC Foundation Office at 313-845-9620.

Career Opportunities

- Executive Assistant
- Administrative Assistant
- Office Manager
- Office Supervisor and Administrative Support among other job titles

Minimum Number of Credits To Graduate (Including Options Electives): 60

Courses

Required Core Courses	Cr. Hours
BBA 110 - Business Language Skills	3
BBA 131 - Introduction to Business	4
BBA 133 - Business Behavior and Communication	3
BBA 231 - Business Office Communications	3
BBA 235 - Office Administration Practicum	4
BCA 106 - Introduction to Windows	2
BCA 125 - Introduction to the Internet & Web Pages	3
BCA 140 - Software Applications	3
BCA 143 - Word Processing	3
BCA 145 - Spreadsheet	3
BCA 147 - Data Base Applications	3
BCA 152 - Presentation Software	2
MGT 230 - Principles of Management	3
MGT 231 - Supervision and Teambuilding	3
MGT 240 - Creative Problem Solving	3
<i>Complete one of the following courses:</i>	
BCO 191 - Business Cooperative Education	1
BCO 290 - Business Cooperative Education	2

Required Support Courses	Cr. Hours
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SPC 131 - Fundamentals of Speaking 3
Complete one of the following courses:
 BMA 110 - Business Mathematics 3
 MATH 115 - College Algebra or higher level - MATH course.* 5
Note:
 * The following courses do not meet the requirements for this program: MATH 121, MATH 221, and MATH 225.

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Business, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
 Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Term 1	Term 2	Term 3	Term 4
BBA 110	BBA 133	BBA 231	BBA 235
BBA 131	BCA 125	BCA 145	BCA 152
BCA 106	BCA 143	BCA 147	POLS 131
BCA 140	BMA 110	MGT 230	MGT 231
ENG 131	ENG 132		MGT 240

Programs of Study

Advanced Pathways

Certificate of Achievement - Skilled Trades and Apprenticeship Division
 Skilled Trades and Apprenticeship 313-845-6415

ADPATH.001.CTAE...
 Technology Building 115

Description	Courses		
<p>The Advanced Pathways in Educational Career Excellence certificate program is intended to develop the basic foundation skills necessary to pass employer-delivered selection tests and prepare students for employment in skilled trades.</p> <p>Satisfactory scores on Reading and Math Course Placement are required for entry into this program.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 20</p>	Required Core Courses		
			Cr. Hours
	TAMA 110 - Industrial Applications of Basic Math Principles		2
	TAFD 115 - Computer Applications for Skilled Trades		2
	TAFD 150 - Applied Technology		3
	TADV 100 - Basic Print Reading		2
	TAMA 120 - Industrial Applications of Algebraic Principles		3
	TAFD 120 - Industrial Safety Awareness		2
	TAEI 102 - DC and AC Electricity		3
	TAMN 100 - Shop Tools and Techniques		3
	Recommended Course Sequence		
	Term 1	Term 2	Term 3
	TAMA 110	TADV 100	TAEI 102
	TAFD 115	TAMA 120	TAMN 100
	TAFD 150	TAFD 120	
	<i>Note:</i>		
	The sequence of classes shown above has been set to allow students to successfully complete this series of classes in one year while working part or full-time. The order in which the courses are taken has a logical pattern, building skills as the courses progress. If a student chooses, extra courses may be taken in any semester to accelerate his or her progress through the program. When this is done, pre-requisites must be observed. It is recommended, however, that a student not enroll for more than 9 credit hours in a semester if he or she is working full-time.		

Animation

Certificate of Achievement - Fine Arts and Fitness Division

Kirk McLendon 313-845-6487 mclendon@hfcc.edu
 James Nelson 313-845-6316 jnelson@hfcc.edu

ANIMATE.CMULT...
 MacKenzie Fine Arts Center 149
 MacKenzie Fine Arts Center 128

Description	Courses		
<p>Animation is one of the five new Graphic Design Certificate Programs offered at HFCC. Earn an Animation Certificate by completing the 37 credit hours of core courses. Students may complete an additional 23 credit hours of General Education and Elective courses to earn an Associate in Arts degree. Classes are offered throughout the year during the day, evening and weekend.</p> <p>Animators are artists who create the magic of motion. With animation commonplace on television, movies, and the web, there is a demand for artists with the skill and know-how to produce creative animation. Computer and drawing skills are very important in this field.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 37</p>	Required Core Courses		
			Cr. Hours
	ART 101 - Two-Dimensional Design		3
	ART 102 - Drawing 1		3
	ART 107 - Photoshop		3
	ART 108 - Flash		3
	ART 112 - Drawing II		3
	ART 113 - Life Drawing I		3
	ART 115 - Intermediate Perspective		3
	ART 130 - History of Graphic Design		3
	ART 255 - Animation Basics		3
	ART 265 - Illustration		3
	ART 275 - Advanced Projects		3
	TCM 157 - Digital Video Editing		1
	<i>Complete one of the following courses:</i>		
	ART 208 - Lightwave		3
	ART 209 - Maya		3
	<i>Note:</i>		
	An additional 23 credit hours of General Education courses may be taken with any of the five Graphic Design certificates to obtain an Associate in Arts degree. Students may take either ART 208 or ART 209.		

Architecture/Construction Technology

Associate in Applied Science-Technology Division

Lee Yaros
David Wiltshire

313-317-1517
313-845-9637

lyaros@hfcc.edu
djwiltshire@hfcc.edu

ARCON.AAS...
Dearborn Heights Center 164A
Technology Building 115A

Description

The Associate in Applied Science degree program in Architecture/Construction Technology teaches architectural CAD/drafting and building construction methods and materials. This includes both residential and commercial building types.

Laboratory classes provide students with experience in the areas of residential and commercial construction materials, computer-aided drafting and design, cost estimating, construction methods, presentation techniques, residential construction practices, and use of surveying equipment.

Students learn the principles and skills of the architectural profession supported by an understanding of building construction through “hands-on” activities designed to provide students with a practical “skill-based” education.

Classes for the ACT Program are located at the Dearborn Heights Center.

Career Opportunities

- Architectural CAD Technician
- Building Construction Technician
- Materials Testing Lab Technician
- Facilities Management Technician
- Builder
- Building Code Inspector
- Architectural Illustrator
- Civil Engineer Tech
- Appraiser
- Structural Steel Detailer
- Construction Estimator
- Building Materials Sales Rep

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- Ferris State University
- Lawrence Technological University
- University of Detroit Mercy
- University of Michigan - Ann Arbor

Additional Program Requirements

Students seeking an ACT associate degree are required to participate in Co-op for at least one semester. This experience has proven to be invaluable as students “try on” the career they’ve chosen and earn while they learn. Pay rates generally are compatible with entry-level positions (Average 2007 rate = approx \$12.51/hour) and a high percentage of students are asked to continue their employment after their initial Co-op semester.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 66**

Courses

Required Core Courses	Cr. Hours
ACT 110 - Introduction to Architecture	3
ACT 116 - Basic Architectural CAD	4
ACT 124 - Construction Systems	4
ACT 130 - Architectural Graphics	3
ACT 136 - Intermediate Architectural CAD	4
ACT 150 - Residential Detailing	3
ACT 175 - Environmental Building Systems	4
ACT 211 - Commercial Construction Systems	3
ACT 220 - Residential Design	3

ACT 224 - Construction Systems 2	4
ACT 233 - Commercial Detailing	3
ACT 246 - Construction Estimating	4
ACT 258 - Architectural Presentation Techniques	4
ACT 260 - Commercial Design Development	3
<i>Complete one of the following courses:</i>	
ACT 190 - Architecture/Construction Technology Co-op	1
ACT 290 - Architecture/Construction Technology Co-op	2
<i>Complete one of the following courses:</i>	
ACT 104 - Community Construction Applications	4
ACT 205 - Advanced Architectural CAD	4

Required Support Courses

Required Support Courses	Cr. Hours
<i>Complete one of the following MATH courses:</i>	
MATH 103 - Technical Mathematics	4
MATH 112 - Trigonometry	3
MATH 115 - College Algebra	5

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Recommended Course Sequence Option One

Fall I	Winter I	Spring I	Fall II	Winter II
ACT 110	ACT 130	ACT 104	ACT 211	ACT 246
ACT 116	ACT 136	ACT 190	ACT 220	ACT 258
ACT 124	ACT 150		ACT 224	ACT 260
MATH 103	ACT 175		ACT 233	
	ENG 131		ENG 135	

Recommended Course Sequence Option Two

Fall I	Winter I	Fall II	Winter II	Spring II	Fall III	Winter III
ACT 110	ACT 130	ACT 136	ACT 211	ACT 104	ACT 246	ENG 135
ACT 116	ACT 175	ACT 150	ACT 220	ACT 190	ACT 258	
ACT 124	ACT 224	MATH 103	ACT 233	ENG 131	ACT 260	

Note: Students can view course availability at <http://www2.hfcc.edu/programs/architecture/courses.htm> for the standard day and evening schedule for ACT courses (subject to change).

ENG 132 is recommended for transferring students.

Students may select either ACT 104 or ACT 190.

Students may select either MATH 103, MATH 112 or MATH 115.

It is recommended students fulfill their American Society, Events, Institutions and Cultures course requirement Winter I Term for Course Sequence Option One or Winter II Term for Course Sequence Option Two.

Art Foundation

Associate in Arts - Fine Arts and Fitness Division

Kevin Donahue
James Nelson

313-317-6686
313-845-6316

kdonahue@hfcc.edu
jnelson@hfcc.edu

ARTFD.AA...
MacKenzie Fine Arts Center 150
MacKenzie Fine Arts Center 128

Description	Courses																						
<p>The Henry Ford Community College Art Department offers a variety of art courses as well as three programs of study: Art Foundation, Ceramics and Graphic Design. Refer to these headings to find course requirements for each. Course descriptions for all Art Department programs can be found under ART. For specific information on these degree programs and art courses, students should contact an Art faculty advisor. All students receiving an Associate in Arts degree from HFCC must participate in a graduating student Art Exhibition.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ART 101 - Two-Dimensional Design</td><td>3</td></tr> <tr><td>ART 102 - Drawing 1</td><td>3</td></tr> <tr><td>ART 105 - Three-Dimensional Design</td><td>3</td></tr> <tr><td>ART 112 - Drawing II</td><td>3</td></tr> <tr><td>ART 113 - Life Drawing I</td><td>3</td></tr> <tr><td>ART 116 - Painting I</td><td>3</td></tr> <tr><td>ART 121 - Art History Survey I</td><td>3</td></tr> <tr><td>ART 122 - Art History Survey II</td><td>3</td></tr> <tr><td>ART 141 - Ceramics I</td><td>3</td></tr> <tr><td><i>Complete 9 credit hours of ART electives.*</i></td><td>9</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	ART 101 - Two-Dimensional Design	3	ART 102 - Drawing 1	3	ART 105 - Three-Dimensional Design	3	ART 112 - Drawing II	3	ART 113 - Life Drawing I	3	ART 116 - Painting I	3	ART 121 - Art History Survey I	3	ART 122 - Art History Survey II	3	ART 141 - Ceramics I	3	<i>Complete 9 credit hours of ART electives.*</i>	9
Required Core Courses	Cr. Hours																						
ART 101 - Two-Dimensional Design	3																						
ART 102 - Drawing 1	3																						
ART 105 - Three-Dimensional Design	3																						
ART 112 - Drawing II	3																						
ART 113 - Life Drawing I	3																						
ART 116 - Painting I	3																						
ART 121 - Art History Survey I	3																						
ART 122 - Art History Survey II	3																						
ART 141 - Ceramics I	3																						
<i>Complete 9 credit hours of ART electives.*</i>	9																						

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Eastern Michigan University
- Lawrence Technological University
- University of Michigan – Dearborn

**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

*Complete 9 credit hours of ART electives.**

Note:

Art elective courses include: Art Education, Art History, Ceramics, Graphic Design, Interior Design, Jewelry, Painting, Photography, Printmaking, and Sculpture. Students should consult with their academic advisor to select the additional courses to supplement their program.

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses for the may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Automotive Service (ASSET)

Associate in Applied Science - Technology Division

Gary Heinz
David Wiltshire

313-845-6350
313-845-9637

gheinz@hfcc.edu
djwiltshire@hfcc.edu

ASSET.AAS...
Technology Building 162B
Technology Building 115A

Description

Automotive Service (ASSET) is an associate degree program to prepare individuals for service and repair positions in automobile dealerships and independent garages. The program consists of a well-balanced group of courses designed to provide students with the job competencies and skills required for entry-level employment. Students are required to complete 72 credit hours in core, cognate, and General Education courses. In addition, students are required to participate in cooperative education at local automobile repair facilities.

Career Opportunities

- Service Technician
- Service Manager

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Eastern Michigan University
- Ferris State University
- Lawrence Technological University
- Siena Heights University
- University of Michigan - Dearborn

Admission Requirements/Eligibility

The ASSET program is a two-year program. All new students enter with the next starting class, Fall 2008.

Accreditation

The automotive programs at HFCC are ASE certified training programs.

Minimum Number of Credits To Graduate (Including Options/Electives): 72

Courses

Required Core Courses	Cr. Hours
AUTO 100 - Internal Combustion Engines	3
AUTO 108 - Basic Automotive Electricity	3
AUTO 110 - Automotive Electrical Systems	3
AUTO 120 - Automotive Fuel Management Systems	2
AUTO 131 - Automotive Ignition Systems	2
AUTO 132 - Computer Ignition Systems	2
AUTO 140 - Automotive Transmissions	3

AUTO 142 - Electronically Controlled - Transmissions/Transaxles	2
AUTO 145 - Manual Transmissions and Transaxles	4
AUTO 150 - Automotive Diagnosis and Engine Evaluation	2
AUTO 160 - Automotive Chassis Units	2
AUTO 162 - ABS Brakes	3
AUTO 165 - Electronic Steering and Suspension	4
AUT 170 - Related Technical Automotive	4
AUTO 224 - Automotive Air Conditioning	2
AUTO 231 - Diesel Engine Performance and Diagnosis	4
AUTO 237 - Computerized Engine/Vehicle Emission Control Systems	2

Required Support Courses

Cr. Hours

AUSV 135 - Shop Mathematics	2
AUTO 191 - Automotive Service Co-op	2
AUTO 192 - Automotive Service Co-op	2
AUTO 291 - Automotive Service Co-op	2
AUTO 292 - Automotive Service Co-op	2
CIS 100 - Introduction to Information Technology	3
MGT 231 - Supervision and Teambuilding*	3

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Recommended Course Sequence

Fall I	Winter I	Spring/Summer I	Fall II	Winter II
AUSV 135	AUTO 100	AUTO 120	AUTO 140	AUTO 142
AUTO 108	AUTO 110	AUTO 132	AUTO 150	AUTO 145
AUTO 160	AUTO 131	AUTO 224	AUTO 165	AUTO 231
AUT 170	AUTO 162	POLS 131	AUTO 291	AUTO 237
AUTO 191	AUTO 192		ENG 131	AUTO 292
CIS 100				ENG 135

Note:

During the Fifth Semester (Winter II) students will be required to take a Business Management Course. This course will be determined by the ASSET program coordinator, Mr. Gary Heinz.

Automotive Service Management — Business Concentration

Associate in Business - Business and Economics Division

Corrine Asher
Elaine Saneske

313-845-9867
313-845-9704

casher@hfcc.edu
esaneske@hfcc.edu

AUTOSERVMGMT.AB...
Reuther Liberal Arts Building 319A
Reuther Liberal Arts Building 328

Description	Required Support Courses	Cr. Hours
<p>The Automotive Service Industry is a growing enterprise with many variations on the service business theme. These businesses require management personnel who possess both strong automotive service knowledge and strong business management skills. Skills and knowledge necessary for success include effective communication with customers, co-workers, and service technicians coupled with a strong understanding of the technologies used in modern automobiles.</p> <p>Graduates may find employment as service managers of automotive dealerships or as managers of aftermarket automotive repair and parts chain stores. Graduates will also have the practical and technical skills necessary to secure positions as an assistant service manager, service advisor, service writer, or service consultant.</p> <p>Students may elect, by the selection of specific courses, either the Associate in Applied Science degree or the Associate in Business degree. Students choose, when they begin the program, whether to start by taking the automotive classes or the business classes first. Students may take automotive and business classes simultaneously.</p>	AUTO 100 - Internal Combustion Engines	3
	AUTO 110 - Automotive Electrical Systems	3
	AUTO 120 - Automotive Fuel Management Systems	2
	AUT 130 - Automotive Ignition Systems	2
	AUTO 140 - Automotive Transmissions	3
	AUTO 150 - Automotive Diagnosis and Engine Evaluation	2
	AUTO 160 - Automotive Chassis Units	2
	AUT 170 - Related Technical Automotive	4
	AUTO 220 - Automotive Air Conditioning	2
	AUTO 230 - Automotive Diesel Principles	2
	AUTO 190 - Automotive Technology Co-op	1

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

Minimum Number of Credits To Graduate (Including Options/Electives): 65

Courses	
Required Core Courses	Cr. Hours
BBA 131 - Introduction to Business	4
BBA 133 - Business Behavior and Communication	3
BBA 153 - Customer Service	3
BCA 140 - Software Applications	3
BMA 110 - Business Mathematics	3
MGT 230 - Principles of Management	3
MGT 231 - Supervision and Teambuilding	3
MGT 240 - Creative Problem Solving	3
BCO 190 - Business Cooperative Education	1
<i>Complete one of the following courses:</i>	
BAC 110 - Practical Accounting	4
BAC 131 - Principles of Accounting	4

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Business, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Programs of Study

Automotive Service Management — Technical Concentration

Associate in Applied Science - Technology Division

Gary Heinz
David Wiltshire

313-845-6350
313-845-9816

gheinz@hfcc.edu
djwiltshire

AUTOSERVMGMT.AAS...
Technology Building 162B
Technology Building 115A

Programs of Study

Description

The Automotive Service Industry is a growing enterprise with many variations on the service business theme. These businesses require management personnel who possess both strong automotive service knowledge and strong business management skills. Skills and knowledge necessary for success include effective communication with customers, co-workers, and service technicians coupled with a strong understanding of the technologies used in modern automobiles.

Graduates may find employment as service managers of automotive dealerships or as managers of aftermarket automotive repair and parts chain stores. Graduates will also have the practical and technical skills necessary to secure positions as an assistant service manager, service advisor, service writer, or service consultant.

Students may elect, by the selection of specific courses, either the Associate in Applied Science degree or the Associate in Business degree. Students choose, when they begin the program, whether to start by taking the automotive classes or the business classes first. Students may take automotive and business classes simultaneously.

Minimum Number of Credits To Graduate (Including Options/Electives): 65

Courses

Required Core Courses	Cr. Hours
AUTO 100 - Internal Combustion Engines	3
AUTO 110 - Automotive Electrical Systems	3
AUTO 120 - Automotive Fuel Management Systems	2
AUT 130 - Automotive Ignition Systems	2
AUTO 140 - Automotive Transmissions	3
AUTO 150 - Automotive Diagnosis and Engine Evaluation	2
AUTO 160 - Automotive Chassis Units	2
AUT 170 - Related Technical Automotive	4
AUTO 220 - Automotive Air Conditioning	2
AUTO 230 - Automotive Diesel Principles	2
AUTO 260 - Alternative Automotive Propulsion Systems	3
AUTO 190 - Automotive Technology Co-op	1

Required Support Courses

Required Support Courses	Cr. Hours
BBA 131 - Introduction to Business	4
BBA 133 - Business Behavior and Communication	3
BBA 153 - Customer Service	3
BCA 140 - Software Applications	3
BMA 110 - Business Mathematics	3
MGT 230 - Principles of Management	3
MGT 231 - Supervision and Teambuilding	3
BCO 190 - Business Cooperative Education	1
<i>Complete one of the following courses:</i>	
BAC 110 - Practical Accounting	4
BAC 131 - Principles of Accounting	4

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Automotive Technology

Associate in Applied Science-Technology Division

Gary Heinz
David Wiltshire

313-845-6350
313-845-9637

gheinz@hfcc.edu
djwiltshire@hfcc.edu

AUTOT.AAS...
Technology Building 162B
Technology Building 115A

Description	Courses																																		
<p>The associate degree program in Automotive Technology includes in-depth material relating to the various systems found on today's vehicles, including electrical, fuel, ignition, power, and drivetrain. This program is designed to provide a thorough knowledge of the technical aspects of the automobile and to develop a certain amount of manual skill in servicing, testing, and diagnosing. The related courses provide a broad background qualifying the individual for employment in numerous fields allied to the automobile industry.</p> <p>Laboratory classes provide students with actual experience to strengthen their understanding of the theory learned in classroom study. The laboratories are equipped with some of the latest equipment being used to service modern automobiles. Included in laboratories are representative types of engines, chassis, transmissions, rear axles, and considerable testing equipment being used today.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • Product Test Technician • Dynamometer Technician • Service Technician • Diagnostic Technician • Service Manager • Parts Manager <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> • Davenport University • Eastern Michigan University • Lawrence Technological University • Siena Heights University • University of Michigan - Dearborn • Wayne State University <p>Accreditation</p> <p>The Associate in Applied Science Degree Program is accredited by National Institute for Automotive Service Excellence (ASE).</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. 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Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.</p> <p>Elective Courses</p> <p>Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).</p> <p>Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.</p>	Required Core Courses	Cr. 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**Minimum Number of Credits To Graduate
(Including Options/Electives): 68**

Automotive Technology

Certificate of Achievement - Technology Division

Gary Heinz
David Wiltshire

313-845-6355
313-845-9637

gheinz@hfcc.edu
djwiltshire@hfcc.edu

AUTOT.CERT...
Technology Building 162B
Technology Building 115A

Description

The certificate of achievement programs in Automotive Technology teaches the various systems found on today's vehicles, including electrical, fuel, ignition, power, and drive train. These programs are designed to be completed individually or applied to the associate degree in Automotive Technology. Because the Certificate of Achievement transfers into the two-year degree program, it is highly recommended that students complete certificate requirements prior to degree requirements. The related courses provide a broad background qualifying the individual for employment in numerous fields allied to the automobile industry.

Laboratory classes provide students with actual experience to strengthen their understanding of the theory learned in classroom study. The laboratories are equipped with some of the latest equipment being used to service modern automobiles. Included in laboratories are representative types of engines, chassis, transmissions, rear axles, and considerable testing equipment being used today.

Mini-Certificates of Achievement/Automotive Technology

Upon successful completion of the required courses, the student will, upon application, receive a Certificate of Achievement. These courses can be applied to the Associate in Applied Science degree in Automotive Technology. Because the Certificate of Achievement transfers into the two-year degree program, it is highly recommended that students complete certificate requirements prior to degree requirements.

Career Opportunities

- Product Test Technician
- Service Technician
- Dynamometer Technician
- Service Manager
- Parts Manager

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students

who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Eastern Michigan University
- Lawrence Technological University
- Siena Heights University
- University of Michigan - Dearborn
- Wayne State University

**Minimum Number of Credits To Graduate
(Including Options/Electives): 44**

Courses

Required Core Courses	Cr. Hours
AUTO 100 - Internal Combustion Engines	3
AUTO 110 - Automotive Electrical Systems	3
AUTO 120 - Automotive Fuel Management Systems	2
AUT 130 - Automotive Ignition Systems	2
AUTO 140 - Automotive Transmissions	3
AUTO 142 - Electronically Controlled - Transmissions/Transaxles	2
AUTO 150 - Automotive Diagnosis and Engine Evaluation	2
AUTO 160 - Automotive Chassis Units	2
AUTO 167 - Brake Clinic	2
AUT 170 - Related Technical Automotive	4
AUT 180 - Technical Automotive Welding	4
AUTO 187 - Automotive Engine Tune-Up	2
AUTO 210 - Automotive Engine Dynamometer	2
AUTO 217 - Automobile Alignment Clinic	2
AUTO 220 - Automotive Air Conditioning	2
AUTO 227 - Automotive Air Conditioning	2
AUTO 230 - Automotive Diesel Principles	2
AUTO 237 - Computerized Engine/Vehicle Emission Control Systems	2
AUTO 287 - Advanced Automotive Tune-Up	1

Automotive Technology — Auto Air Conditioning, Brakes, Alignment

Certificate of Achievement - Technology Division

Gary Heinz 313-845-6350 gheinz@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

AUTOACBRAL.CSGL...
 Technology Building 162B
 Technology Building 115A

Description	Courses	
Mini-Certificates of Achievement/Automotive Technology Upon successful completion of the required courses, the student will, upon application, receive a Certificate of Achievement. These courses can be applied to the Associate in Applied Science degree in Automotive Technology.	Required Core Courses	
		Cr. Hours
	AUTO 167 - Brake Clinic	2
	AUTO 217 - Automobile Alignment Clinic	2
	AUTO 227 - Automotive Air Conditioning	2

Accreditation

This program is an ASE certified training program.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 6**

Automotive Technology — Auto Tune-Up

Certificate of Achievement - Technology Division

Gary Heinz 313-845-6350 gheinz@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

AUTOTUNEU.CSGL...
 Technology Building 162B
 Technology Building 115A

Description	Courses	
Mini-Certificates of Achievement/Automotive Technology Upon successful completion of the required courses, the student will, upon application, receive a Certificate of Achievement. These courses can be applied to the Associate in Applied Science degree in Automotive Technology.	Required Core Courses	
		Cr. Hours
	AUTO 187 - Automotive Engine Tune-Up	2
	AUTO 287 - Advanced Automotive Tune-Up	1

Accreditation

This program is an ASE certified training program.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 3**

Automotive Technology — Dynamometer Technician

Certificate of Achievement - Technology Division

Gary Heinz
David Wiltshire

313-845-6350
313-845-9637

gheinz@hfcc.edu
djwiltshire@hfcc.edu

DYNATECH.CMLT...
Technology Building 162B
Technology Building 115A

Description

The certificate enables the student to achieve job entry level skills in those courses relating directly to the set-up, operation, and data acquisition system commonly employed in automotive chassis and engine dynamometers. Because the Certificate of Achievement transfers into the two-year degree program, it is highly recommended that students complete certificate requirements prior to degree requirements.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Lawrence Technological University
- Wayne State University

Mini-Certificates of Achievement/Automotive Technology

Upon successful completion of the required courses, the student will, upon application, receive a Certificate of Achievement. These courses can be applied to the Associate in Applied Science degree in Automotive Technology.

Accreditation

This program is an ASE certified training program.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 20**

Career Opportunities

- Engineering Technician
- Test Driver
- Dynamometer Technician
- Data Evaluation Specialist

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Courses

Required Core Courses	Cr. Hours
AUTO 100 - Internal Combustion Engines	3
AUTO 110 - Automotive Electrical Systems	3
AUTO 120 - Automotive Fuel Management Systems	2
AUT 130 - Automotive Ignition Systems	2
AUTO 150 - Automotive Diagnosis and Engine Evaluation	2
AUTO 187 - Automotive Engine Tune-Up	2
AUTO 210 - Automotive Engine Dynamometer	2
AUTO 230 - Automotive Diesel Principles	2
AUTO 237 - Computerized Engine/Vehicle Emission Control Systems	2

Biology — Pre-Professional

Associate in Science - Science Division

Linda Brandt
Dr. Charles Jacobs

313-545-9729
313-845-9734

lbrandt@hfcc.edu
cjacobs@hfcc.edu

BIOLG.AS...
Science Building 104G
Science Building 107

Description	Courses																																																		
<p>The Associate in Science degree in Pre-Professional Biology prepares students to transfer to a 4-year institution to complete a bachelor's degree in the life sciences. It was designed in collaboration with several university biology departments to ensure maximum transferability into the various programs they offer.</p> <p>Although the minimum requirement for completing the program is 60 credit hours, students may be able to take additional coursework at HFCC and transfer it to the 4-year institution.</p> <p>Career Opportunities This degree is designed for students who want to enter careers in areas such as:</p> <ul style="list-style-type: none"> • Human Health and Medicine • Genetic Counseling • Biotechnology and Genetic Engineering • Marine Biology • Natural Resources and Conservation • Veterinary Medicine • Secondary Education • Microbiology • Forensic Biology <p>Transfer Options/Requirements The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center).</p> <p>Admission Requirements/Eligibility The career opportunities supported by the Pre-Professional Biology program require strong math and science skills. Students planning to enter this area should take a rigorous high school background including four years of college prep math and science.</p> <p>The Pre-Professional Biology program, and the Bachelor of Science degrees to which it can lead, require the student to take numerous courses in sequence. Typically, students will take three or more math and science courses each semester in order to make sure that they stay on track to complete the degrees.</p> <p>Additional Program Requirements Students must consult with a Pre-Professional Biology advisor to plan an appropriate course of study for the area of biological sciences and the college or university to which they intend to transfer.</p> <p>Courses numbered below 100 will not count toward the minimum 60 hours required for graduation with an Associate in Science in Pre-Professional Biology.</p> <p>The minimum requirement for earning the Associate in Science degree in Pre-Professional Biology is 60 credit hours. However, most universities and colleges will accept additional coursework from HFCC and apply it toward BS degree requirements. We encourage students to take advantage of this and to complete as many courses as they can transfer at HFCC.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. 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Hours	BIO 150 - Biology: Organisms, Genes, and Ecology	4	BIO 152 - Biology: Cells and Molecular Biology	4	CHEM 141 - Principles of General and Inorganic Chemistry I	5	CHEM 142 - Principles of General and Inorganic Chemistry II	5	<i>Complete 10 credit hours from the following courses:</i>		BIO 130 - Evolution and Behavior	4	BIO 131 - Introductory Biology	4	BIO 138 - Environmental Science	3	BIO 141 - Botany	4	BIO 143 - Zoology	4	BIO 233 - Anatomy and Physiology I	4	BIO 234 - Anatomy and Physiology II	4	BIO 251 - Microbiology	5	CHEM 241 - Organic Chemistry I	4	CHEM 242 - Organic Chemistry II	4	CHEM 243 - Organic Chemistry Laboratory I	2	CHEM 244 - Organic Chemistry Laboratory II	2	MATH 153 - Calculus for Business, Life and Social Science	5	MATH 175 - Precalculus OR	5	MATH 180 - Calculus I OR	5	PHYS 131 - Liberal Arts Physics	4	PHYS 132 - Liberal Arts Physics (Continued)	4	Required Support Courses	Cr. Hours	ENG 132 - College Writing and Research	3
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**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

Bookkeeping

Certificate of Achievement - Business and Economics Division

Charles Lacey 313-845-9657 clacey@hfcc.edu
 Elaine Saneske 313-845-9645 esaneske@hfcc.edu

BOOK.CMULT...
 Reuther Liberal Arts Building 319C
 Reuther Liberal Arts Building 328

Description	Courses																								
<p>Henry Ford Community College's Bookkeeping certificate is designed to prepare a student to work as a bookkeeper in a small- to medium-sized business. Students are trained to use a double-entry accounting system to perform basic accounting functions such as journalizing and posting business transactions; preparing adjusting entries, a ten-column worksheet, and basic financial statements; journalizing and posting adjusting entries, and posting the closing trial balance. Students are trained in computerized accounting software (QuickBooks or Peachtree) and in the Microsoft Office Suite, with advanced training in Microsoft Excel (spreadsheet software). Courses in business math applications, written business communication, and business office protocol are also part of the program.</p> <p>This certificate program prepares students to take a series of exams administered by the American Institute of Professional Bookkeepers (AIPB) to become an AIPB Certified Bookkeeper. Students desiring this designation must make arrangements with the AIPB to take the exams.</p>	<p>Required Core Courses</p> <table border="1"> <thead> <tr> <th></th> <th style="text-align: right;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>BAC 110 - Practical Accounting</td><td style="text-align: right;">4</td></tr> <tr><td>BAC 112 - Bookkeeping</td><td style="text-align: right;">4</td></tr> <tr><td>BBA 133 - Business Behavior and Communication</td><td style="text-align: right;">3</td></tr> <tr><td>BBA 110 - Business Language Skills</td><td style="text-align: right;">3</td></tr> <tr><td>BBA 231 - Business Office Communications</td><td style="text-align: right;">3</td></tr> <tr><td>BCA 140 - Software Applications</td><td style="text-align: right;">3</td></tr> <tr><td>BCA 145 - Spreadsheet Applications</td><td style="text-align: right;">3</td></tr> <tr><td>BMA 110 - Business Mathematics</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2"><i>Complete one of the following courses:</i></td></tr> <tr><td>BAC 141 - Computerized Accounting Applications-QuickBooks</td><td style="text-align: right;">2</td></tr> <tr><td>BAC 146 - Computerized Accounting Applications-Peachtree</td><td style="text-align: right;">3</td></tr> </tbody> </table> <p><i>Note:</i> Students may take either BAC 141 or BAC 146.</p>		Cr. Hours	BAC 110 - Practical Accounting	4	BAC 112 - Bookkeeping	4	BBA 133 - Business Behavior and Communication	3	BBA 110 - Business Language Skills	3	BBA 231 - Business Office Communications	3	BCA 140 - Software Applications	3	BCA 145 - Spreadsheet Applications	3	BMA 110 - Business Mathematics	3	<i>Complete one of the following courses:</i>		BAC 141 - Computerized Accounting Applications-QuickBooks	2	BAC 146 - Computerized Accounting Applications-Peachtree	3
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BCA 140	BBA 110	BBA 133																							
BMA 110	BCA 145	BBA 231																							

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 28**

Programs of Study

Building Construction Trades

Associate in Applied Science - Skilled Trades and Apprenticeship Division
 Skilled Trades and Apprenticeship 313-845-6415

BLDCT.AAS...
 Technology Building 115

Description

The Associate in Applied Science degree in Building Construction Trades is a specifically designed program for building and construction trades journeypersons who have completed a formal apprenticeship program registered with the Bureau of Apprenticeship and Training, U.S. Department of Labor or a bona-fide program recognized by HFCC. Formal classroom-related instruction associated with the sponsored apprenticeship program will be evaluated and up to 20 hours of college credit may be granted for equivalent courses available through the College. Students seeking the degree must then complete an additional 40 credits and meet the General Education and Computer Literacy requirements of the College.

Career Opportunities

- Foreman
- Project Engineer
- Superintendent
- Estimator

Admission Requirements/Eligibility

Currently only the carpenters', electricians', operating engineers', iron workers', plumbers', and sheet metal workers' apprenticeship school curricula have been evaluated and approved.

Additional Program Requirements

Evidence of successful completion of the apprenticeship program and documentation of the related instruction, including individual course title, course descriptions, number of contact hours earned for each course, dates of completion for each course, and grade earned (if applicable) must be presented. Approval by a designee of the Skilled Trades and Apprenticeship Division is required.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 60**

Courses

Required Core Courses	Cr. Hours
Complete 50 credit hours of Core Courses.*	50
<i>Note:</i>	
* Coursework is selected by the student based on his or her personal or career goals and the result of academic assessment tests, transcript evaluations, and career planning sessions. It is also suggested that students seek the recommendation of a sponsoring Trade Council.	
Required Support Courses	Cr. Hours
COUN 120 - Career Exploration	1

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Business Administration

Associate in Business - Business and Economics Division

Jared Boyd 313-845-9697 jboyd@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

BUSAD.AB...
 Reuther Liberal Arts Building 304
 Reuther Liberal Arts Building 328

Programs of Study

Description

Henry Ford Community College's associate degree in Business Administration provides students with fundamental knowledge in business studies. This program is designed to afford students with the ability to transfer to specific four-year bachelor degree programs with the maximum number of credits possible. The core courses in the Business Administration Program consist of courses that are often required by four-year institutions to enter their business programs.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Northwood University
- University of Detroit Mercy
- University of Michigan - Dearborn
- Walsh College
- Wayne State University

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 60**

Courses

Required Core Courses	Cr. Hours
BAC 131 - Principles of Accounting	4
BAC 132 - Principles of Accounting	4
BCA 140 - Software Applications	3
BEC 151 - Principles of Macro Economics	3
BEC 152 - Principles of Micro Economics	3
BLW 253 - Business Law and the Legal Environment	4

Required Support Courses	Cr. Hours
SPC 131 - Fundamentals of Speaking	3
MATH 115 - College Algebra or higher level MATH course.	3-5

Note:
 The following courses do not meet the requirements for this program: MATH 121, MATH 221, and MATH 225.

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Business, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

CAD Technology — Industrial Drafting

Associate in Applied Science - Technology Division

Gerald Klein
David Wiltshire

313-845-6424
313-845-9637

gklein@hfcc.edu
djwiltshire@hfcc.edu

DFCAD.AAS...
Technology Building 180A
Technology Building 115A

Description

Our drafting program is designed and equipped to offer you experience in the latest CAD programs and their applications. Manual drafting is taught in the intro class to give you a solid background in the basics of drafting standards and projection. Those basic skills are then applied in CAD design, detailing, and problem solving in the advanced courses. The curriculum gives you experience in a wide variety of drafting specialties including: layout and detailing in product design, machine element drafting, fixture design, and die design. Courses in advanced CAD techniques will help you achieve a high degree of proficiency in the use of the latest design software.

Career Opportunities

“Opportunities should be best for individuals with at least 2 years of postsecondary training in drafting and considerable skill and experience using computer-aided design and drafting (CADD) systems. The middle 50 percent (of mechanical drafters) earned between \$32,100 and \$51,950”. (Bureau of Labor Statistics)

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor’s degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Central Michigan University
- Davenport University
- Eastern Michigan University
- Ferris State University
- Lawrence Technological University
- Siena Heights University
- University of Michigan - Dearborn
- Wayne State University

Minimum Number of Credits To Graduate (Including Options/Electives): 60

Courses	
Required Core Courses	Cr. Hours
DRAF 110 - Introduction to Industrial Drafting	3
DRAF 120 - Introduction to CAD	4
DRAF 130 - Technical Descriptive Geometry	3
DRAF 142 - Industrial Detailing	4
DRAF 210 - Die Design	3
DRAF 220 - Machine Element Drafting	2
DRAF 230 - Jigs, Fixtures, Tools	3

DRAF 240 - Product Drawing	2
DRAF 255 - CAD Advanced Techniques	4
DRAF 260 - Advanced CAD Applications Solid Modeling	4

Required Support Courses	Cr. Hours
MPS 100 - Manufacturing Processes I	6
<i>Complete one of the following MATH Options:</i>	
MATH 100 - Basic Technical Mathematics AND	4
MATH 103 - Technical Mathematics	4
OR	
MATH 110 - Intermediate Algebra AND	4
MATH 112 - Trigonometry	3
OR	
MATH 175 - Precalculus	5
OR	
MATH 180 - Calculus I	5
<i>Complete one of the following courses:</i>	
PHYS 120 - Technical Physics	4
PHYS 131 - Liberal Arts Physics	4

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

DRAF 123 - Introduction to CATIA V5	2
DRAF 125 - CATIA V5 Level II	2
DRAF 127 - CATIA V5 Level III	2
CIS 100 - Introduction to Information Technology	3
ELEC 103 - Basic Electricity	4
ELEC 120 - Basic Hydraulics	3
ICO 191 - Industrial Co-op	2

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Term 1	Term 2
DRAF 110	DRAF 130
DRAF 120	DRAF 142

CAD Technology — Industrial Drafting – CATIA

Certificate of Achievement - Technology Division

Gerald Klein 313-845-6424 gklein@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

CATIA.CSGL...
 Technology Building 180A
 Technology Building 115A

Description	Courses								
The use of CATIA V5 is increasing in the automotive and supplier industry. The certificate classes enable designers, engineers, and students with previous CAD background to become knowledgeable and proficient in this powerful and versatile software. The classes will take you through some of the most commonly used Work Benches: Sketcher, Part, Drafting, Assembly, and Generative Shape Design (surfacing).	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>DRAF 123 - Introduction to CATIA V5</td> <td>2</td> </tr> <tr> <td>DRAF 125 - CATIA V5 Level II</td> <td>2</td> </tr> <tr> <td>DRAF 127 - CATIA V5 Level III</td> <td>2</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	DRAF 123 - Introduction to CATIA V5	2	DRAF 125 - CATIA V5 Level II	2	DRAF 127 - CATIA V5 Level III	2
	Required Core Courses	Cr. Hours							
	DRAF 123 - Introduction to CATIA V5	2							
	DRAF 125 - CATIA V5 Level II	2							
DRAF 127 - CATIA V5 Level III	2								

Career Opportunities

“By improving their skills on CATIA V5, students will become proficient in the same 3D application that has designed almost 50 percent of the cars on the road today and practically every large aircraft that has been designed in the last 10 years.” (from www.engineering.com)

Admission Requirements/Eligibility

The student must have completed one of the following: DRAF 120, equivalent CAD class, CAD work experience, or have permission of instructor.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 6**

Programs of Study

Ceramics

Associate in Arts - Fine Arts and Fitness Division

Steven Glazer
James Nelson

313-845-6485
313-845-6316

sglazer@hfcc.edu
jnelson@hfcc.edu

CERAM.AA...
MacKenzie Fine Arts Center 147
MacKenzie Fine Arts Center 128

Description	Courses																										
<p>The Ceramics program offers a wide selection of courses both for the first-time potter and the art student interested in the career potential of a studio potter.</p> <p>The introductory courses, ART 141-Ceramics I and ART 142-Ceramics II, concentrate on the hand-building and wheel-construction methods, while the advanced courses offer more specialized studies in glaze making, ceramic sculpture, kiln firing, and even kiln construction. In advanced courses the student explores the design and production techniques necessary to be a successful studio potter.</p> <p>The Associate in Arts degree in Ceramics is designed to prepare the student in the techniques and aesthetics needed to be self employed in a successful home pottery studio.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 60</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ART 101 - Two-Dimensional Design</td><td>3</td></tr> <tr><td>ART 102 - Drawing 1</td><td>3</td></tr> <tr><td>ART 105 - Three-Dimensional Design</td><td>3</td></tr> <tr><td>ART 112 - Drawing II</td><td>3</td></tr> <tr><td>ART 116 - Painting I</td><td>3</td></tr> <tr><td>ART 141 - Ceramics I</td><td>3</td></tr> <tr><td>ART 142 - Ceramics II</td><td>3</td></tr> <tr><td>ART 161 - Photography 1</td><td>3</td></tr> <tr><td>ART 242 - Ceramics III</td><td>3</td></tr> <tr><td><i>Complete 5 additional credit hours of ART courses.</i></td><td>5</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Support Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>BBA 131 - Introduction to Business</td><td>4</td></tr> </tbody> </table> <p>Associate in Arts Degree Requirements</p> <p>Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.</p> <p>General Education</p> <p>Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.</p> <p>Elective Courses</p> <p>Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).</p> <p>Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.</p>	Required Core Courses	Cr. Hours	ART 101 - Two-Dimensional Design	3	ART 102 - Drawing 1	3	ART 105 - Three-Dimensional Design	3	ART 112 - Drawing II	3	ART 116 - Painting I	3	ART 141 - Ceramics I	3	ART 142 - Ceramics II	3	ART 161 - Photography 1	3	ART 242 - Ceramics III	3	<i>Complete 5 additional credit hours of ART courses.</i>	5	Required Support Courses	Cr. Hours	BBA 131 - Introduction to Business	4
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Chemistry — Pre-Professional

Associate in Science - Science Division

Dr. Laura Yeakel
Dr. Charles Jacobs

313-845-9721
313-845-9734

lyeakel@hfcc.edu
cjacobs@hfcc.edu

CHEMS.AS...
Science Building 14
Science Building 107

Description

The Associate in Science degree in Pre-Professional Chemistry is designed as a transfer degree for students interested in pursuing an American Chemical Society approved chemistry major at a 4-year school. It was designed in collaboration with several university chemistry departments to ensure maximum transferability into the various programs they offer.

Although the minimum requirement for completing the program is 60 credit hours, students may be able to take additional coursework at HFCC and transfer it to the 4-year institution.

Career Opportunities

A degree in chemistry has been a route for students to enter satisfying careers in areas including (but not limited to):

- Professional Chemistry
- Pharmacy and Pharmaceuticals
- Environmental Science and Management
- Education
- Human Health and Medicine
- Materials Science
- Veterinary Medicine
- Forensic Science

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center).

Admission Requirements/Eligibility

The career opportunities supported by the Pre-Professional Chemistry program require strong math and science skills. Students planning to enter this area should take a rigorous high school background including four years of college prep math and science.

The Pre-Professional Chemistry program, and the Bachelor's of Science degrees to which it can lead, require that students take numerous courses in sequence. Typically, students will take several math and science courses each semester in order to make sure that they stay on track to complete the degrees.

Additional Program Requirements

Students must consult with a Pre-Professional Chemistry advisor to plan an appropriate course of study for the college or university to which they intend to transfer.

No courses numbered below 100 will count toward the minimum 60 hours required for the Associate in Science degree in Pre-Professional Chemistry.

The minimum required for earning the Associate in Science degree in Pre-Professional Chemistry is 60 credit hours. However, most universities and colleges will accept additional coursework from HFCC transfer students and apply it towards their Bachelor of Science degree requirements. We encourage students to take advantage of this and to complete as many courses as they can transfer at HFCC.

Minimum Number of Credits To Graduate (Including Options/Electives): 60

Courses

Required Core Courses

Required Core Courses	Cr. Hours
CHEM 141 - Principles of General and Inorganic Chemistry I	5
CHEM 142 - Principles of General and Inorganic Chemistry II	5
CHEM 241 - Organic Chemistry I	4
CHEM 242 - Organic Chemistry II	4
CHEM 243 - Organic Chemistry Laboratory I	2

Complete 25 credit hours from the following courses: 25

CHEM 220, CHEM 244, MATH 180, MATH 185, MATH 280, PHYS 241, PHYS 242, PHYS 243, BIO 152 and/or BIO 150.

Note:

Students should select the majority of electives from the Required Core Courses list above to maximize progress towards a bachelor's degree. Choose courses appropriate to your intended four-year institution. Consult transfer guides available in the University Transfer, Advising, and Career Counseling Center.

A student must see a chemistry department advisor before registering for CHEM 243.

A student must see a chemistry department advisor before registering for CHEM 220.

Required Support Courses

Required Support Courses	Cr. Hours
ENG 132 - College Writing and Research	3

Complete one of the following courses: CRJ 131, ENG 235, ENG 236, HIST 151, HIST 152, POLS 131, and/or SOC 131.

Note:

The study of a foreign language is often recommended for those intending to pursue a bachelor's degree in chemistry or at the graduate level. French or German are commonly suggested.

Associate in Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Science Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses for the may also be used to fulfill Associate in Science Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree as well as courses used to fulfill requirements of the Associate in Science degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Child Development

Associate in Arts - Other Academic Division

Deborah Zopf
Diane Green

313-845-6430
313-845-9748

dzopf@hfcc.edu
diane@hfcc.edu

CHILD.AA...
Learning Technology Center 227A
Learning Technology Center 117

Description

The Pre-Education program was chosen in 2001 as one of the six exemplary community college teacher education programs in America by Recruiting New Teachers, Inc., an affiliate of the Carnegie Foundation of New York.

Career Opportunities

Child Development degree graduates may choose to work as children's institution attendants, school child care attendants, nursery school attendants, or child monitors in private homes. Graduates wishing to pursue a bachelor's degree may transfer most if not all of the coursework toward a bachelor's degree.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center).

**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

Courses

Required Core Courses	Cr. Hours
CHD 201 - Child Development: Introduction to Creative Child Care	3
CHD 202 - Child Development: CDA Portfolio/ Assessment Preparation	3
CIS 221 - Instructional Technology for Elementary Teachers	3
ENG 246 - Introduction to Children's Literature	3
MATH 121 - Mathematics for Elementary Teachers I	3
MATH 221 - Mathematics for Elementary Teachers II	3
PSY 152 - Child Psychology	3
PSY 256 - Educational Psychology	3
PSY 294 - Educational Psychology Practicum	1

Required Support Courses	Cr. Hours
ENG 131 - Introduction to College Writing	3
ENG 132 - College Writing and Research	3
HPE 260 - Health, Nutrition, and PE	3
POLS 131 - Introduction to American Government and Political Science	3
PSY 131 - Introductory Psychology	3

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses for the may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Child Development

Certificate of Achievement - Other Academic Division

Deborah Zopf 313-845-6430 dzopf@hfcc.edu
 Diane Green 313-845-9748 diane@hfcc.edu

CHILD.CMULT...
 Learning Technology Center 227A
 Learning Technology Center 117

Description	Courses												
<p>The Child Development Associate (CDA) program was created by the Administration for Children, Youth, and Families to upgrade the quality of child care programs. Currently, the Council for Early Childhood Professional Recognition administers the CDA Credential. This credential is awarded to any individual who demonstrates proficiency in the Competency Goals set by the Council. The proficiency can be developed through coursework and regular work in a childcare setting.</p> <p>The 15-credit hour Child Care Certificate of Achievement in Child Development is designed to provide the competencies needed for the CDA credential. Students who wish to complete the Associate in Arts in Child Development may apply these credits toward the associate degree. However, CHD 201 and CHD 202 may not apply toward a Bachelor's degree in Elementary Education.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>CHD 201 - Child Development: Introduction to Creative Child Care</td> <td>3</td> </tr> <tr> <td>CHD 202 - Child Development: CDA Portfolio/ Assessment Preparation</td> <td>3</td> </tr> <tr> <td>HPE 260 - Health, Nutrition, and PE</td> <td>3</td> </tr> <tr> <td>PSY 131 - Introductory Psychology</td> <td>3</td> </tr> <tr> <td>PSY 152 - Child Psychology</td> <td>3</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	CHD 201 - Child Development: Introduction to Creative Child Care	3	CHD 202 - Child Development: CDA Portfolio/ Assessment Preparation	3	HPE 260 - Health, Nutrition, and PE	3	PSY 131 - Introductory Psychology	3	PSY 152 - Child Psychology	3
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HPE 260 - Health, Nutrition, and PE	3												
PSY 131 - Introductory Psychology	3												
PSY 152 - Child Psychology	3												

Programs of Study

Career Opportunities

Completion of this program and successful completion of the CDA credentialing process would provide the credentials for working as a lead teacher or program director in some child development settings.

Registry/Certification/Licensure Exam Information

Information on the national Child Development Associate degree can be found at www.cdacouncil.org. The preparation for this credential is addressed in CHD 201 and CHD 202.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 15**

CNC (Computer Numerical Control)

Associate in Applied Science - Technology Division

Ken Wright
David Wiltshire

31-845-6331
313-845-9637

kwright@hfcc.edu
djwiltshire@hfcc.edu

MFCNC.AAS...
Technology Building 164E
Technology Building 115A

Description	Courses																																																				
<p>These programs are designed for students interested in adapting ideas to working models or generally refining an engineer's concepts.</p> <p>Through extensive laboratory experiences, the student acquires skills that are essential for 21st-century in manufacturing. Most students work part-time in their fields of endeavor while completing their degree requirements.</p> <p>All of these programs strongly emphasize the safe and skillful use of tool-room machines. Core courses are individualized to fit the student's personal goals.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • Automation and Control Technician • CNC Set-up Technician • Engineering Technician • Quality Controller • Programmer • Laboratory Technician • Tool Analyst • Pre-production Planner • Plastic R & D Technician • Machinist/Toolmaker • Sales & Service Engineer • Process Engineer • Test Technician <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> • Davenport University • Eastern Michigan University • Ferris State University • Lawrence Technological University • Siena Heights University • University of Michigan – Dearborn 	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. 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**Minimum Number of Credits To Graduate
(Including Options/Electives): 78.5**

CNC (Computer Numerical Control)/Manufacturing Productivity Systems

Associate in Applied Science - Technology Division

Ken Wright
David Wiltshire

313-845-6331
313-845-9637

kwright@hfcc.edu
djwiltshire@hfcc.edu

MFENG.AAS...
Technology Building 164E
Technology Building 115A

Programs of Study

Description

These programs are designed for students interested in adapting ideas to working models or generally refining an engineer's concepts.

Through hands-on experience, the student acquires skills that are essential in industrial processes, blueprint reading, layout and inspection. Most students work part-time in their fields of endeavor while completing their degree requirements.

All of these programs strongly emphasize the safe and skillful use of tool-room machines. Core courses are individualized to fit the student's personal goals.

Career Opportunities

- Automation and Control Technician
- Engineering Technician
- Quality Controller
- CNC Programmer
- Laboratory Technician
- CNC Set-Up Technician
- Tool Analyst
- Pre-production Planner
- Plastic R & D Technician
- Machinist/Toolmaker
- Sales & Service Engineer
- Process Engineer
- Test Technician

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Eastern Michigan University
- Ferris State University
- Lawrence Technological University
- Siena Heights University
- University of Michigan - Dearborn

Registry/Certification/Licensure Exam Information

Optional HAAS Technical Education Council Level 1 and 2 Certification.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 65**

Courses

Required Core Courses	Cr. Hours
MPS 100 - Manufacturing Processes I	6
MPS 110 - Manufacturing Processes II	6
MPS 120 - Practical Problems In Machine Tools I	4
MPS 125 - Practical Problems in Machine Tools II	4
MPS 130 - Quality Control Gaging and Inspection	4
MPS 140 - Introduction to CNC	4
MPS 145 - CNC Operations	6
MPS 150 - SPC In Manufacturing	4
MPS 210 - Non-Traditional Manufacturing Processes	4

Required Support Courses	Cr. Hours
DRAF 110 - Introduction to Industrial Drafting	3
PHYS 120 - Technical Physics	4
<i>Complete 6 credit hours from the following courses:</i>	6
AUT 170, DRAF 120, DRAF 130, ELEC 103, ELEC 106, ELEC 120 and/or MPS 160.	
<i>Complete one of the following MATH options:</i>	
MATH 100 - Basic Technical Mathematics AND	4
MATH 103 - Technical Mathematics	4
OR	
MATH 103 - Technical Mathematics AND	4
MATH 112 - Trigonometry	3
OR	
<i>Complete one of the following MATH courses:</i>	
MATH 175, MATH 180, MATH 183, MATH 196H, MATH 280, MATH 283, MATH 286, MATH 289 MATH 293, and/or Math 296H.	

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

CNC (Computer Numerical Control)/Manufacturing Productivity Systems — Advanced

Certificate of Achievement - Technology

Ken Wright 313-845-6331
David Wiltshire 313-845-9637

kwright@hfcc.edu
djwiltshire@hfcc.edu

CNCAD.CMLT...
Technology Building 164E
Technology Building 115A

Description	Courses																		
<p>In the modern business environment, many employers require substantial skills in the use and application of CNC equipment. The attainment of the Advanced CNC Certificate in Manufacturing Productivity Systems offers evidence to employers that the individual has reached an advanced level of proficiency. It provides students with the opportunity to improve and build on their current skills and knowledge of CNC. Students enrolled in the program will receive training on the latest equipment used in the industry.</p> <p>The courses required for this certificate are all accepted towards an associate degree to improve a student's employability. The certificate can be used as a building block toward an Associate in Applied Science degree. Individuals who are already employed may find that the certificate increases the opportunity for promotion.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>MPS 130 - Quality Control Gaging and Inspection</td><td>4</td></tr> <tr><td>MPS 140 - Introduction to CNC</td><td>4</td></tr> <tr><td>MPS 145 - CNC Operations</td><td>6</td></tr> <tr><td>MPS 146 - Introduction to CNC Machine Tool Probing</td><td>1</td></tr> <tr><td>MPS 147 - Basic Macro Programming for CNC</td><td>1.5</td></tr> <tr><td>MPS 148 - Advanced CNC Probing</td><td>1</td></tr> <tr><td>MPS 150 - SPC In Manufacturing</td><td>4</td></tr> <tr><td>MPS 275 - Advanced CNC Operations</td><td>6</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	MPS 130 - Quality Control Gaging and Inspection	4	MPS 140 - Introduction to CNC	4	MPS 145 - CNC Operations	6	MPS 146 - Introduction to CNC Machine Tool Probing	1	MPS 147 - Basic Macro Programming for CNC	1.5	MPS 148 - Advanced CNC Probing	1	MPS 150 - SPC In Manufacturing	4	MPS 275 - Advanced CNC Operations	6
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**Minimum Number of Credits To Graduate
(Including Options/Electives): 27.5**

CNC (Computer Numerical Control)/Manufacturing Productivity Systems — Basic

Certificate of Achievement - Technology Division

Ken Wright 313-845-6331
David Wiltshire 313-845-9637

kwright@hfcc.edu
djwiltshire@hfcc.edu

CNCBA.CMLT...
Technology Building 164E
Technology Building 115A

Description	Courses												
<p>In the modern business environment, many employers require substantial skills in the use of CNC equipment. The attainment of the Certificate in Manufacturing Productivity Systems offers evidence to employers that the individual has reached the basic level of proficiency. It provides students with the opportunity to improve their job skills. Students enrolled in the program will receive training on the latest CNC equipment used in the industry.</p> <p>The courses required for this certificate are all accepted towards an associate degree to improve a student's employability. The certificate can be used as a building block toward an Associate in Applied Science degree. Individuals who are already employed may find that the certificate increases the opportunity for promotion. The certificate requires a total of 21 credit hours.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>MPS 100 - Manufacturing Processes I</td><td>6</td></tr> <tr><td>MPS 130 - Quality Control Gaging and Inspection</td><td>4</td></tr> <tr><td>MPS 140 - Introduction to CNC</td><td>4</td></tr> <tr><td>MPS 145 - CNC Operations</td><td>6</td></tr> <tr><td>MPS 146 - Introduction to CNC Machine Tool Probing</td><td>1</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	MPS 100 - Manufacturing Processes I	6	MPS 130 - Quality Control Gaging and Inspection	4	MPS 140 - Introduction to CNC	4	MPS 145 - CNC Operations	6	MPS 146 - Introduction to CNC Machine Tool Probing	1
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**Minimum Number of Credits To Graduate
(Including Options/Electives): 21**

Computer Information Systems

Associate in Applied Science - Technology Division

David Maier
David Wiltshire

313-845-9890
313-845-9637

djmaier@hfcc.edu
djwiltshire@hfcc.edu

CISYS.AAS..
Technology Building 164K
Technology Building 115A

Programs of Study

Description	Courses																																																				
<p>This program, leading to an Associate in Applied Science Degree, teaches information technology and Internet fundamentals, microcomputer technology, LAN technology, operating systems, programming languages (Visual Basic, ASP, C, C++, C#, Java, JavaScript, COBOL, Perl and HTML), data base concepts, systems analysis and systems design. Elective courses in Project Management, Information Security, Hardware and Software Troubleshooting and Web Technologies allow the student to pursue specialized study.</p> <p>Laboratory classrooms and an open computer lab provide students with opportunities to test and debug programs and complete a variety of course assignments.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • Network Administration • Programming • Computer Support • Web Developer • PC Hardware • Software Installation and Repair <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. 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**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

Computer Information Systems — Application Developer Certificate

Certificate of Achievement - Technology Division

David Maier
David Wiltshire

313-845-9890
313-845-9637

djmaier@hfcc.edu
djwiltshire@hfcc.edu

APPDEV...
Technology Building 164K
Technology Building 115A

Description	Courses										
<p>The .NET Application Certificate is designed to prepare the student for the Microsoft Certified Application Developer (MCAD) Exams. The .NET programming language that is used is Visual Basic. For more information on the CAD exams, please visit Microsoft’s website at www.Microsoft.com and search for the keywords MCAD Certificate. Henry Ford Community College is a member of Microsoft’s MSDN Academic Alliance Program which means that students can purchase the Visual Studio .NET Academic version for a very affordable price. This version incorporates all the features of Visual Studio .NET Professional and adds several new course management features, including assignment managers, documentation, and sample code. The CIS course listed can also be applied to an Associate in Applied Science within the Computer Information Systems program.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>CIS 111 - SQL for Database Development</td> <td>3</td> </tr> <tr> <td>CIS 130 - Visual Basic .NET Programming</td> <td>3</td> </tr> <tr> <td>CIS 132 - Active Server Pages .NET Programming</td> <td>3</td> </tr> <tr> <td>CIS 215 - Advanced Visual Basic .NET Database Programming</td> <td>3</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	CIS 111 - SQL for Database Development	3	CIS 130 - Visual Basic .NET Programming	3	CIS 132 - Active Server Pages .NET Programming	3	CIS 215 - Advanced Visual Basic .NET Database Programming	3
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Career Opportunities

- Application developer for a Visual Basic .NET application
- Application developer for an ASP.Net Internet application
- Database Administrator for SQL Server database

**Minimum Number of Credits To Graduate
(Including Options/Electives): 12**

Computer Information Systems — Information Assurance

Associate in Applied Science - Technology Division

Shannon Scanlon 313-845-6346 sscanlon@hfcc.edu
 Gregory Osowski 313-845-9859 gosowski@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

INFOASSUR.AAS...
 Technology Building 162J
 Liberal Arts Building 109W
 Technology Building 115A

Programs of Study

Description

As the world becomes more dependent on information technology, the security of information becomes critical. Henry Ford Community College is a member of the International Cyber-Security Education Consortium, and offers an interdisciplinary program leading to an Associate in Applied Science degree that emphasizes technical security, ethical conduct, legal and regulatory compliance, law enforcement and development of strategic security plans. Students complete an interdisciplinary core of study and can tailor electives to their career or transfer interest.

In April, 2006, the Information Assurance Courseware Evaluation (IACE) Review Committee of the National Security Agency's National Information Assurance Education and Training Program (NIETP) certified that Henry Ford Community College's Information Assurance courseware meets all of the elements of the Committee on National Security Systems (CNSS) National Training Standard for Information Systems Security (INFOSEC) Professionals NSTISSI-4011.



Students completing coursework in Information Assurance can transfer their credits to universities or enter the job market. Elective courses allow for each student to tailor a program of study to meet their unique interests.

Career Opportunities

- Law Enforcement
- Secure Software Engineering
- Language Specialist
- Network Security Specialist

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- University of Detroit Mercy

Courses

Required Core Courses	Cr. Hours
CIS 100 - Introduction to Information Technology	3
CIS 112 - Introduction to Networking	3
CIS 114 - Introduction to Novell NetWare Administration	3
CIS 220 - System Analysis and Design	3
CIS 272 - Project Management	4
CIS 280 - Information Assurance and Security	4
CNT 260 - Network Security: Security + Prep	4
CRJ 131 - Introduction to Law Enforcement and Criminal Justice	3
CRJ 132 - Police Administration - Staff and Line Operations	3
CRJ 134 - Criminal Investigation	3
CRJ 234 - Criminalistics: Criminal Investigation Laboratory Techniques	3

Required Support Courses

Required Support Courses	Cr. Hours
Complete 18 credit hours from the following courses:*	18
ARA 131, ARA 132, CIS 113, CIS 116, CIS 124, CIS 129, CIS 130, CIS 157, CIS 158, CIS 170, CIS 171, CIS 212, CIS 215, CIS 229, CIS 230, CIS 295, CNT 110, CNT 120, CNT 210, CNT 220, CRJ 135, CRJ 136, FRE 131, FRE 132, FRE 231, FRE 232, GER 131, GER 132, GER 231, GER 232, HPE 142, SPN 131, SPN 132, SPN 231, SPN 232 and/or SOC 131.	

Note:
 Students should consult with an advisor before course selection. The 18 credit hour requirement is intended for concentration in foreign language, network security, software insurance or criminal justice.

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
 Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 60**

Computer Information Systems — Network Administration

Associate in Applied Science - Technology Division

David Maier
David Wiltshire

313-845-9890
313-845-9637

djmaier@hfcc.edu
djwiltshire@hfcc.edu

CISPNETWRK.AAS...
Technology Building 162K
Technology Building 115A

Description	Courses																												
<p>This program, the Associate in Applied Science degree in Network Administration, teaches computer repair, network concepts and terminology, and Unix, Novell NetWare, and Microsoft Windows Server Administration as well as Cisco training on a variety of Cisco Systems equipment.</p> <p>Laboratory classrooms provide the student with opportunities to build, configure, and troubleshoot personal computers in the lab. Students will also install, configure and troubleshoot operating systems, connect personal computers to Local Area Networks and troubleshoot common network problems; perform Unix, Novell and Microsoft Windows Server Administration tasks on classroom servers, and install, configure and troubleshoot Cisco Systems switches and routers.</p> <p>To earn an associate degree, the student must complete a minimum of 68 credit hours of course work. There are core courses in CNT, Compute Network Technology, and CIS, Computer Information Systems; Required Support Courses in Math; and General Education courses as part of the program course requirements. For more information visit our Web site on the internet at www.hfcc.edu.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • PC Software Installation • PC Hardware Installation • Network Administration • Computer Network Support Specialist • Network Control and Systems Technician • LAN/WAN Technician • Cabling Installation Technician <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> • Davenport University • Ferris State University • Lawrence Technological University <p>Registry/Certification/Licensure Exam Information</p> <p>The AAS degree in Network Administration prepares students to successfully complete a number of Industry Certification Exams, including Comp-TIA A+, Comp-TIA Network+, Comp-TIA Server+, Comp-TIA Security+, Novell NetWare Certified Network Administrator (CNA), Microsoft Windows Server Administration (MCP), and Cisco Systems Certified Network Associate (CCNA). These certification tests are administered at HFCC's M-TEC Center, 3601 Schafer Rd., Dearborn, MI 48126, 313-317-6600. Payment and scheduling of these exams are through the Pearson-Vue Web site (http://www.pearsonvue.com).</p>	<p>Required Core Courses</p> <table border="1"> <thead> <tr> <th>Course</th> <th>Cr. Hours</th> </tr> </thead> <tbody> <tr><td>CIS 100 - Introduction to Information Technology</td><td>3</td></tr> <tr><td>CIS 114 - Introduction to Novell NetWare Administration</td><td>3</td></tr> <tr><td>CIS 124 - Introduction to Windows Server Administration</td><td>3</td></tr> <tr><td>CIS 125 - Principles of Programming Logic</td><td>4</td></tr> <tr><td>CIS 129 - Introduction to UNIX with Shell Scripting</td><td>4</td></tr> <tr><td>CIS 229 - UNIX System Administration</td><td>4</td></tr> <tr><td>CIS 295 - Network Design and Implementation</td><td>3</td></tr> <tr><td>CNT 110 - CCNA: Networking Fundamentals</td><td>4</td></tr> <tr><td>CNT 120 - CCNA: Routing Protocols and Concepts</td><td>4</td></tr> <tr><td>CNT 210 - CCNA: LAN Switching and Wireless</td><td>4</td></tr> <tr><td>CNT 220 - CCNA: WAN Technologies</td><td>4</td></tr> </tbody> </table> <p><i>Complete 15 credit hours from the following courses:</i> 15 CIS 105, CIS 112, CIS 113, CIS 157, CIS 158, CIS 212, CNT 115, CNT 240 CNT 260, CNT 291, CNT 292, CNT 293, CNT 294, and/or ICO 191.</p> <hr/> <p>Required Support Courses</p> <table border="1"> <thead> <tr> <th>Course</th> <th>Cr. Hours</th> </tr> </thead> <tbody> <tr> <td><i>Complete 4 credit hours of MATH numbered 100 or above.*</i></td> <td>4</td> </tr> </tbody> </table> <p><i>Note:</i> *The following courses do not meet the requirements for this program: MATH 121, MATH 127, MATH 221, and MATH 225.</p> <hr/> <p>Associate in Applied Science Degree Requirements</p> <p>Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.</p> <hr/> <p>General Education</p> <p>Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.</p> <hr/> <p>Elective Courses</p> <p>Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).</p> <p><i>Note:</i> Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.</p>	Course	Cr. Hours	CIS 100 - Introduction to Information Technology	3	CIS 114 - Introduction to Novell NetWare Administration	3	CIS 124 - Introduction to Windows Server Administration	3	CIS 125 - Principles of Programming Logic	4	CIS 129 - Introduction to UNIX with Shell Scripting	4	CIS 229 - UNIX System Administration	4	CIS 295 - Network Design and Implementation	3	CNT 110 - CCNA: Networking Fundamentals	4	CNT 120 - CCNA: Routing Protocols and Concepts	4	CNT 210 - CCNA: LAN Switching and Wireless	4	CNT 220 - CCNA: WAN Technologies	4	Course	Cr. Hours	<i>Complete 4 credit hours of MATH numbered 100 or above.*</i>	4
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**Minimum Number of Credits To Graduate
(Including Options/Electives): 68**

Computer Information Systems — Web Development

Certificate of Achievement - Technology Division

David Maier 313-845-9890 djmaier@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

CISPWEBDSN.CMLT...
 Technology Building 164K
 Technology Building 115A

Description

The Web Development Certificate is designed to prepare graduates for an entry-level position as a Web Developer, Webmaster, Web Administrator, Web Programmer or Multimedia Developer.

The U.S. Department of Labor, Bureau of Labor Statistics lists computer occupations as 5 out of the top 20 fastest growing occupations in the economy for 2004-2014. The Michigan Department of Labor and Economic Growth projects the highest number of new career opportunities between 2002 and 2012 (25.8%) to be in the computer and mathematics industries with an average starting salary of \$62,000. Money Magazine and Salary.com 2006 Best Jobs in America report lists computer-related occupations as 2 of the top 7 career opportunities on the basis of salary, opportunities, advancement, creativity, flexibility, and stress.

The Henry Ford Community College Web Development Certificate distinguishes itself with extensive hands-on laboratory experience using the latest technology and software. Industry-experienced, full-time faculty provide the highest quality instruction on the latest web authoring integrated development environments, graphics and design techniques, client and server-side coding and scripting, back-end technologies, multimedia and animation tools, and project management principles.

All courses can also be applied towards and Associate in Applied Science degree in Computer Information Systems.

Career Opportunities

- Web Administrator
- Web Developer
- Web Programmer
- Webmaster
- Multimedia Developer

Registry/Certification/Licensure Exam Information

CIW Foundations (<http://www.ciwcertified.com/>)
 ComTIA i-Net+ (<http://www.comptia.org/>)
 Adobe Certified Professional (<http://www.adobe.com/support/certification/>)

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 24**

Courses

Required Core Courses	Cr. Hours
ART 107 - Photoshop	3
ART 108 - Flash	4
CIS 122 - Web/Internet Technologies	3
CIS 126 - XHTML/HTML/CSS Web Programming	4
CIS 172 - JavaScript Programming	3
CIS 222 - Web Database Development With PHP	4
CIS 227 - Dreamweaver Web Authoring	4

Recommended Course Sequence

Semester I	Semester II
ART 107	ART 108
CIS 122	CIS 172
CIS 126	CIS 222
	CIS 227

Programs of Study

Computer Networking Academy — CCNA

Certificate of Achievement - Technology Division

Kathryn Fitzner
David Wiltshire

313-317-1570
313-845-9637

kfitzner@hfcc.edu
djwiltshire@hfcc.edu

COMPNET.CMULT...
Technology Building 211B
Technology Building 115A

Description

Henry Ford Community College's Computer Networking Academy provides students with the skills for designing, building, and maintaining computer networks.

HFCC is designated as a Regional Cisco Networking Academy and offers a preparation program for CCNA (Cisco Certified Network Associate) and CCNP (Cisco Certified Network Professional) industry certifications. Cisco certifications are consistently rated among the most highly valued certifications within the IT industry by both employers and IT professionals.

The CCNA certificate program consists of four courses and is designed to be completed within one year. Students learn how to install and configure Cisco routers and switches in multi-protocol local and wide area networks, perform basic troubleshooting, and improve network performance and security. The four CCNA courses are also part of the required core courses for the Network Administration Associate Degree in Applied Sciences.

Career Opportunities

- PC Support Specialist
- Help Desk Technician
- Network Technician
- Network Administrator
- Network Engineer
- Other IT related fields

**Minimum Number of Credits To Graduate
(Including Options/Electives): 16**

Courses

Required Core Courses	Cr. Hours
CNT 110 - CCNA: Networking Fundamentals	4
CNT 120 - CCNA: Routing Protocols and Concepts	4
CNT 210 - CCNA: LAN Switching and Wireless	4
CNT 220 - CCNA: WAN Technologies	4

Note:

CNT 110 and CNT 210 are typically offered the first eight weeks of the Fall and Winter semesters. CNT 120 and CNT 220 are typically offered the second eight weeks of the Fall and Winter semesters.

Upon successful completion of the CNT 110, CNT 120, CNT 210, and CNT 220, the students will, upon application, receive a CCNA Courses Certificate of Achievement.

Additional Computer Networking Courses	Cr. Hours
CNT 115 - Network Infrastructure Essentials	4
CNT 260 - Network Security: Security + Prep	4

Computer Networking Academy — CCNP

Certificate of Achievement - Technology Division

Kathryn Fitzner
David Wiltshire

313-317-1570
313-845-9637

kfitzner@hfcc.edu
djwiltshire@hfc.edu

COMPNETCON.CMLT...
Technology Building 211B
Technology Building 115A

Description

The CCNP certificate program consists of four courses and is designed to prepare students and professionals for the more advanced CCNP industry certification. The CCNP curriculum trains students to install, configure, and troubleshoot local and wide-area networks consisting of 100 to over 500 nodes and emphasizes such topics as security, converged networks, quality of service (QoS), virtual private networks (VPN) and broadband technologies. The four CCNP courses are electives within the Associate in Applied Science degree program in Network Administration. Please note that completion of all four CCNA courses, CCNA certification, or instructor permission is required before beginning the CCNP program.

Career Opportunities

- Network Technician
- Network Administrator
- Network Engineer
- Other IT related fields

**Minimum Number of Credits To Graduate
(Including Options/Electives): 16**

Courses

Required Core Courses	Cr. Hours
CNT 291 - CCNP: Building Scalable Internetworks	4
CNT 293 - CCNP: Building Multilayer Switched Networks	4
CNT 295 - CCNP: Implementing Secure Converged WANs	4
CNT 297 - CCNP: Optimizing Converged Networks	4

Note:

Please note that the completion of all four CCNA courses or CCNA certification is required before beginning the CCNP program.

The four CCNP courses may be taken in any order.

Additional Computer Networking Academy Courses	Cr. Hours
CNT 115 - Network Infrastructure Essentials	4
CNT 260 - Network Security: Security + Prep	4

Computer Networking Academy — Network Infrastructure Essentials

Certificate of Achievement - Technology Division

Kathryn Fitzner 313-317-1570 kfitzner@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

CSCODVCABL.CSGL...
 Technology Building 211B
 Technology Building 115A

Description	Courses				
<p>HFCC's Computer Networking Academy offers a Network Infrastructure Essentials Certificate of Achievement. Students may apply for this certificate upon successful completion of the Network Infrastructure Essentials course. This is a basic course designed for students interested in the physical aspects of voice and data network cabling, infrastructure design, and installation. This course helps prepare students for certification in network cable installation.</p> <p>Additional networking courses offered within the Computer Networking Academy include CCNA, CCNP, and Network Security certification preparation courses.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • Cable Installation Technician • Network Technician <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 4</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>CNT 115 - Network Infrastructure Essentials</td> <td style="text-align: center;">4</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	CNT 115 - Network Infrastructure Essentials	4
Required Core Courses	Cr. Hours				
CNT 115 - Network Infrastructure Essentials	4				

Programs of Study

Computer Software Applications

Certificate of Achievement - Business and Economics Division

Diane Smith 313-845-9702 dlsmith1@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

BAIMOFAPP.CMLT...
 Reuther Liberal Arts Building 331
 Reuther Liberal Arts Building 328

Description	Courses																										
<p>In today's modern business environment, many occupations require substantial skills in the use of various computer software applications. The attainment of Henry Ford Community College's Certificate in Computer Software Applications offers evidence to employers that the individuals have reached a certain level of proficiency in the application of computer software. The certificate provides students with the opportunity to improve their software applications literacy and job skills. Students enrolled in the program will receive training in Windows operating system software; the Internet; and word processing, spreadsheet, database management, presentation and web pages applications software.</p> <p>The certificate is often combined with an associate degree to improve a student's employability. The certificate can be used as a building block toward a Certificate in Office Administration and/or an Associate in Business Degree in the Administration and Information Management program. Individuals who are already employed may find that the certificate increases the opportunity for promotion.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>BCA 106 - Introduction to Windows</td> <td style="text-align: center;">2</td> </tr> <tr> <td>BCA 125 - Introduction to the Internet & Web Pages</td> <td style="text-align: center;">3</td> </tr> <tr> <td>BCA 140 - Software Applications</td> <td style="text-align: center;">3</td> </tr> <tr> <td>BCA 143 - Word Processing</td> <td style="text-align: center;">3</td> </tr> <tr> <td>BCA 145 - Spreadsheet</td> <td style="text-align: center;">3</td> </tr> <tr> <td>BCA 147 - Data Base Applications</td> <td style="text-align: center;">3</td> </tr> <tr> <td>BCA 152 - Presentation Software</td> <td style="text-align: center;">2</td> </tr> </tbody> </table> <p>Recommended Course Sequence</p> <table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Term 1</th> <th style="background-color: #cccccc;">Term 2</th> </tr> </thead> <tbody> <tr> <td>BCA 106</td> <td>BCA 143</td> </tr> <tr> <td>BCA 125</td> <td>BCA 145</td> </tr> <tr> <td>BCA 140</td> <td>BCA 147</td> </tr> <tr> <td>BCA 152</td> <td></td> </tr> </tbody> </table> <p><i>Note:</i> If students elect to take BCA 106 and BCA 152 in the same semester, they should take BCA 106 the first 8 weeks of that semester and take BCA 152 the second 8 weeks of that semester.</p>	Required Core Courses	Cr. Hours	BCA 106 - Introduction to Windows	2	BCA 125 - Introduction to the Internet & Web Pages	3	BCA 140 - Software Applications	3	BCA 143 - Word Processing	3	BCA 145 - Spreadsheet	3	BCA 147 - Data Base Applications	3	BCA 152 - Presentation Software	2	Term 1	Term 2	BCA 106	BCA 143	BCA 125	BCA 145	BCA 140	BCA 147	BCA 152	
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BCA 125	BCA 145																										
BCA 140	BCA 147																										
BCA 152																											

Registry/Certification/Licensure Exam Information

Successful completion of BCA 143-Word Processing, BCA 145-Spreadsheet Applications, and BCA 147-Database Applications will provide students with sufficient knowledge and skills to take the Microsoft Expert or Level 2 certification exams for Word and Excel and the Core-level or Level 1 certification exam for Access.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 19**

Criminal Justice — Corrections/Probation and Parole

Associate in Arts - Social Science Division

Greg Osowski 313-845-9859
 Kim Schopmeyer 313-845-6443

gosowski@hfcc.edu
 ks chop@hfcc.edu

CORAD.AA...
 Reuther Liberal Arts Building 109W
 Reuther Liberal Arts Building 108

Description

The Corrections/Probation and Parole curriculum is designed for students interested in public service work with offenders within correctional institutions, such as jails or prisons, or in professional work outside correctional institutions, with juveniles and those on probation or parole.

Career Opportunities

The curriculum prepares students to take various entry-level positions and certification exams. Most people start out in entry-level positions as corrections officers or in court probation departments upon completion of an associate's degree. For future advancement in the institutional field or work in probation and parole, a bachelor's degree is highly recommended.

- Counseling
- Prison Corrections Officer
- Probation/Parole Officer
- Social Work

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Central Michigan University
- Davenport University
- Madonna University
- University of Detroit Mercy
- University of Michigan - Dearborn

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 60**

Courses

Required Core Courses

Required Core Courses	Cr. Hours
CRJ 131 - Introduction to Law Enforcement and Criminal Justice	3
CRJ 135 - Juvenile Justice	3
CRJ 136 - Corrections I - Introduction to Corrections	3
CRJ 138 - Probation and Parole	3
CRJ 141 - Corrections Clients - Human Growth and Development	3
CRJ 253 - Legal Issues in Corrections/Probation and Parole	4
CRJ 286 - Topics in Corrections/Probation and Parole	3

Required Support Courses

Required Support Courses	Cr. Hours
BCA 140 - Software Applications	3
HPE 142 - Advanced First Aid	3
PSY 131 - Introductory Psychology	3
<i>Complete one of the following courses:</i>	
SPC 131 - Fundamentals of Speaking	3
SPC 145 - Interpersonal Communication	3

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

CRJ 134 - Criminal Investigation	3
CRJ 291 - Criminal Justice Internship	3
CRJ 234 - Criminalistics: Criminal Investigation Laboratory Techniques	3

Note:
 Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Criminal Justice — Corrections/Probation and Parole

Certificate of Achievement-Social Science Division

Greg Osowski 313-845-9859 gosowski@hfcc.edu
 Kim Schopmeyer 313-845-6443 kschop@hfcc.edu

CORAD.CMLT..
 Reuther Liberal Arts Building 109W
 Reuther Liberal Arts Building 108

Description	Courses																																				
<p>HFCC offers a 30-hour certificate of completion program in Criminal Justice — Corrections/Probation and Parole that will help the student prepare for an entry-level position. This program is based on the Michigan Department of Corrections recommended courses.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • Corrections Officers <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> • Concordia University in Ann Arbor • Madonna University • University of Michigan – Dearborn 	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>CRJ 135 - Juvenile Justice</td> <td>3</td> </tr> <tr> <td>CRJ 136 - Corrections I - Introduction to Corrections</td> <td>3</td> </tr> <tr> <td>CRJ 138 - Probation and Parole</td> <td>3</td> </tr> <tr> <td>CRJ 141 - Corrections Clients - Human Growth and Development</td> <td>3</td> </tr> <tr> <td>CRJ 253 - Legal Issues in Corrections/Probation and Parole</td> <td>4</td> </tr> <tr> <td>CRJ 286 - Topics in Corrections/Probation and Parole</td> <td>3</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Elective Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td colspan="2"><i>These courses are suggestions for electives.</i></td> </tr> <tr> <td colspan="2"><i>Choose any combination of courses to equal minimum of 11 credit hours. Students should consult their academic advisor for course selection.</i></td> </tr> <tr> <td>BCA 140 - Software Applications</td> <td>3</td> </tr> <tr> <td>CRJ 131 - Introduction to Law Enforcement and Criminal Justice</td> <td>3</td> </tr> <tr> <td>ENG 131 - Introduction to College Writing</td> <td>3</td> </tr> <tr> <td>ENG 132 - College Writing and Research</td> <td>3</td> </tr> <tr> <td>ENG 135 - Business and Technical Writing and Research</td> <td>3</td> </tr> <tr> <td>POLS 131 - Introduction to American Government and Political Science</td> <td>3</td> </tr> <tr> <td>PSY 131 - Introductory Psychology</td> <td>3</td> </tr> <tr> <td>SOC 131 - Introduction to Sociology</td> <td>3</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	CRJ 135 - Juvenile Justice	3	CRJ 136 - Corrections I - Introduction to Corrections	3	CRJ 138 - Probation and Parole	3	CRJ 141 - Corrections Clients - Human Growth and Development	3	CRJ 253 - Legal Issues in Corrections/Probation and Parole	4	CRJ 286 - Topics in Corrections/Probation and Parole	3	Elective Courses	Cr. Hours	<i>These courses are suggestions for electives.</i>		<i>Choose any combination of courses to equal minimum of 11 credit hours. Students should consult their academic advisor for course selection.</i>		BCA 140 - Software Applications	3	CRJ 131 - Introduction to Law Enforcement and Criminal Justice	3	ENG 131 - Introduction to College Writing	3	ENG 132 - College Writing and Research	3	ENG 135 - Business and Technical Writing and Research	3	POLS 131 - Introduction to American Government and Political Science	3	PSY 131 - Introductory Psychology	3	SOC 131 - Introduction to Sociology	3
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**Minimum Number of Credits To Graduate
 (Including Options/Electives): 30**

Programs of Study

Criminal Justice — Law Enforcement

Associate in Arts - Social Science Division

Greg Osowski
Henry Bowers

313-845-9859
313-845-9706

gosowski@hfcc.edu
hbowers@hfcc.edu

LAWEF.AA...
Reuther Liberal Arts Building 109W
Reuther Liberal Arts Building 103

Description	Courses																														
<p>The Associate in Arts degree program in Law Enforcement is concerned with the preservation of peace, the prevention of crime, and the protection of life and property.</p> <p>The program is designed to prepare students for entry into the public service fields of law enforcement with a full working comprehension of the relationships between public and private concerns.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • Federal Law Enforcement • Law School • Police Officer • Private Industry • State Law Enforcement <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> • Concordia University in Ann Arbor • Davenport University • Madonna University • University of Detroit Mercy • University of Michigan – Dearborn <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 62</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. 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Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.</p> <p>General Education</p> <p>Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.</p> <p>Elective Courses</p> <p>Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).</p> <p><i>These courses are suggestions for electives:</i></p> <table border="1"> <tbody> <tr> <td>CRJ 135 - Juvenile Justice</td> <td style="text-align: center;">3</td> </tr> <tr> <td>CRJ 136 - Corrections I - Introduction to Corrections</td> <td style="text-align: center;">3</td> </tr> <tr> <td>CRJ 234 - Criminalistics: Criminal Investigation Laboratory Techniques</td> <td style="text-align: center;">3</td> </tr> </tbody> </table> <p>Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.</p>	Required Core Courses	Cr. 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Culinary & Baking

Certificate of Achievement - Technology Division

Dennis Konarski
Jeff Click

313-845-6390
313-845-9651

dennis@hfcc.edu
jclick@hfcc.edu

CULBK.CMLT...
Student and Culinary Arts Center 163E
Student and Culinary Arts Center 163D

Description

Let your creativity shine while learning the various facets of the baking and pastry fields. Students will also explore international cuisine and the art of garde manger by preparing decorative cold food displays.

Career Opportunities

- Bakeries
- Pastry Shops
- Hotels and Private Clubs
- Specialty Food Shops

Accreditation

Hospitality and Culinary programs at HFCC are fully accredited by the Educational Foundation of the National Restaurant Association.

Courses

Required Core Courses

Cr. Hours

HOSP 121 - Introduction to Quality Food Preparation - Lecture	2
HOSP 123 - Introduction to Professional Cooking - Lab	6
HOSP 140 - Advanced Food Preparation	8
HOSP 231 - Advanced Baking & Pastry	6
HOSP 241 - Garde Manger & Menu Planning	6
HOSP 245 - Hotel and Restaurant Desserts	3

Recommended Course Sequence

Fall I	Winter I	Fall II	Winter II
HOSP 121	HOSP 140	HOSP 231	HOSP 241
HOSP 123		HOSP 245	

**Minimum Number of Credits To Graduate
(Including Options/Electives): 31**

Culinary Arts

Associate in Applied Science - Technology Division

Dennis Konarski
Jeff Click

313-845-6390
313-845-9651

dennis@hfcc.edu
jclick@hfcc.edu

CULIN.AAS...
Student and Culinary Arts Center 163E
Student and Culinary Arts Center 163D

Description	Required Support Courses	Cr. Hours
<p>The employment growth in the hospitality industry drastically outpaces the work force, thus opening up a wide range of career opportunities in a diversified job market. The Food Service Industry is one of the oldest industries in the world. One of the complex divisions in today's industry is the food and beverage department. In order to be successful in this area, it is necessary for employees to have knowledge of menu planning, purchasing, and creating memorable dining experiences. Students will acquire the specialized skills needed in many aspects of kitchen operations. Laboratory classes provide students with hands-on experience serving and preparing quantities of food in the new facilities of the Student and Culinary Arts building.</p> <p>HFCC has developed articulation agreements with Eastern Michigan and Madonna University to facilitate the educational mobility of students. Students following a specifically designed transfer agreement are able to complete three years at HFCC and one full year at Madonna University with a Bachelor of Science degree in Hospitality Management.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> Hotels, Motels and Motor Inns Commercial Food Establishments Clubs Airlines Recreational Centers Resort and Tourist Operation College Food Services / Institutional Operations <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> Eastern Michigan University Madonna University Ferris State University Siena Heights University <p>Accreditation</p> <p>Hospitality and Culinary programs at HFCC are fully accredited by the Accrediting Commission of the American Culinary Federation Educational Foundation of the National Restaurant Association.</p>	<p>Complete one of the following courses:</p> <p>BMA 110 - Business Mathematics 3</p> <p>MATH 104 - Mathematics for Food Service Careers 4</p> <p>MATH 110 - Intermediate Algebra or higher level MATH course 4</p> <p>Complete a minimum of 3 credit hours from the following courses: <i>These courses are also suggested for electives.</i></p> <p>HOSP 101 - Wines of the World 1</p> <p>HOSP 103 - Major Wine Grape Varieties 1</p> <p>HOSP 108 - Creative Cookery 3</p> <p>HOSP 115 - International Cooking 4</p> <p>HOSP 221 - Front Office Procedures and Guest Services 3</p> <p>HOSP 245 - Hotel and Restaurant Desserts 3</p> <p>HOSP 280 - Culinary Art, Food I 3</p> <p>HOSP 285 - Culinary Art, Food II 3</p> <p>Complete one of the following courses:</p> <p>POL 131 - Intro. to American Gov't and Political Science 3</p> <p>SSC 131 - A Survey of the Social Sciences 3</p> <p><i>Note: See prerequisite for BMA 110</i></p>	

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Minimum Number of Credits To Graduate (Including Options/Electives): 66

Required Core Courses	Cr. Hours
HOSP 105 - Applied Foodservice Sanitation	2
HOSP 110 - Introduction to Hospitality Industry	3
HOSP 121 - Intro. to Quality Food Prep. - Lecture*	2
HOSP 123 - Intro. to Professional Cooking - Lab*	6
HOSP 130 - Food and Nutrition	3
HOSP 140 - Advanced Food Preparation	8
HOSP 150 - Dining Room Service and Operations	3
HOSP 160 - Hospitality Purchasing	3
HOSP 170 - Food and Beverage Controls	3
HOSP 210 - Hospitality Supervision and Leadership	3
HOSP 231 - Advanced Baking & Pastry	6
HOSP 241 - Garde Manger & Menu Planning	6
<i>Complete 2 credit hours from the following courses:**</i>	
HOSP 190 - Hospitality Studies Co-Op	1
HOSP 290 - Hospitality Studies Co-Op	2

Note: *Must be taken concurrently. HOSP 280 and HOSP 285 may be used for HOSP 121 and HOSP 123 for evening students.

**Students may take HOSP 190 for 2 semesters instead of HOSP 290.

Recommended Course Sequence

Recommended Course Sequence Option One

Fall I	Winter I	Fall II	Winter II	Spring II
HOSP 105	HOSP 140	HOSP 231	HOSP 241	HOSP 115
HOSP 121	HOSP 108			HOSP 221
HOSP 123	HOSP 110			
MATH 104	HOSP 160			

Recommended Course Sequence Option Two

Winter I	Fall I	Winter II	Fall II	Winter III	Spring II
HOSP 105	HOSP 140	HOSP 160	HOSP 231	HOSP 241	HOSP 115
HOSP 121		HOSP 110			HOSP 221
HOSP 123		HOSP 108			
MATH 104					

Note:

Students should not limit themselves to the above courses per term. New students need to be advised by Program Director or the University Transfer, Advising, and Career Counseling Center.

Culinary Arts Supervision

Certificate of Achievement - Technology Division

Dennis Konarski
Jeff Click

313-845-6390
313-845-9651

dennis@hfcc.edu
jclick@hfcc.edu

CULSU.CMLT...
Student and Culinary Arts Center 163E
Student and Culinary Arts Center 163D

Description

Hospitality Studies Certificate - Chart Your Own Course!

Chefs must have technical knowledge and human resource skills to be successful in today's kitchens. Key components of the supervision certificate include training in food sanitation, nutrition, and managerial techniques.

All of these courses may be used towards an Associate in Applied Science in Culinary Arts.

Accreditation

Hospitality and Culinary programs at HFCC are fully accredited by the Accrediting Commission of the American Culinary Federation Educational Foundation of the National Restaurant Association.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 39**

Courses

Required Core Courses	Cr. Hours
HOSP 105 - Applied Foodservice Sanitation	2
HOSP 110 - Introduction to Hospitality Industry	3
HOSP 121 - Introduction to Quality Food Preparation Lecture	2
HOSP 123 - Introduction to Professional Cooking - Lab	6
HOSP 130 - Food and Nutrition	3
HOSP 140 - Advanced Food Preparation	8
HOSP 210 - Hospitality Supervision and Leadership	3
HOSP 231 - Advanced Baking & Pastry	6
HOSP 241 - Garde Manger & Menu Planning	6

Recommended Course Sequence

Term 1	Term 2	Term 3	Term 4
HOSP 105	HOSP 140	HOSP 231	HOSP 241
HOSP 110	HOSP 210	HOSP 130	
HOSP 121			
HOSP 123			

Culinary Skills

Certificate of Achievement - Technology Division

Dennis Konarski
Jeff Click

313-845-6390
313-845-9651

dennis@hfcc.edu
jclick@hfcc.edu

CULSK.CSGL...
Student and Culinary Arts Center 163E
Student and Culinary Arts Center 163D

Description

Culinary Skills Certificate-Chart Your Own Course!

These courses provide the foundation for quality food production in a professional kitchen using both lab and lecture classes. Once you've mastered the basics, the opportunities are endless. These courses may be applied towards the Associate in Applied Science degree in Culinary Arts or Hotel/Restaurant Management.

Accreditation

Hospitality and Culinary programs at HFCC are fully accredited by the Accrediting Commission of the American Culinary Federation Educational Foundation of the National Restaurant Association.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 16**

Courses

Required Core Courses	Cr. Hours
HOSP 121 - Introduction to Quality Food Preparation - Lecture	2
HOSP 123 - Introduction to Professional Cooking - Lab	6
HOSP 140 - Advanced Food Preparation	8

Recommended Course Sequence

Recommended Course Sequence Option One

Fall I	Winter I
HOSP 121	HOSP 140
HOSP 123	

Recommended Course Sequence Option Two

Winter I	Fall I
HOSP 121	HOSP 140
HOSP 123	

Customer Service Professional

Certificate of Achievement - Business and Economics Division

CUSRV.CMLT...

Diane Smith 313-845-9702 dlsmith1@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

Reuther Liberal Arts Building 331
 Reuther Liberal Arts Building 328

Description	Courses																												
<p>Henry Ford Community College's Customer Service Professional certificate prepares students for a career in customer service. This program emphasizes oral and written communication skills, workplace skills, and basic computer skills and includes training to work effectively as a Customer Service Representative (CSR).</p> <p>CSRs interact with a company's customers by answering questions about products, services or billings. CSRs, working in a call center or in a customer service department, receive in-bound calls from a company's customers and enter orders for products or services, sell tickets, make reservations, and solve problems that customers are experiencing.</p> <p>Students in this program will qualify to test for the National Retail Federation (NRF) Foundation's Professional Certification in Customer Service, a nationally recognized skill standards and certification exam.</p> <p>The Customer Service Professional certificate (developed in consultation with businesses such as Blue Cross Blue Shield, Ford Motor Company, DTE Energy, and Oakwood Hospital and Medical Center) may be used as a building block towards earning an Associate in Business degree.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>BBA 110 - Business Language Skills</td><td>3</td></tr> <tr><td>BBA 133 - Business Behavior and Communication</td><td>3</td></tr> <tr><td>BBA 153 - Customer Service</td><td>3</td></tr> <tr><td>BBA 157 - Call Center/Help Desk Practicum</td><td>1</td></tr> <tr><td>BBA 231 - Business Office Communications</td><td>3</td></tr> <tr><td>BCA 101 - Computer Keyboarding</td><td>3</td></tr> <tr><td>BCA 140 - Software Applications</td><td>3</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2" style="background-color: #cccccc;">Recommended Course Sequence</th> </tr> <tr> <th style="background-color: #cccccc;">Term 1</th> <th style="background-color: #cccccc;">Term 2</th> </tr> </thead> <tbody> <tr><td>BBA 110</td><td>BBA 157</td></tr> <tr><td>BBA 133</td><td>BBA 231</td></tr> <tr><td>BBA 153</td><td>BCA 140</td></tr> <tr><td>BCA 101</td><td></td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	BBA 110 - Business Language Skills	3	BBA 133 - Business Behavior and Communication	3	BBA 153 - Customer Service	3	BBA 157 - Call Center/Help Desk Practicum	1	BBA 231 - Business Office Communications	3	BCA 101 - Computer Keyboarding	3	BCA 140 - Software Applications	3	Recommended Course Sequence		Term 1	Term 2	BBA 110	BBA 157	BBA 133	BBA 231	BBA 153	BCA 140	BCA 101	
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**Minimum Number of Credits To Graduate
 (Including Options/Electives): 19**

Education Paraprofessional

Certificate of Achievement - Other Academic Division

EDPAR.CMLT...

Deborah Zopf 313-845-6430 dzopf@hfcc.edu
 Diane Green 313-845-9748 diane@hfcc.edu

Learning Technology Center 227A
 Learning Technology Center 117

Description	Courses																										
<p>The 35 credit hour Education Paraprofessional Certificate of Achievement is designed to increase the students' knowledge in specific content areas and to promote the development of interaction skills necessary for working with children. This certificate also enables those presently employed as paraprofessionals to become more effective as aides. Upon successful completion of the program students receive a Certificate of Achievement. Those who wish to earn an Associate in Arts degree in Pre-Elementary Education may apply the total hours of the certificate program toward that degree. However, ENG 121 and HPE 142 may not apply toward a bachelor's degree in Elementary Education. Please consult the transfer guides in the University Transfer, Advising, and Career Counseling Center.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>CIS 221 - Instructional Technology for Elementary Teachers</td><td>3</td></tr> <tr><td>ENG 121 - Assisting with Elementary Reading</td><td>3</td></tr> <tr><td>ENG 131 - Introduction to College Writing</td><td>3</td></tr> <tr><td>ENG 132 - College Writing and Research</td><td>3</td></tr> <tr><td>ENG 246 - Introduction to Children's Literature</td><td>3</td></tr> <tr><td>HPE 142 - Advanced First Aid</td><td>3</td></tr> <tr><td>MATH 121 - Mathematics for Elementary Teachers I</td><td>3</td></tr> <tr><td>MATH 221 - Mathematics for Elementary Teachers II</td><td>3</td></tr> <tr><td>PSY 131 - Introductory Psychology</td><td>3</td></tr> <tr><td>PSY 256 - Educational Psychology</td><td>3</td></tr> <tr><td>PSY 294 - Educational Psychology Practicum</td><td>1</td></tr> <tr><td><i>4 credit hours Science (100 level or higher)</i></td><td>4</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	CIS 221 - Instructional Technology for Elementary Teachers	3	ENG 121 - Assisting with Elementary Reading	3	ENG 131 - Introduction to College Writing	3	ENG 132 - College Writing and Research	3	ENG 246 - Introduction to Children's Literature	3	HPE 142 - Advanced First Aid	3	MATH 121 - Mathematics for Elementary Teachers I	3	MATH 221 - Mathematics for Elementary Teachers II	3	PSY 131 - Introductory Psychology	3	PSY 256 - Educational Psychology	3	PSY 294 - Educational Psychology Practicum	1	<i>4 credit hours Science (100 level or higher)</i>	4
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PSY 294 - Educational Psychology Practicum	1																										
<i>4 credit hours Science (100 level or higher)</i>	4																										

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 35**

Electrical Technology

Associate in Applied Science - Technology Division

Mark Siedlik
David Wiltshire

313-845-6353
313-845-9637

msiedlik@hfcc.edu
djwiltshire@hfcc.edu

ELECT.AAS...
Technology Building 211H
Technology Building 115A

Description

The Electrical Technology program at HFCC starts with the basic principles of electricity and proceeds to the concepts of solid state components such as diodes, transistors, integrated circuits, and microprocessor systems. More advanced courses show how these fundamental principles are applied to machine control, computers, power supplies, amplifiers, oscillators, industrial control, and instrumentation systems.

Laboratory instruction (about 50% of class time) teaches the use of test equipment, setting up circuits, trouble shooting, and calibrating systems.

The Electrical Technology facilities are state-of-the-art offering the high-tech training necessary to prepare you for job success in today's economy. Working conditions are simulated in five fully-equipped laboratories where students put electrical-electronics theory to practice. Along with hands-on lab experience, computer-simulated circuit analysis is used in most of the electronics courses.

Students must complete a minimum of 63 credit hours of study for the Associate in Applied Science degree consisting of required core, required support, and general education courses. To graduate, the student must fulfill the Computer Literacy requirement either by successfully completing one of the Computer Literacy courses (listed in the General Education course requirements) or by passing the Computer Literacy Test.

Career Opportunities

This program leads to an associate degree in Electrical/Electronics technology, which prepares individuals for positions in the following career opportunities:

- Computer Service
- Instrumentation Set-up
- Machine Service
- Quality Control
- Research and Development
- Machine Controls
- Instrumentation Repair
- Microprocessor Systems
- Product Evaluation
- Sales

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Eastern Michigan University
- Ferris State University
- Lawrence Technological University
- Siena Heights University
- University of Michigan - Dearborn
- Wayne State University

Articulation Agreements

3+1 Articulation with Eastern Michigan University, Bachelor of Science in Electrical Engineering Technology.

3+1 Articulation with Ferris State University, Bachelor of Applied Science in Industrial Technology & Management.

Courses

Required Core Courses

Required Core Courses	Cr. Hours
ELEC 103 - Basic Electricity	4
ELEC 106 - Basic Electronics	3
ELEC 115 - Digital Circuits I	3
ELEC 120 - Basic Hydraulics	3
ELEC 145 - AC/DC Rotating Machines	3
ELEC 155 - Analog Electronics 1	3
ELEC 185 - Pneumatics	3
ELEC 195 - AC/DC Circuit Analysis	3
ELEC 200 - Ladder Diagrams and Motor Controls	3
ELEC 245 - Programmable Controllers	3
ELEC 255 - Instrumentation Systems	3
ELEC 260 - Automation Controls and Robotics	3
ELEC 295 - Microprocessor Systems	3

Required Support Courses

Required Support Courses	Cr. Hours
MATH 112 - Trigonometry or higher numbered MATH course	3
<i>Complete one of the following courses:</i>	
PHYS 120 - Technical Physics	4
PHYS 131 - Liberal Arts Physics	4
<i>Complete 7 credit hours from the following courses:</i>	
AUT 170, CNT 110, DRAF 120, ELEC 190, ELEC 205, ELEC 215 and/or, MPS 100.	7

Associate in Applied Science Degree Requirement

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Term 1	Term 2	Term 3	Term 4	Term 5
ELEC 103	ELEC 115	ELEC 120	ELEC 245	ELEC 260
ELEC 106	ELEC 145	ELEC 185	ELEC 255	ELEC 295
	ELEC 155	ELEC 200		
	ELEC 195			

**Minimum Number of Credits To Graduate
(Including Options/Electives): 63**

Electrical Technology — Analog Electronics

Certificate of Achievement - Technology Division

Mark Siedlik
David Wiltshire

313-845-6353
313-845-9637

msiedlik@hfcc.edu
djwiltshire@hfcc.edu

ELECANALEL.CMLT...
Technology Building 211H
Technology Building 115A

Description	Courses																		
<p>This certificate can be earned while pursuing an Associate in Applied Science degree in Electrical Technology. Analog electronics deals with infinitely varying signals and the components that amplify and operate with these varying signals. Topics in this area include diodes, rectification, filtration, amplification, transistors, scr, triacs, diacs, sensors and instrumentation.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 24</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ELEC 103 - Basic Electricity</td><td>4</td></tr> <tr><td>ELEC 106 - Basic Electronics</td><td>3</td></tr> <tr><td>ELEC 155 - Analog Electronics 1</td><td>3</td></tr> <tr><td>ELEC 190 - Electronics Technology Co-op</td><td>1</td></tr> <tr><td>ELEC 195 - AC/DC Circuit Analysis</td><td>3</td></tr> <tr><td>ELEC 205 - Analog Electronics II</td><td>3</td></tr> <tr><td>ELEC 255 - Instrumentation Systems</td><td>3</td></tr> <tr><td>MATH 103 or higher level MATH</td><td></td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	ELEC 103 - Basic Electricity	4	ELEC 106 - Basic Electronics	3	ELEC 155 - Analog Electronics 1	3	ELEC 190 - Electronics Technology Co-op	1	ELEC 195 - AC/DC Circuit Analysis	3	ELEC 205 - Analog Electronics II	3	ELEC 255 - Instrumentation Systems	3	MATH 103 or higher level MATH	
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ELEC 195 - AC/DC Circuit Analysis	3																		
ELEC 205 - Analog Electronics II	3																		
ELEC 255 - Instrumentation Systems	3																		
MATH 103 or higher level MATH																			

Electrical Technology — Automation Controls

Certificate of Achievement - Technology Division

Mark Siedlik
David Wiltshire

313-845-6353
313-845-9637

msiedlik@hfcc.edu
djwiltshire@hfcc.edu

ELECAUCTRL.CMLT...
Technology Building 211H
Technology Building 115A

Description	Courses																																
<p>This certificate can be geared to working people in industry that need the skills directly related to their job in industrial controls. Also Electrical Engineers, who may have a theoretical four year degree, may want to consider taking some of the classes in the certificate; especially ELEC 245-Programmable Controllers and ELEC 260-Automation Controls and Robotics.</p> <p>This certificate can be earned while pursuing an Associate in Applied Science degree in Electrical Technology.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 27</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ELEC 103 - Basic Electricity</td><td>4</td></tr> <tr><td>ELEC 106 - Basic Electronics</td><td>3</td></tr> <tr><td>ELEC 145 - AC/DC Rotating Machines</td><td>3</td></tr> <tr><td>ELEC 190 - Electronics Technology Co-op</td><td>1</td></tr> <tr><td>ELEC 195 - AC/DC Circuit Analysis</td><td>3</td></tr> <tr><td>ELEC 200 - Ladder Diagrams and Motor Controls</td><td>3</td></tr> <tr><td>ELEC 245 - Programmable Controllers</td><td>3</td></tr> <tr><td>ELEC 260 - Automation Controls and Robotics</td><td>3</td></tr> <tr><td>MATH 103 or higher level MATH</td><td>3-5</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4" style="background-color: #cccccc;">Recommended Course Sequence</th> </tr> <tr> <th style="background-color: #cccccc;">Term 1</th> <th style="background-color: #cccccc;">Term 2</th> <th style="background-color: #cccccc;">Term 3</th> <th style="background-color: #cccccc;">Term 4</th> </tr> </thead> <tbody> <tr> <td>ELEC 103</td> <td>ELEC 145 ELEC 195 ELEC 200</td> <td>ELEC 245</td> <td>ELEC 260</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	ELEC 103 - Basic Electricity	4	ELEC 106 - Basic Electronics	3	ELEC 145 - AC/DC Rotating Machines	3	ELEC 190 - Electronics Technology Co-op	1	ELEC 195 - AC/DC Circuit Analysis	3	ELEC 200 - Ladder Diagrams and Motor Controls	3	ELEC 245 - Programmable Controllers	3	ELEC 260 - Automation Controls and Robotics	3	MATH 103 or higher level MATH	3-5	Recommended Course Sequence				Term 1	Term 2	Term 3	Term 4	ELEC 103	ELEC 145 ELEC 195 ELEC 200	ELEC 245	ELEC 260
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Recommended Course Sequence																																	
Term 1	Term 2	Term 3	Term 4																														
ELEC 103	ELEC 145 ELEC 195 ELEC 200	ELEC 245	ELEC 260																														

Electrical Technology — Basic Electronics

Certificate of Achievement - Technology Division

Mark Siedlik
David Wiltshire

313-845-6353
313-845-9637

msiedlik@hfcc.edu
djwiltshire@hfcc.edu

ELECBASEEL.CSGL...
Technology Building 211H
Technology Building 115A

Description	Courses								
<p>This certificate can be earned while pursuing an Associate in Applied Science degree in Electrical Technology.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 10</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ELEC 103 - Basic Electricity</td><td>4</td></tr> <tr><td>ELEC 106 - Basic Electronics</td><td>3</td></tr> <tr><td>MATH 103 or higher level MATH</td><td>3-5</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	ELEC 103 - Basic Electricity	4	ELEC 106 - Basic Electronics	3	MATH 103 or higher level MATH	3-5
Required Core Courses	Cr. Hours								
ELEC 103 - Basic Electricity	4								
ELEC 106 - Basic Electronics	3								
MATH 103 or higher level MATH	3-5								

Electrical Technology — Digital Electronics

Certificate of Achievement - Technology Division

Mark Siedlik 313-845-6353 msiedlik@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

ELECDIGELE.CMLT...
 Technology Building 211H
 Technology Building 115A

Description

Digital electronics is that branch of electronics dealing with finite and discrete signal levels. Most digital signals are binary: they are either high or low.

This certificate can be earned while pursuing an Associate in Applied Science degree in Electrical Technology.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 23**

Courses

Required Core Courses	Cr. Hours
ELEC 103 - Basic Electricity	4
ELEC 106 - Basic Electronics	3
ELEC 115 - Digital Circuits I	3
ELEC 190 - Electronics Technology Co-op	1
ELEC 195 - AC/DC Circuit Analysis	3
ELEC 215 - Digital Circuits II	3
ELEC 295 - Microprocessor Systems	3
MATH 103 or higher level MATH	3-5

Recommended Course Sequence

Term 1	Term 2	Term 3
ELEC 103	ELEC 115	ELEC 215
ELEC 106	ELEC 195	ELEC 295

Energy Technology — Boiler License Review Basic

Certificate of Achievement - Technology Division

Gregory Laskowsky 313-317-1550 glaskowsky@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

ENTPHPBOIL.CSGL...
 Technology Building 115D
 Technology Building 115A

Description

This is an entry-level program designed for students seeking to enter the boiler operation, power plant operation or facilities operation and maintenance fields. In this program students operate boilers, engines, turbines and heating and cooling equipment in the “hands-on” labs in the Energy Technology Department. Upon completing this 17 credit hour program, students receive a diploma which may be presented to local license agencies to assist in meeting the requirements to take a HP Boiler, LP Boiler or NIULPE 4th Class license exam.

Courses in the certificate may also be applied to the Energy Technology — Power/Building Engineer Advanced Certificate. All courses in the certificate program may be applied to an Associate in Applied Science degree in Energy Technology — Power/Building Engineer.

Career Opportunities

Successful passing of one of these exams will offer the opportunity to seek employment as a power engineer, building engineer or facilities engineer. Graduates of this program also find employment in: boiler, HVAC, refrigeration, air conditioning areas such as sales, service, installation, maintenance, and repair of buildings and their related mechanical and electrical systems.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 17**

Courses

Required Core Courses	Cr. Hours
ENT 103 - DC and AC Electricity	3
ENT 105 - Introduction to RACH (PO)	2
ENT 141 - Power Engineering I- Energy Conversion Fundamental (PO)	2
ENT 145 - Power Engineering II - Boilers and Auxiliaries (PO)	4
ENT 256 - Power Engineering III - Steam Plant Operation Lab (PO)	4
ENT 259 - Power Engineering IV- Plant/Building Operations & Maintenance (PO)	2

Programs of Study

Energy Technology — Heating and Cooling Advanced

Certificate of Achievement - Technology Division

Gregory Laskowsky
David Wiltshire

313-317-1550
313-845-9637

glaskowsky@hfcc.edu
djwiltshire@hfcc.edu

HCOOL.CERT...
Technology Building 115D
Technology Building 115A

Description

This 35 credit hour certificate program is intended for the student who would like to take the next step into the advanced residential and light commercial heating and cooling industry. Entry-level theory and hands-on experiences are provided as well as advanced courses in commercial heating and refrigeration, light commercial controls, heating and cooling mechanical codes, installation, energy management and energy system design. Students successfully completing this certificate may take ARI or ACCA air conditioning exams and the EPA Refrigerant Recovery exam and will be prepared to sit for the State of Michigan Mechanical Contractors Test.

All courses in the certificate program may be applied to an Associate of Applied Science degree in Energy Technology — HVAC. Courses in this program may also be applied to the Energy Technology — Heating and Cooling Basic Certificate.

Career Opportunities

Upon successful completion of the Associate in Applied Science degree in Energy Technology — HVAC, the student is qualified for an entry-level position as:

- Energy conservation technician
- HVAC service and installation technician
- Plant/building energy manager
- Residential/commercial energy auditor
- HVAC design/estimating or sales engineer
- Facilities manager or facilities maintenance technician
- Representative for power equipment or instrument and control equipment found in buildings of all sizes.
- Building engineer
- Field service engineer
- Licensed power engineer
- Field application engineer

**Minimum Number of Credits To Graduate
(Including Options/Electives): 35**

Energy Technology — Heating and Cooling Basic

Certificate of Achievement - Technology Division

Gregory Laskowsky
David Wiltshire

313-317-1550
313-845-9637

glaskowsky@hfcc.edu
djwiltshire@hfcc.edu

HCOOL.CMLT...
Technology Building 115D
Technology Building 115A

Description

This 19 credit hour Heating and Cooling program is a job entry preparation certificate in Heating and Cooling for residential service. The courses provide theory and hands-on exposure to the basics of electricity, air conditioning, heating, and refrigeration technology. Sheet metal fabrication and heating and cooling installation, troubleshooting and design are included. A student successfully completing this certificate should be ready to sit for air conditioning (ARI or ACCA) and EPA Refrigerant Recovery exams to be certified as an entry-level residential service technician.

All courses in the certificate program may be applied to an Associate of Applied Science degree in Energy Technology — HVAC. All courses in this program may also be applied to the Energy Technology — Heating and Cooling Advanced Certificate.

Career Opportunities

Upon successful completion of the Associate in Applied Science degree in Energy Technology — HVAC, the student is qualified for an entry-level position as an:

- Energy conservation technician
- HVAC service and installation technician
- Facilities manager or facilities maintenance technician

Courses	
Required Core Courses	Cr. Hours
ENT 100 - Basic Workplace Skills (PO)	1
ENT 101 - Introduction to Energy Technology	2
ENT 103 - DC and AC Electricity	3
ENT 105 - Introduction to RACH (PO)	2
ENT 106 - Sheet Metal Fabrication for Systems	2
ENT 108 - Introduction to Heating and Cooling Codes	2
ENT 109 - HVAC Installation and Start-Up	2
Residential Service Technician Courses	Cr. Hours
ENT 104 - Heating Technology (PO)	4
ENT 113 - Refrigeration Technology	4
ENT 119 - Air Conditioning Technology	4
Advanced Commercial/Industrial/Design Courses	Cr. Hours
<i>Select 9 credits from the Advanced Commercial/Industrial/Design courses from the following:</i>	9
ENT 212 - Light Commercial Heating Systems (PO)	3
ENT 216 - Light Commercial Refrigeration Systems	3
ENT 219 - RACH Light Commercial Systems	3
ENT 230 - Michigan Mechanical Contractor Licensing Examination Preparation	4
ENT 260 - Energy Systems Management (PO)	4
ENT 265 - Energy Systems Design	5

**Minimum Number of Credits To Graduate
(Including Options/Electives): 19**

Courses	
Required Core Courses	Cr. Hours
ENT 103 - DC and AC Electricity	3
ENT 104 - Heating Technology (PO)	4
ENT 105 - Introduction to RACH (PO)	2
ENT 106 - Sheet Metal Fabrication for Systems	2
ENT 113 - Refrigeration Technology	4
ENT 119 - Air Conditioning Technology	4

Energy Technology — HVAC

Associate in Applied Science - Technology Division

Gregory Laskowsky
David Wiltshire

313-317-1550
313-845-9637

glaskowsky@hfcc.edu
djwiltshire@hfcc.edu

ENGRYHVAC.AAS...
Technology Building 115D
Technology Building 115A

Description

This associate degree program presents an overall study of the principles of energy production and its uses. It provides the student with a rounded background in the principles of measurement, conservation and operation and repair of residential/commercial heating, air conditioning and refrigeration equipment.

During the student's progress in the degree program, the student will earn the Energy Technology — HVAC Basic Certificate and the Energy Technology — HVAC Advanced Certificate, enabling the student career opportunities while completing the associate degree.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Eastern Michigan University
- Ferris State University
- Lawrence Technological University
- Siena Heights University
- University of Michigan - Dearborn
- Wayne State University

**Minimum Number of Credits To Graduate
(Including Options/Electives): 63**

Courses

Required Core Courses

	Cr. Hours
ENT 100 - Basic Workplace Skills (PO)	1
ENT 101 - Introduction to Energy Technology	2
ENT 103 - DC and AC Electricity	3
ENT 104 - Heating Technology (PO)	4
ENT 105 - Introduction to RACH (PO)	2
ENT 106 - Sheet Metal Fabrication for Systems	2
ENT 108 - Introduction to Heating and Cooling Codes	2
ENT 109 - HVAC Installation and Start-Up	2
ENT 113 - Refrigeration Technology	4
ENT 119 - Air Conditioning Technology	4
ENT 141 - Power Engineering I- Energy Conversion Fundamental (PO)	2
ENT 260 - Energy Systems Management (PO)	4
MFMT 103 - Industrial Computer Application	2
<i>Complete 12 credit hours from the following courses:</i>	12
ENT 201, ENT 212, ENT 216, ENT 219, ENT 230, ENT 231, ENT 240, and/or ENT 265.	

Required Support Courses

	Cr. Hours
ENG 132 - College Writing and Research	3
<i>Complete 4 credit hours of Math from the following courses:</i>	4
MATH 100, MATH 103, MATH 175, and/or MATH 180.	
<i>Complete 4 credit hours of Science from the following courses:</i>	4
CHEM 131, PHYS 120, and/or PHYS 131.	
<i>Complete one of the following courses:</i>	
POLS 131 - Introduction to American Government and Political Science	3
SSC 131 - A Survey of the Social Sciences	3

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Energy Technology — Plumbing - Pipefitting Advanced

Certificate of Achievement - Technology Division

Greg Laskowsky
David Wiltshire

313-317-1550
313-845-9637

glaskowsky@hfcc.edu
djwiltshire@hfcc.edu

ENTPLPIPAD.CMLT...
Technology Building 164D
Technology Building 115A

Description	Courses																																
<p>The Energy Technology, Technical Division Plumbing-Pipefitting certificates are designed for those student candidates that interested in Plumbing-Pipefitting. The certificates are designed for those who are seeking to improve their skills in the Construction Technical Trades or for those interested in multi-skilled improvements.</p> <p>The Advanced Certificate Plumbing-Pipefitting is achieved by obtaining first the basic certificate, then taking the next steps preparing for State of Michigan Welding Certification, along with a Practical Plumbing Lab and State of Michigan License preparation for the Journeymen's State of Michigan License Exam.</p> <p>* Verifiable apprentice work time is required to take the State of Michigan Journeyman's test. 35 hours.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 29</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ENT 100 - Basic Workplace Skills (PO)</td><td>1</td></tr> <tr><td>PLMB 100 - Fundamentals of Plumbing and Pipefitting</td><td>2</td></tr> <tr><td>PLMB 110 - Drains, Wastes, and Vents</td><td>2</td></tr> <tr><td>PLMB 120 - Hydronic Heating Systems</td><td>2</td></tr> <tr><td>PLMB 250 - Plumbing-Pipefitting Codes</td><td>2</td></tr> <tr><td>PLMB 275 - Practical Plumbing Lab-State License Preparation</td><td>4</td></tr> <tr><td>PLMB 280 - Plumbing-Pipefitting State of Michigan License Preparation</td><td>2</td></tr> <tr><td>TAMJ 110 - Materials Joining and Fabrication Fundamentals</td><td>3</td></tr> <tr><td>TAMJ 115 - Materials Joining and Fabrication: Advanced Techniques2</td><td>2</td></tr> <tr><td>TAMJ 125 - MJ & F: ASME Pipe and Pressure Vessel Welding</td><td>2</td></tr> <tr><td>TAMJ 230 - MJ & F: ASME Pipe and Pressure Vessel Certification</td><td>2</td></tr> <tr><td>TAMN 100 - Shop Tools and Techniques</td><td>3</td></tr> <tr><td colspan="2"><i>Complete one of the following courses:</i></td></tr> <tr><td>ENT 124 - Construction Blueprint Reading</td><td>2</td></tr> <tr><td>TAFD 112 - Construction Blueprint Reading</td><td>2</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	ENT 100 - Basic Workplace Skills (PO)	1	PLMB 100 - Fundamentals of Plumbing and Pipefitting	2	PLMB 110 - Drains, Wastes, and Vents	2	PLMB 120 - Hydronic Heating Systems	2	PLMB 250 - Plumbing-Pipefitting Codes	2	PLMB 275 - Practical Plumbing Lab-State License Preparation	4	PLMB 280 - Plumbing-Pipefitting State of Michigan License Preparation	2	TAMJ 110 - Materials Joining and Fabrication Fundamentals	3	TAMJ 115 - Materials Joining and Fabrication: Advanced Techniques2	2	TAMJ 125 - MJ & F: ASME Pipe and Pressure Vessel Welding	2	TAMJ 230 - MJ & F: ASME Pipe and Pressure Vessel Certification	2	TAMN 100 - Shop Tools and Techniques	3	<i>Complete one of the following courses:</i>		ENT 124 - Construction Blueprint Reading	2	TAFD 112 - Construction Blueprint Reading	2
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Energy Technology — Plumbing - Pipefitting Basic

Certificate of Achievement - Technogy Division

Gregory Laskowsy
David Wiltshire

313-317-1550
313-845-9637

glaskowsky@hfcc.edu
djwiltshire@hfcc.edu

ENTPLPIPBA.CMLT...
Technology Building 164D
Technology Building 115A

Description	Courses																						
<p>The Energy Technology — Plumbing-Pipefitting Basic and Advanced certificates are designed for those student candidates that interested in Plumbing-Pipefitting. The certificates are designed for those who are seeking to improve their skills in the Construction Technical Trades or for those interested in multi-skilled improvements.</p> <p>Upon completing the Energy Technology — Plumbing - Pipefitting Basic Certificate students are encouraged to continue and complete the Energy Technology — Plumbing - Pipefitting Advanced Certificate. Students take the next steps preparing for State of Michigan Welding Certification, along with a Practical Plumbing Lab and State of Michigan License preparation for the Journeymen's State of Michigan License Exam.</p> <p>* Verifiable apprentice work time is required to take the State of Michigan Journeyman's test. 35 hours.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 17</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ENT 100 - Basic Workplace Skills (PO)</td><td>1</td></tr> <tr><td>PLMB 100 - Fundamentals of Plumbing and Pipefitting</td><td>2</td></tr> <tr><td>PLMB 110 - Drains, Wastes, and Vents</td><td>2</td></tr> <tr><td>PLMB 120 - Hydronic Heating Systems</td><td>2</td></tr> <tr><td>PLMB 250 - Plumbing-Pipefitting Codes</td><td>2</td></tr> <tr><td>TAMJ 110 - Materials Joining and Fabrication Fundamentals</td><td>3</td></tr> <tr><td>TAMN 100 - Shop Tools and Techniques</td><td>3</td></tr> <tr><td colspan="2"><i>Complete one of the following courses:</i></td></tr> <tr><td>ENT 124 - Construction Blueprint Reading</td><td>2</td></tr> <tr><td>TAFD 112 - Construction Blueprint Reading</td><td>2</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	ENT 100 - Basic Workplace Skills (PO)	1	PLMB 100 - Fundamentals of Plumbing and Pipefitting	2	PLMB 110 - Drains, Wastes, and Vents	2	PLMB 120 - Hydronic Heating Systems	2	PLMB 250 - Plumbing-Pipefitting Codes	2	TAMJ 110 - Materials Joining and Fabrication Fundamentals	3	TAMN 100 - Shop Tools and Techniques	3	<i>Complete one of the following courses:</i>		ENT 124 - Construction Blueprint Reading	2	TAFD 112 - Construction Blueprint Reading	2
Required Core Courses	Cr. Hours																						
ENT 100 - Basic Workplace Skills (PO)	1																						
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ENT 124 - Construction Blueprint Reading	2																						
TAFD 112 - Construction Blueprint Reading	2																						

Energy Technology — Power Engineering High Pressure Boiler - 3rd Class Steam Refrigeration License Review Online

Certificate of Achievement - Technology Division

James Martini
David Wiltshire

313-845-6453
313-845-9637

jmartini@hfcc.edu
djwiltshire@hfcc.edu

ENTPHPBOIL.CSGL....
Technology Building 112L
Technology Building 115A

Description

Online study is available for:

- Multi-Skilled Power and Process Engineers and Technicians
- Building Engineers and Technicians
- Facilities Engineers and Technicians

Online study is available for Power Engineers and Technicians in the Energy Technology department at Henry Ford Community College. These courses and programs are generally designed for operations personnel who have had some power, process or maintenance field experience and are seeking their initial license or studying to obtain higher licenses. For those persons desiring to enter this field without field experience, it is recommended that they enroll in the regular classroom lab courses in the power engineering area at the college or consider taking the introductory online courses noted below.

Online study courses are “totally” online. These courses are available for college credit toward graduation and do not require attendance of any class or laboratory sessions on campus. Online study in the Energy Technology area at the college is supplemented with “optional” hands on laboratories, in the College Power Engineering Cogeneration Facility which may include operating plant auxiliary systems, steam turbine electric generators, gas and diesel engine generators, motor generator sets, operation of simulation programs including a large steam turbine electric boiler plant simulator, and operation of seven functional boiler systems. These optional labs are possible where students can make it to campus and are available to attend.

Prerequisites for Online Study

You should have basic computer skills prior to taking any online course which includes using getting on the internet with web browsers, doing e-mail, working with a word processor like MS Notebook and handling basic file operations. These basic skills can be obtained by taking the online course MFMT 103-Industrial Computer Applications.

Online Introductory Courses to the Power Engineering Field

For those persons seeking an orientation or familiarization to this field and may not be able to attend campus classes, the following introductory courses may be taken.

1. MFMT 115-Boiler (LP)/Heating Plant Operation & Maintenance: If you cannot attend the traditional classroom-laboratory sessions at the college, this online course, provides an introduction to this field and to low pressure boilers and heating plants.
2. MFMT 151-Power and Process Plant Operation: An additional online course which provides a more extensive introduction to the power, process and facilities fields is.

Online Courses are for Power Process Facilities Engineers and Technicians in the field:

- With Power-Process-Facilities field experience and/or,
- Who are advancing in the profession and/or,
- Who are seeking higher grade licenses.

Energy Technology — Power Engineering High Pressure Boiler - 3rd Class Steam Refrigeration License Review Certificate of Achievement-Online

In this online program, students study equipment, mechanical and electrical systems of buildings and plants and demonstrate their

understanding of the use, the operation and maintenance through workbook exercises and/or completing exams related to individual elements. The building operator or engineer student will further demonstrate his/her understanding by completing sketches, online internet exploratory experiences and/or field work or related activities and exams related to field systems. Practice license exams for high pressure boiler operator and third class refrigeration and air conditioning engineer are provided in this course and the student should be able to attain a passing score on such exams.

Career Opportunities

Power Engineers, Process Engineers, Building Engineers, Facility Engineers, Stationary Engineers and Technicians operate and maintain boilers, chillers, rooftop heating & cooling systems, highly complex instrument and controls systems, engines, generators, compressors, and related equipment such as pumps and fans. These systems provide power, heat, air conditioning, and refrigeration for buildings and manufacturing facilities.

Employment Outlook

The Projections of Employment, published by the Labor Market Information shows that the number of Facilities Engineers and Stationary Engineers will grow at the average through 2005 and beyond. Projected Growth 2005-2012 is approximately 10%. The trend toward automated, centralized control of building operations has not reduced the need for Power, Building and Facilities Engineers. When automated systems are installed in older buildings, they often take the place of simpler systems and equipment that had not required the high-level services of Power, Facilities and Building Engineers. Furthermore, Facilities Engineers and Building Engineers not only operate, but also maintain these sophisticated systems. Automated systems typically require fewer operators but more maintenance personnel. Technically trained engineers must also be available to take over manually if the system should fail. Due to the increasing complexity of power-generating systems, job opportunities will be best for those with college technical training or vocational school courses in computerized controls and instrumentation. Although there are relatively few job openings for Facilities Engineers at any given time, highly skilled Power, Building, Facilities Engineers and Technicians are currently in short supply and have little difficulty finding employment.

Depending on where they work, Facilities Engineers and Stationary Engineers also service industrial machinery, hospital equipment, plumbing fixtures, elevators, and other electrical or mechanical devices used on the premises. Engineers are responsible for the safe, efficient operation of all systems under their control. Generally they make regular rounds of equipment areas, reading meters and gauges, listening to the machinery, and adjusting the controls as required. Periodically they perform tests and take corrective action, such as adding chemicals to the boilers to prevent corrosion and scale.

In large, automated facilities, engineers in a central control room monitor conditions throughout the plant by watching video display terminals and checking computer printouts that show instrument readings from machinery in remote locations. Necessary adjustments often can be made simply by typing commands to the main computer on the computer terminal keyboard. If machinery breaks down or malfunctions occur, engineers are responsible for locating the source of trouble and making or arranging for all the necessary repairs. Using hand and power tools,

they may replace or modify defective parts, fabricate new parts, or completely overhaul the equipment. When necessary, they contact the equipment manufacturer or call in the appropriate specialist. For each shift, engineers keep a log of test results, instrument readings, and any preventive or corrective maintenance work performed.

In many establishments, Facilities and Stationary Engineers handle all aspects of the job; in others, they are assisted by helpers or maintenance personnel.

Additional Program Requirements

Energy Technology — Power Engineering online elective and substitution courses for online certificates: With completion of an advising session and written approval, of Energy Technology — Power Engineering Technology faculty, the following online courses may be taken to enhance the advancement for students in the profession or substitute for online courses where experience of the student may require a course to compensate for a need for learning in a related area:

MFMT 103 - Industrial Computer Exploration	2 Cr. Hrs.
MFMT 151 - Power and Process Plant Operation	5 Cr. Hrs.
MFMT 162 - Boiler Installers-Repairers License Review	5 Cr. Hrs.
MFMT 222 - Manufacturing Fabrication	2 Cr. Hrs.
MFMT 223 - Facilities Fabrication	2 Cr. Hrs.

Registry/Certification/Licensure Exam Information

This program is designed to prepare students to take:

1. NIULPE (National Institute for the Uniform Licensing of Power Engineers) 3rd or 4th Class Power Engineer Exams,
2. City of Detroit LP Boiler, HP Boiler or 3rd Class Steam or Refrigeration License Exams or
3. City of Dearborn LP Boiler, HP Boiler or 3rd Class Steam or Refrigeration License Exams.

Note:

This certificate does not qualify a person to take power engineering license exams. Specific experience requirements are required to take various license exams. Check with the license agency involved to ensure you have the required experience for the license you are seeking.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 9**

Courses	
Required Core Courses	Cr. Hours
MFMT 114 - Energy Conversion Principles, Tools, Instruments, Processes	2
MFMT 116 - HP Boiler Operation/Maintenance And License Prep	2
MFMT 241 - Power Engineering/Refrigeration License Review	5

Energy Technology — Power Engineering Low Pressure Boiler-Heating Plant Operator

Certificate of Achievement - Technology Division

James Martini
David Wiltshire

313-845-6453
313-845-9637

jmartini@hfcc.edu
djwiltshire@hfcc.edu

ENTPLPBOIL.CSGL...
Technology Building 211L
Technology Building 115A

Description

Online study is available for:

- Multi-Skilled Power or Process Engineers and Technicians
- Building Engineers and Technicians
- Facilities Engineers and Technicians

Online study is available for Power Engineers and Technicians in the Energy Technology department at Henry Ford Community College. These courses and programs are generally designed for operations personnel who have had some power, process or maintenance field experience and are seeking their initial license or studying to obtain higher licenses. For those persons desiring to enter this field without field experience, it is recommended that they enroll in the regular classroom lab courses in the power engineering area at the college or consider taking the introductory online courses noted below.

Online study courses are “totally” online. These courses are available for college credit toward graduation and do not require attendance of any class or laboratory sessions on campus. Online study in the Energy Technology area at the college is supplemented with “optional” hands on laboratories, in the College Power Engineering Cogeneration Facility which may include operating plant auxiliary systems, steam turbine electric generators, gas and diesel engine generators, motor generator sets, operation of simulation programs including a large steam turbine electric boiler plant simulator, and operation of seven functional boiler systems. These optional labs are possible where students can make it to campus and are available to attend.

Prerequisites for Online Study

You should have basic computer skills prior to taking any online course which includes using getting on the internet with web browsers, doing e-mail, working with a word processor like MS Notebook and handling basic file operations. These basic skills can be obtained by taking the online course MFMT 103-Industrial Computer Applications.

Online Introductory Courses to the Power Engineering Field

For those persons seeking an orientation or familiarization to this field and may not be able to attend campus classes, the following introductory courses may be taken.

1. MFMT 115-Boiler (LP)/Heating Plant Operation & Maintenance: If you cannot attend the traditional classroom-laboratory sessions at the college, this online course, provides an introduction to this field and to low pressure boilers and heating plants.
2. MFMT 151-Power and Process Plant Operation: An additional online course which provides a more extensive introduction to the power, process and facilities fields is.

Online Courses are for Power Process Facilities Engineers and Technicians in the field:

- With Power-Process-Facilities field experience and/or,
- Who are advancing in the profession and/or,
- Who are seeking higher grade licenses.

Energy Technology — Power Engineering Low Pressure Boiler - Heating Plant Operator Certificate of Achievement Online

A basic totally online entry-level certificate for persons seeking initial positions as low pressure boiler or heating and cooling plant operators or maintenance technicians. Covers energy conversion fundamentals, tools and equipment used by heating and cooling plant technicians. Provides

information on the various boiler-heating and cooling plant operations and maintenance. Provides basic information for completing low pressure boiler license exams, however, persons seeking a license should check with the license agency to determine the experience and other elements which may be required for obtaining a license.

Career Opportunities

Power Engineers, Process Engineers, Building Engineers, Facility Engineers, Stationary Engineers and Technicians operate and maintain boilers, chillers, rooftop heating & cooling systems, highly complex instrument and controls systems, engines, generators, compressors, and related equipment such as pumps and fans. These systems provide power, heat, air conditioning, and refrigeration for buildings and manufacturing facilities.

Employment Outlook

The Projections of Employment, published by the Labor Market Information shows that the number of Facilities Engineers and Stationary Engineers will grow at the average through 2005 and beyond. Projected Growth 2005-2012 is approximately 10%. The trend toward automated, centralized control of building operations has not reduced the need for Power, Building and Facilities Engineers. When automated systems are installed in older buildings, they often take the place of simpler systems and equipment that had not required the high-level services of Power, Facilities and Building Engineers. Furthermore, Facilities Engineers and Building Engineers not only operate, but also maintain these sophisticated systems. Automated systems typically require fewer operators but more maintenance personnel. Technically trained engineers must also be available to take over manually if the system should fail. Due to the increasing complexity of power-generating systems, job opportunities will be best for those with college technical training or vocational school courses in computerized controls and instrumentation. Although there are relatively few job openings for Facilities Engineers at any given time, highly skilled Power, Building, Facilities Engineers and Technicians are currently in short supply and have little difficulty finding employment.

Depending on where they work, Facilities Engineers and Stationary Engineers also service industrial machinery, hospital equipment, plumbing fixtures, elevators, and other electrical or mechanical devices used on the premises. Engineers are responsible for the safe, efficient operation of all systems under their control. Generally they make regular rounds of equipment areas, reading meters and gauges, listening to the machinery, and adjusting the controls as required. Periodically they perform tests and take corrective action, such as adding chemicals to the boilers to prevent corrosion and scale.

In large, automated facilities, engineers in a central control room monitor conditions throughout the plant by watching video display terminals and checking computer printouts that show instrument readings from machinery in remote locations. Necessary adjustments often can be made simply by typing commands to the main computer on the computer terminal keyboard. If machinery breaks down or malfunctions occur, engineers are responsible for locating the source of trouble and making or arranging for all the necessary repairs. Using hand and power tools, they may replace or modify defective parts, fabricate new parts, or completely overhaul the equipment. When necessary, they contact the equipment manufacturer or call in the appropriate specialist. For each shift, engineers keep a log of test results, instrument readings, and any preventive or corrective maintenance work performed.

In many establishments, Facilities and Stationary Engineers handle all aspects of the job; in others, they are assisted by helpers or maintenance personnel.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 8**

Courses	
Required Core Courses	Cr. Hours
MFMT 114 - Energy Conversion Principles, Tools, Instruments, Processes	2
MFMT 115 - Boiler (LP)/Heating Plant Operation & Maintenance	2
MFMT 228 - Building-Plant Major Equipment/Controls Maintenance I	2
<i>Complete one of the following courses:</i>	
ENT 259 - Power Engineering IV - Plant/Building Operations & Maintenance (PO)	2
MFMT 229 - Building-Plant Major Equipment/Controls Maintenance II	2

Energy Technology — Power Engineering Steam - Refrigeration (1st & 2nd Class) License Review Online

Certificate of Achievement - Technology Division ENTPADSTRF.CSGL...
 James Martini 313-845-6453 jmartini@hfcc.edu Technology Building 211L
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu Technology Building 115A

Description

Online study is available for:

- Multi-Skilled Power Process Engineers and Technicians
- Building Engineers and Technicians
- Facilities Engineers and Technicians

Online study is available for Power Engineers and Technicians in the Energy Technology department at Henry Ford Community College. These courses and programs are generally designed for operations personnel who have had some power, process or maintenance field experience and are seeking their initial license or studying to obtain higher licenses. For those persons desiring to enter this field without field experience, it is recommended that they enroll in the regular classroom lab courses in the power engineering area at the college or consider taking the introductory online courses noted below.

Online study courses are “totally” online. These courses are available for college credit toward graduation and do not require attendance of any class or laboratory sessions on campus. Online study in the Energy Technology area at the college is supplemented with “optional” hands on laboratories, in the College Power Engineering Cogeneration Facility which may include operating plant auxiliary systems, steam turbine electric generators, gas and diesel engine generators, motor generator sets, operation of simulation programs including a large steam turbine electric boiler plant simulator, and operation of seven functional boiler systems. These optional labs are possible where students can make it to campus and are available to attend.

Prerequisites for Online Study

You should have basic computer skills prior to taking any online course which includes using getting on the internet with web browsers, doing e-mail, working with a word processor like MS Notebook and handling basic file operations. These basic skills can be obtained by taking the online course MFMT 103-Industrial Computer Applications.

Online Introductory Courses to the Power Engineering Field

For those persons seeking an orientation or familiarization to this field and may not be able to attend campus classes, the following introductory courses may be taken.

1. MFMT 115-Boiler (LP)/Heating Plant Operation & Maintenance: If you cannot attend the traditional classroom-laboratory sessions at the college, this online course, provides an introduction to this field and to low pressure boilers and heating plants.
2. MFMT 151-Power and Process Plant Operation: An additional online course which provides a more extensive introduction to the power, process and facilities fields is. Online Courses are for Power Process Facilities Engineers and Technicians in the field
 - With Power-Process-Facilities field experience and/or,
 - Who are advancing in the profession and/or,
 - Who are seeking higher grade licenses.

Energy Technology — Power Engineering Steam - Refrigeration (1st & 2nd Class) License Review Online

An advanced college level online certificate program providing Refrigeration and Steam study in the following areas:

1st and 2nd Class Refrigeration Operator License Review and Refrigeration Journeyman course providing information and review

of the fundamentals of refrigeration thermodynamics, refrigerants, metering devices, refrigeration system components, refrigeration system operation for ammonia and other refrigerants and refrigeration system operation and maintenance.

1st and 2nd Class Steam License review of major and minor power engineering subjects including boilers, basic thermodynamics, boiler operation & maintenance, boiler & plant efficiency & emissions control, pumps, auxiliaries, power plant accessories, turbines, engines, electrical, compressors, internal combustion engines, power plant equipment, and review of national, state and local steam and boiler codes. Students are required to answer questions, work problems and sketch components and systems and focus is on license exam subjects requiring knowledge of both steam and refrigeration.

Career Opportunities

Power Engineers, Process Engineers, Building Engineers, Facility Engineers, Stationary Engineers and Technicians operate and maintain boilers, chillers, rooftop heating & cooling systems, highly complex instrument and controls systems, engines, generators, compressors, and related equipment such as pumps and fans. These systems provide power, heat, air conditioning, and refrigeration for buildings and manufacturing facilities.

Employment Outlook

The Projections of Employment, published by the Labor Market Information shows that the number of Facilities Engineers and Stationary Engineers will grow at the average through 2005 and beyond. Projected Growth 2005-2012 is approximately 10%. The trend toward automated, centralized control of building operations has not reduced the need for Power, Building and Facilities Engineers. When automated systems are installed in older buildings, they often take the place of simpler systems and equipment that had not required the high-level services of Power, Facilities and Building Engineers. Furthermore, Facilities Engineers and Building Engineers not only operate, but also maintain these sophisticated systems. Automated systems typically require fewer operators but more maintenance personnel. Technically trained engineers must also be available to take over manually if the system should fail. Due to the increasing complexity of power-generating systems, job opportunities will be best for those with college technical training or vocational school courses in computerized controls and instrumentation. Although there are relatively few job openings for Facilities Engineers at any given time, highly skilled Power, Building, Facilities Engineers and Technicians are currently in short supply and have little difficulty finding employment.

Depending on where they work, Facilities Engineers and Stationary Engineers also service industrial machinery, hospital equipment, plumbing fixtures, elevators, and other electrical or mechanical devices used on the premises. Engineers are responsible for the safe, efficient operation of all systems under their control. Generally they make regular rounds of equipment areas, reading meters and gauges, listening to the machinery, and adjusting the controls as required. Periodically they perform tests and take corrective action, such as adding chemicals to the boilers to prevent corrosion and scale.

In large, automated facilities, engineers in a central control room monitor conditions throughout the plant by watching video display terminals and checking computer printouts that show instrument readings from machinery in remote locations. Necessary adjustments often can be

made simply by typing commands to the main computer on the computer terminal keyboard. If machinery breaks down or malfunctions occur, engineers are responsible for locating the source of trouble and making or arranging for all the necessary repairs. Using hand and power tools, they may replace or modify defective parts, fabricate new parts, or completely overhaul the equipment. When necessary, they contact the equipment manufacturer or call in the appropriate specialist. For each shift, engineers keep a log of test results, instrument readings, and any preventive or corrective maintenance work performed.

In many establishments, Facilities and Stationary Engineers handle all aspects of the job; in others, they are assisted by helpers or maintenance personnel.

Registry/Certification/Licensure Exam Information

Students completing this certificate may have the knowledge to take the NIULPE (National Institute for the Uniform Licensing of Power Engineers) 2nd, 1st or Chief Engineers License Exams on campus or through any one of the 20 + state licensing boards for NIULPE, if they have the required years of field experience for a specific steam license or may use the course to prepare for other local license agency steam license exams at various license levels.

Students completing this certificate may also have the knowledge to take the EPA Refrigerant Recovery Exam, and the Refrigeration portions of the NIULPE (National Institute for the Uniform Licensing of Power Engineers) 3rd, 2nd, 1st or Chief Engineers License Exams on campus or through any one of the 20 + state licensing boards for NIULPE, if they have the required years of field experience for a specific refrigeration license or may use the course to prepare for other local license agency refrigeration exams at various license levels.

Note:

This certificate does not qualify a person to take power engineering license exams. Specific experience requirements are required to take various license exams. Check with the license agency involved to ensure you have the required experience for the license you are seeking.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 10**

Courses	
Required Core Courses	Cr. Hours
MFMT 241 - Power Engineering/Refrigeration License Review	5
MFMT 248 - Power Engineering - Steam License Review	5

Energy Technology — Power/Building Engineer

Associate in Applied Science - Technology Division

Gregory Laskowsky
David Wiltshire

313-317-1550
313-845-9637

glaskowsky@hfcc.edu
djwiltshire@hfcc.edu

ENGRYPWRBLD.AAS...
Technology Building 115D
Technology Building 115A

Programs of Study

Description	Courses																																														
<p>This associate degree program is designed to provide the necessary background principles, concepts and practical laboratory experience to enter the field of power engineering or assume a position in the building or small plant operation and maintenance areas.</p> <p>The program is designed for students who want to become operating engineers, boiler operators, building engineers, refrigeration and air conditioning engineers in generating plants, pumping stations, steam plants, heating plants, water treatment facilities, industrial refrigeration plants and commercial and industrial buildings.</p> <p>During the student's progress in the degree program, the student will earn the Energy Technology — Boiler License Review Basic Certificate and the Energy Technology — Power/Building Engineer Advanced Certificate, enabling the student career opportunities while completing the associate degree.</p> <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> • Davenport University • Eastern Michigan University • Ferris State University • Lawrence Technological University • Siena Heights University • University of Michigan - Dearborn • Wayne State University <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 62</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ENT 100 - Basic Workplace Skills (PO)</td><td style="text-align: right;">1</td></tr> <tr><td>ENT 101 - Introduction to Energy Technology</td><td style="text-align: right;">2</td></tr> <tr><td>ENT 103 - DC and AC Electricity</td><td style="text-align: right;">3</td></tr> <tr><td>ENT 105 - Introduction to RACH (PO)</td><td style="text-align: right;">2</td></tr> <tr><td>ENT 141 - Power Engineering I- Energy Conversion Fundamental (PO)</td><td style="text-align: right;">2</td></tr> <tr><td>ENT 145 - Power Engineering II - Boilers and Auxiliaries (PO)</td><td style="text-align: right;">4</td></tr> <tr><td>ENT 256 - Power Engineering III - Steam Plant Operation Lab (PO)</td><td style="text-align: right;">4</td></tr> <tr><td>ENT 259 - Power Engineering IV- Plant/Building Operations & Maintenance (PO)</td><td style="text-align: right;">2</td></tr> <tr><td>ENT 260 - Energy Systems Management (PO)</td><td style="text-align: right;">4</td></tr> <tr><td>MFMT 103 - Industrial Computer Application</td><td style="text-align: right;">2</td></tr> <tr><td><i>Complete 7 credit hours from the following courses:</i></td><td style="text-align: right;">7</td></tr> <tr><td>ENT 201, ENT 231, ENT 235, ENT 240, MFMT 115, MFMT 116, MFMT 241, and/or MFMT 248.</td><td></td></tr> <tr><td><i>Complete 12 credit hours from the following courses:</i></td><td style="text-align: right;">12</td></tr> <tr><td>ENT 201, ENT 212, ENT 216, ENT 219, ENT 230, ENT 248, ENT 265, MFMT 241, and/or MFMT 248.</td><td></td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #cccccc;">Required Support Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td><i>Complete 4 credit hours of Math from the following courses:</i></td><td style="text-align: right;">4</td></tr> <tr><td>MATH 100, MATH 103, MATH 175, and/or MATH 180.</td><td></td></tr> <tr><td><i>Complete 4 credit hours of Science from the following courses:</i></td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 131, PHYS 120, and/or PHYS 131.</td><td></td></tr> <tr><td><i>Complete one of the following courses:</i></td><td></td></tr> <tr><td>POLS 131 - Introduction to American Government and Political Science</td><td style="text-align: right;">3</td></tr> <tr><td>SSC 131 - A Survey of the Social Sciences</td><td style="text-align: right;">3</td></tr> </tbody> </table> <p>Associate in Applied Science Degree Requirements</p> <p>Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.</p> <p>General Education</p> <p>Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.</p> <p>Elective Courses</p> <p>Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).</p> <p>Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.</p>	Required Core Courses	Cr. Hours	ENT 100 - Basic Workplace Skills (PO)	1	ENT 101 - Introduction to Energy Technology	2	ENT 103 - DC and AC Electricity	3	ENT 105 - Introduction to RACH (PO)	2	ENT 141 - Power Engineering I- Energy Conversion Fundamental (PO)	2	ENT 145 - Power Engineering II - Boilers and Auxiliaries (PO)	4	ENT 256 - Power Engineering III - Steam Plant Operation Lab (PO)	4	ENT 259 - Power Engineering IV- Plant/Building Operations & Maintenance (PO)	2	ENT 260 - Energy Systems Management (PO)	4	MFMT 103 - Industrial Computer Application	2	<i>Complete 7 credit hours from the following courses:</i>	7	ENT 201, ENT 231, ENT 235, ENT 240, MFMT 115, MFMT 116, MFMT 241, and/or MFMT 248.		<i>Complete 12 credit hours from the following courses:</i>	12	ENT 201, ENT 212, ENT 216, ENT 219, ENT 230, ENT 248, ENT 265, MFMT 241, and/or MFMT 248.		Required Support Courses	Cr. Hours	<i>Complete 4 credit hours of Math from the following courses:</i>	4	MATH 100, MATH 103, MATH 175, and/or MATH 180.		<i>Complete 4 credit hours of Science from the following courses:</i>	4	CHEM 131, PHYS 120, and/or PHYS 131.		<i>Complete one of the following courses:</i>		POLS 131 - Introduction to American Government and Political Science	3	SSC 131 - A Survey of the Social Sciences	3
Required Core Courses	Cr. Hours																																														
ENT 100 - Basic Workplace Skills (PO)	1																																														
ENT 101 - Introduction to Energy Technology	2																																														
ENT 103 - DC and AC Electricity	3																																														
ENT 105 - Introduction to RACH (PO)	2																																														
ENT 141 - Power Engineering I- Energy Conversion Fundamental (PO)	2																																														
ENT 145 - Power Engineering II - Boilers and Auxiliaries (PO)	4																																														
ENT 256 - Power Engineering III - Steam Plant Operation Lab (PO)	4																																														
ENT 259 - Power Engineering IV- Plant/Building Operations & Maintenance (PO)	2																																														
ENT 260 - Energy Systems Management (PO)	4																																														
MFMT 103 - Industrial Computer Application	2																																														
<i>Complete 7 credit hours from the following courses:</i>	7																																														
ENT 201, ENT 231, ENT 235, ENT 240, MFMT 115, MFMT 116, MFMT 241, and/or MFMT 248.																																															
<i>Complete 12 credit hours from the following courses:</i>	12																																														
ENT 201, ENT 212, ENT 216, ENT 219, ENT 230, ENT 248, ENT 265, MFMT 241, and/or MFMT 248.																																															
Required Support Courses	Cr. Hours																																														
<i>Complete 4 credit hours of Math from the following courses:</i>	4																																														
MATH 100, MATH 103, MATH 175, and/or MATH 180.																																															
<i>Complete 4 credit hours of Science from the following courses:</i>	4																																														
CHEM 131, PHYS 120, and/or PHYS 131.																																															
<i>Complete one of the following courses:</i>																																															
POLS 131 - Introduction to American Government and Political Science	3																																														
SSC 131 - A Survey of the Social Sciences	3																																														

Energy Technology — Power/Building Engineer Advanced

Certificate of Achievement - Technology Division

Gregory Laskowsky
David Wiltshire

313-317-1550
313-845-9637

glaskowsky@hfcc.edu
djwiltshire@hfcc.edu

PWBLD.CERT...
Technology Building 115D
Technology Building 115A

Description	Courses																																		
<p>The Power/Building Engineer Program is designed to prepare students to enter the power plant operation, the building and facilities operation and maintenance and the HVAC commercial-industrial operation and maintenance fields. All courses from the Phase I - HP Boiler License Prep Program apply toward this program. Students completing the 32 credits for the program receive a certificate which may be presented to local license agencies to assist in meeting the requirements to take a HP Boiler, NIULPE 4th Class and/or a 3rd Class Refrigeration Operator license exam. In this program students operate boilers, engines, turbines and heating and cooling equipment in the “hands-on” labs in the Energy Technology Department. Students completing this program and passing a steam and/or refrigeration license exam may find employment as building and facilities engineers, operating engineers, stationary engineers or power engineers, in steam-electric or cogeneration generating plants, pumping stations, heating plants, air conditioning plants, water treatment facilities, industrial or commercial refrigeration plants and commercial or industrial process plants and buildings.</p> <p>All courses in the certificate program may be applied to an Associate in Applied Science degree in Energy Technology — Power/Builder Engineer. Courses in the certificate may also be applied to the Energy Technology — Boiler License Review Basic Certificate.</p> <p>Career Opportunities See Associate in Applied Science degree in Energy Technology — Power/Building Engineer.</p> <p>Additional Program Requirements Power plant, process plant, and heating plant visits are mandatory requirements for courses qualifying students to take license exams. Students must attend 4-6 plant visits as part of their class attendance to qualify for waivers of education for experience as required by license agencies.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 32</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ENT 100 - Basic Workplace Skills (PO)</td><td>1</td></tr> <tr><td>ENT 101 - Introduction to Energy Technology</td><td>2</td></tr> <tr><td>ENT 103 - DC and AC Electricity</td><td>3</td></tr> <tr><td>ENT 105 - Introduction to RACH (PO)</td><td>2</td></tr> <tr><td>ENT 141 - Power Engineering I- Energy Conversion Fundamental (PO)</td><td>2</td></tr> <tr><td>ENT 145 - Power Engineering II - Boilers and Auxiliaries (PO)</td><td>4</td></tr> <tr><td>ENT 256 - Power Engineering III - Steam Plant Operation Lab (PO)</td><td>4</td></tr> <tr><td>ENT 259 - Power Engineering IV- Plant/Building Operations & Maintenance (PO)</td><td>2</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Option II Elective Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td colspan="2"><i>Choose 12 credit hours from the following Elective courses:</i></td></tr> <tr><td>ENT 212 - Light Commercial Heating Systems (PO)</td><td>3</td></tr> <tr><td>ENT 216 - Light Commercial Refrigeration Systems</td><td>3</td></tr> <tr><td>ENT 219 - RACH Light Commercial Systems</td><td>3</td></tr> <tr><td>ENT 248 - Power Engineering First Class License Review (PO)</td><td>3</td></tr> <tr><td>MFMT 241 - Power Engineering/Refrigeration License Review (OL)</td><td>5</td></tr> <tr><td>MFMT 248 - Power Engineering-Steam License Review</td><td>5</td></tr> </tbody> </table> <p><i>Note:</i> Students must meet the prerequisites or have permission to enroll in some of the Advanced Elective Courses. No more than 4 credit hours of prerequisite courses (ENT 104, ENT 113 or ENT 119) may be applied towards the advanced requirements.</p>	Required Core Courses	Cr. Hours	ENT 100 - Basic Workplace Skills (PO)	1	ENT 101 - Introduction to Energy Technology	2	ENT 103 - DC and AC Electricity	3	ENT 105 - Introduction to RACH (PO)	2	ENT 141 - Power Engineering I- Energy Conversion Fundamental (PO)	2	ENT 145 - Power Engineering II - Boilers and Auxiliaries (PO)	4	ENT 256 - Power Engineering III - Steam Plant Operation Lab (PO)	4	ENT 259 - Power Engineering IV- Plant/Building Operations & Maintenance (PO)	2	Option II Elective Courses	Cr. Hours	<i>Choose 12 credit hours from the following Elective courses:</i>		ENT 212 - Light Commercial Heating Systems (PO)	3	ENT 216 - Light Commercial Refrigeration Systems	3	ENT 219 - RACH Light Commercial Systems	3	ENT 248 - Power Engineering First Class License Review (PO)	3	MFMT 241 - Power Engineering/Refrigeration License Review (OL)	5	MFMT 248 - Power Engineering-Steam License Review	5
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Engineering

Associate in Science - Science Division

Dr. Charles Jacobs
Larry Smyrski

313-845-9632
313-845-9631

cjacobs@hfcc.edu
lsmyrski@hfcc.edu

ENGIN.AS...
Science Building 107
Science Building 244

Description

The Associate in Science degree in Pre-Engineering program provides the first two years of a student's engineering education. Articulation agreements guarantee admission to the final two years of engineering school at several universities to students who satisfactorily complete the Associate in Science in Pre-Engineering at HFCC. These articulation agreements also maximize the transferability of your HFCC coursework.

Although the core engineering curriculum is fairly standard among accredited engineering schools, students should consult with the engineering advisor to determine which courses they should take, depending on the engineering discipline and the engineering school to which they will transfer.

HFCC offers the courses common in the first two years of an ABET-accredited engineering program, and works closely with the faculty at local engineering schools to make sure your courses will transfer. The elective courses required for the various fields of engineering may vary slightly, and you should check with an engineering advisor to make sure that you are taking the correct series of courses for your intended field of engineering.

Although the minimum requirement for completing the course is 60 credit hours, students may be able to take additional coursework at HFCC and transfer it to a 4-year institution.

Career Opportunities

Engineering students can specialize in fields such as:

- Aerospace
- Biomedical
- Chemical
- Civil, including structural, transportation, environmental, geotechnical, urban planning, and water resources.
- Computer and electrical
- Industrial
- Mechanical

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center).

Admission Requirements/Eligibility

Engineering school is a rigorous academic program that requires strong math and science skills. Students in engineering programs at 4-year colleges and universities typically take 16-18 credit hours each semester. The majority of these courses are in natural sciences, mathematics, and engineering. Students planning to enter engineering should take a rigorous high school background including four years of college prep math and science.

Most courses that apply toward engineering degrees require calculus as a prerequisite. Engineering schools calculate that, in order to finish a

degree in four years, students should start calculus in their first semester in college. If you do not place into calculus, it will take you longer to earn your degree.

Students who are interested in engineering fields, but who do not have a strong aptitude for math may want to investigate programs in engineering technology. Although we do not have a formal degree program, our courses do transfer into the Bachelor of Science programs in engineering technology at several universities.

Additional Program Requirements

Requirements for different fields of engineering and schools vary. Students must consult with an engineering advisor to plan an appropriate course of study for the area of engineering and the college or university to which they intend to transfer.

The minimum requirement for earning the Associate in Science degree in Pre-Engineering is 60 credit hours. However, engineering schools will accept as many as seven additional courses from HFCC transfer students toward Bachelor of Science degrees in Engineering. We encourage students to take advantage of this and to complete as many courses as they can transfer at HFCC.

**Minimum Number of Credits To Graduate
(Including Options/Electives) : 60**

Courses

Required Core Courses	Cr. Hours
MATH 180 - Calculus I	5
MATH 183 - Calculus II	5
MATH 280 - Calculus III	5
MATH 289 - Differential Equations	4
CHEM 141 - Principles of General and Inorganic Chemistry I	5
PHYS 241 - Mechanics	4
PHYS 242 - Sound, Light, and Thermodynamics	4
PHYS 243 - Electricity and Magnetism	4

Note:

Students should consult an engineering advisor for a Recommended Course Sequence for their intended field of engineering.

Engineering students may use MATH 180 as the prerequisite for CIS 170.

Required Support Courses	Cr. Hours
<i>Complete one of the following courses:</i>	
BEC 133 - Basic Economics	3
BEC 151 - Principles of Macro Economics	3
BEC 152 - Principles of Micro Economics	3

Associate in Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Science Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses for the may also be used to fulfill Associate in Science Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Science degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

BIO 131 - Introductory Biology	4
BIO 150 - Biology: Organisms, Genes, and Ecology	4
BIO 152 - Biology: Cells and Molecular Biology	4
CHEM 142 - Principles of General and Inorganic Chemistry II	5
CIS 170 - "C" Programming	3
ENGR 130 - Introduction to Engineering	3
ENGR 201 - Science of Materials	3
ENGR 232 - Statics	3
ENGR 233 - Dynamics	3

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Environmental Studies

Associate in Science - Science Division

Judy Kelly
Dr. Charles Jacobs

313-845-9728
313-845-9734

jkelly@hfcc.edu
cjacobs@hfcc.edu

ENVIRN.AS...
Science Building 104E
Science Building 107

Description	Courses
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The Associate in Science degree in Environmental Studies emphasizes the interdisciplinary nature of environmental problem-solving at the local, regional, and international levels. Students completing this program can transfer to a Bachelor's program in four broad areas: land resources, nature studies, resource and policy management, and urban service.

Although the minimum requirement for completing the program is 61 credit hours, students may be able to take additional coursework at HFCC and transfer it to the 4-year institution.

Career Opportunities

Some occupations of Bachelors-level environmental studies majors are:

- Teacher
- National park naturalist
- Resource policy planner
- Air quality analyst
- Regional land use planner
- Public health officer
- Public interest group director

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center).

**Minimum Number of Credits To Graduate
(Including Options/Electives): 61**

Required Core Courses	Cr. Hours
BIO 138 - Environmental Science	3
BIO 139 - Environmental Science Laboratory	2
BIO 150 - Biology: Organisms, Genes, Ecology	4
CHEM 141 - Principles of General and Inorganic Chemistry I	5
GEOG 131 - Principles of Physical Geography	4
GEOG 132 - World & Regional Geography	3
GEOL 131 - Principles of Geology	4
<i>Complete one of the following courses:</i>	
ATMS 131 - Weather and Climate	3
GEOG 231 - Introduction to Geographic Information Systems	3

Note:

Students should consult the Environmental Studies advisor for a Recommended Course Sequence for your intended area of study.

Required Support Courses	Cr. Hours
ANTH 131 - Intro to Anthropology	3
BCA 140 - Software Applications	3
BEC 152 - Principles of Micro Economics	3
MATH 112 - Trigonometry or higher-level MATH course	3
POLS 131 - Introduction to American Government & Political Science	3
<i>Complete 6 credit hours of Humanities</i>	6

Associate in Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Science Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses for the may also be used to fulfill Associate in Science Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Science degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Firefighter/Paramedic

Associate in Applied Science

Shannon Bruley
Ronald Bodurka

Health Careers Division

313-317-6582
313-845-9877
sbruley@hfcc.edu
rbodurka@hfcc.edu

FFPAR.AAS...

Health Careers Education Center 132L
Health Careers Education Center 132

Description

The Associate in Applied Science degree in Firefighter/Paramedic offers a career pathway for individuals seeking an entry-level position with a full-time municipal fire service. This program is a combination of academic education with necessary hands-on skills. Degree recipients will have an associate in applied science, an EMT-Basic license, paramedic certification, Firefighter I & II certification and field clinical experience.

EMT-Basic Certification and Paramedic Certification

The paramedic program at HFCC reflects the new national curriculum and all successful completers are eligible to take the National Registry certification exams. The college reserves the right to change policies and course requirements in effect at the time of catalog publication. The EMS portion of the program is constantly updated to meet the changing needs of the profession. This is reflected in the high success rate of our graduates both on the National Registry and in practice.

Computer Usage

This program, from EMS 100-level and up, requires students to utilize a computer and the internet. All students have computer and Internet access through our campus library.

Career Opportunities

Employment opportunities range from municipal fire services to field and hospital-based emergency care positions. Firefighting positions are highly competitive which is why we encourage all students to complete the Associate in Applied Science as a Firefighter/Paramedic. This 90+/- credit hour associate level program is actually a 3-year degree program. Students who successfully complete the full program can transfer to Siena Heights University as a Senior, with only one year remaining in order to complete a bachelor degree (inverted major with Bachelor of Applied Science). This positions our graduates well above many entry-level applicants for the coveted Firefighter positions.

In EMS, paramedics are in high demand. According to the U.S. Department of Labor, Bureau of Labor Statistics, "Employment of emergency medical technicians and paramedics is expected to grow faster than the average for all occupations through 2012" (Occupational Outlook Handbook, 2004-2005 Reprint).

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Siena Heights University

Occupational Exposure/Risk

In emergency medical services, both in school and on the job, exposure to infectious diseases and latex may be minimal to moderate depending on the setting in which you are working. Exposure to illness and infectious disease is an occupational risk for all health care workers. Persons should not become health care workers unless they recognize and accept this risk. Proper education and strict adherence to well established infection-control guidelines can reduce the risk to a minimum. Persons who have latex sensitivity or allergies should consult with a physician prior to entering the program for guidance on the merits of continuing in a health care career.

Admission Requirements/Eligibility

The first year of studies for the Emergency Medical Services degree is open enrollment. Students should place into ENG 131 in order to be most successful. All first year EMS courses must be taken concurrently and passed concurrently with a C or better. Students wishing to enter the second year of studies, which includes the paramedic core, must apply through the EMS office in Health Careers. This level of studies begins every FALL semester. Acceptance to the college is granted to most applicants and does not constitute nor guarantee admission to the paramedic core studies. Early advising for course sequencing is highly recommended. Students are accepted into the program based on a "first-qualified, first-accepted" basis. All potential placements must be registered on the wait list in the EMS office.

For EMS 200-level courses, students will need to satisfy the following prerequisites:

1. EMT-Basic MI License (with a current National Registry Certificate preferred), BIO 233, BIO 234, AH 100, AH 120 & AH 105 (or equivalent)*
2. ASSET Math Score of 39 on the Numerical Skill Unit or COMPASS Pre-Algebra score of 39 or successful completion of MATH 074.
3. ASSET Reading Score of 43 or COMPASS reading score of 84 or successful completion of ENG 081.

*A grade of C or better is required for successful completion of all courses (core and support) required in the EMS program. Students not receiving a C or better cannot continue in the program until they have successfully repeated the course(s) earning a C or better. Students who do not successfully complete all co-requisite courses in the EMS Program cannot continue with that same class of students. Therefore, students who fail must repeat all coursework (200+ and up) from the beginning up to the point that they failed, and then progress in sequence with the new class of paramedic students. Students who need to repeat paramedic must request to be put on the waiting list for the following year. Re-admittance is subject to seat capacity and prior performance.

Tech. Prep. Public Safety Pathway (PSP) completers from the Downriver Career Tech. Program

In order to receive credits, you must complete (with a C or better) at least six credit hours of 100+ level course-work (at HFCC) for each year of HS PSP credit earned. Bring a student copy of your HFCC transcript along with a copy of your FINAL HS transcript to the EMS Program Manager. This is necessary to process a request for credits to be posted by the Office of the Registrar. Do not ask your Counselor, Health Career Advisor, or Instructor to post credits. This process must be initiated by the EMS Program Manager. Do not REPEAT courses in which you have earned credit through the PSP program. If you are not sure if you earned credit, contact the EMS Program Manager before you schedule courses. The

courses in the PSP Program are as follows:

Year 1- CRJ 131 (3 credit hours), MFR (5 credit hours, no transfer equivalent)*

Year 2- CRJ 135 (3 credit hours), AH 100 (4 credit hours), and EMS (8 credit hours, no transfer equivalent)*

Additional Program Requirements

Health Appraisal

Each student is required to complete a Health Appraisal Form, copies of which are available in the Health Careers Office. This appraisal includes a physical, blood titers (to validate immunity to childhood immunizations), TB test, Hepatitis B and boosters if necessary. Actual lab results from the titers need to be submitted with the appraisal to the program. The cost for this appraisal is in addition to the basic tuition and fee schedule.

Students in the EMS program are expected to meet the same physical and mental requirements as emergency medical technicians. A representative job profile, also available in the Health Careers Office, lists the specific physical and mental requirements as well as the environmental conditions of the occupation.

Criminal Background Check and Drug Screen

Consistent with Section 20173 of the Michigan Public Health Code and the requirements of our clinical affiliates, a Criminal Background Check and Drug Screen* is required for all students in EMS programs prior to beginning clinical assignments. The cost for this test is in addition to the basic tuition and fee schedule.

*Students with felony convictions on their record should not enroll into the program as we have a zero-tolerance stance from our clinical affiliates. If such individual is granted an expungement, then he/she would be considered for eligibility. Students with a history of alcohol related driving offenses and or felony convictions will find it difficult if not impossible to gain employment in public safety careers.

Students who are not cleared for clinical through the Health Appraisal, Criminal Background Check and Drug Screen will not be able to complete the EMS education programs.

Uniforms

Uniform shirts are provided through the program at the Basic EMT level. Pants, shoes, work belt, stethoscope, and National Registry exam fees are in addition to the basic tuition and fee schedule.

Job Placement

Information about career placement and job success is available through either the Health Careers Office or the College's Job Placement Office.

Program Duration Limits/Updates/Changes

Once a student is admitted/enrolled into the paramedic portion of the EMS degree, that student must complete with that same group of students. If for any reason a student must stop attending after successfully completing any portion thereof, and wishes to complete, the student must reapply through the EMS office for the desired year of return. Because of the rapid changes in healthcare, legislation, and resulting course content, successfully completed EMS classes must be repeated in order to assure competence. This applies to all second year students who start, stop, and then return for completion. Early advising through the EMS office is essential.

The College continuously attempts to improve each program and as a result, courses and/or requirements may be modified. Curriculum, course content, and program criteria are subject to change by action of the College faculty and administration. Contact the Health Careers Office at 313-845-9877 for any current program updates or visit www.hfcc.edu.

Registry/Certification/Licensure Exam Information

If an individual is a convicted felon, it could disqualify him/her from

obtaining the necessary National Registry Certification. For the specific National Registry EMS Policy, go to http://www.nremt.org/about/policy_felony.asp. After obtaining a National Registry Certificate, individuals can apply for a Michigan Licensure, which is necessary to practice EMS as a profession. If an individual is a convicted felon, questions regarding potential licensure should be directed to the Michigan Department of Community Health, Bureau of Health Professions, or go to the following web site: <http://www.michigan.gov/mdch>.

Accreditation

Henry Ford Community College is an approved EMS Program Sponsor through the Michigan Department of Community Health, Bureau of EMS & Trauma Systems. Through this approval, all graduates/completers of the EMS program(s) are eligible to sit for the national registry exams for the designation of Nationally Registered Emergency Medical Technician-Basic or Nationally Registered Emergency Medical Technician-Advanced.

Minimum Number of Credits To Graduate (Including Options/Electives): 90

Courses

Required Core Courses	Cr. Hours
EMS 100 - EMT - Basic Fundamentals	9
EMS 106 - EMT - Basic Procedures	2.5
EMS 109 - EMT - Basic Clinical Externship	2
EMS 200 - Paramedic I	3
EMS 205 - Paramedic Lab I	3
EMS 210 - Paramedic II	3
EMS 215 - Paramedic Lab II	4
EMS 220 - Paramedic III	4
EMS 225 - Paramedic Lab III	2
EMS 230 - Paramedic IV	4
EMS 240 - Paramedic V	3
EMS 290 - Advanced Clinical I	4
EMS 295 - Advanced Clinical II	4
EMS 299 - Advanced Clinical III	4

Complete Firefighter I and Firefighter II certification (9 credit hours).*

Note:

Courses must be completed following the Recommended Course Sequence. Careful course sequencing is essential. Please take careful note of courses that have co-requisites.

* This program requires a minimum of 60.5 Required Core Courses to graduate. The 60.5 credit hours include the 9 credit hours for the Firefighter I and Firefighter II certifications that are available at HFCC from the training academy. To receive this credit on your transcript see the EMS program manager after you have completed your first semester of Paramedic studies (200 or higher level EMS coursework).

A minimum of 'C' grade is required in all Required Core Courses.

Required Support Courses	Cr. Hours
AH 100 - Medical Terminology	4
AH 105 - Basic Life Support for Healthcare Providers	0.5
AH 120 - Pharmacology for Allied Health	3
BIO 233 - Anatomy and Physiology I	4
BIO 234 - Anatomy and Physiology II	4
POLS 131 - Introduction to American Government and Political Science	3

Complete one of the following courses:

FS 201, CRJ 131, CRJ 132, MGT 237, MGT 238, and/or MGT 240.

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

HPEA 155 - Relax Techniques for Stress Management 2
 HPEA 117 - Weight Train & Phys Conditioning 2

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Spring/Summer I	Fall I	Winter I	
AH 105	EMS 100	AH 120	
AH 100	EMS 106	BIO 233	
ENG 131	EMS 109	ENG 132	
Spring/Summer II	Fall II	Winter II	Spring/Summer III
BIO 234	EMS 200	EMS 215	EMS 225
CLT 100	EMS 205	EMS 220	EMS 240
POLS 131	EMS 210	EMS 230	EMS 299
	EMS 290	EMS 295	

Note:

CLINICAL

Basic:

We require two rotations in the field, usually 8 a.m. - 8 p.m., with Monday through Sunday scheduling options and two rotations in the hospital emergency room, with scheduling options available 24/7. Clinical for EMT Basics will be explained, thoroughly, at the EMS 109 orientation.

Paramedic:

EMS clinicals are made available at the discretion of our host EMS Departments and Hospitals. Students are encouraged to keep flexible schedules during school to accommodate the advanced clinical experience. At the paramedic level (EMS clinical 290, EMS 295 and EMS 299), many of the rotations outside of the ER, are daytimes and during the traditional work week. Examples of this are OR and Cardiac Cath labs. Clinical is explained, in depth, at the Paramedic orientation in August, before the FALL II start of paramedic courses.

Clinical courses, basic and advanced, show TBA in the Time/Day area of the schedule. We try very hard to individualize clinical rotations to each student's needs.

The Second year:

Sequencing for EMS 200+ level course-work is not optional. Paramedic (EMS 200+) courses begin in Fall and end in Spring without exception. Prior to that, courses can be taken in any course/semester order as long as the EMS 100, EMS 106 and EMS 109 courses are taken as co-requisites.

Students are responsible for their own transportation to clinical sites and any expenses incurred.

Fitness Leadership

Associate in Applied Science - Fine Arts and Fitness Division

Carole Sloan 313-845-6318 csloan@hfcc.edu
James Nelson 313-845-6316 jnelson@hfcc.edu

FITLD.AAS...
Athletic Memorial Building 7
Athletic Memorial Building 128

Description

The Health and Physical Education curriculum includes two programs in Fitness Leadership. Interested students can enroll in the Certificate of Achievement program or the two-year Associate in Applied Science degree program.

The Fitness Leadership programs have been established in response to the increasing demand for highly-trained, certified exercise instructors and personal trainers in national fitness clubs, corporate fitness centers, area-wide recreation facilities, and hospitals. To become a successful fitness trainer, an individual needs to be knowledgeable in exercise science and aware of current and future trends in the profession.

Both programs offer a wide variety of courses including Exercise Physiology, Nutrition, Methods of Teaching Exercise, and First Aid.

HFCC's Fitness Leadership instructors are fitness leaders and professionals who are highly qualified to share their training and knowledge to help develop strong and dynamic exercise leaders.

Many HFCC graduates attend Eastern Michigan University or Wayne State University, which have strong exercise science programs and excellent transfer agreements with HFCC.

Statistics provided by the American Council on Exercise, the American College of Sports Medicine, and other professional exercise organizations have strongly shown that students who have received training from a college perform well on certification exams.

Career Opportunities

According to the Bureau of Labor Statistics Employment Projections, fitness trainers were listed as one of the fastest growing occupations in 2002-2012. The 2002 average salary for a fitness trainer was \$29,100 per year. Fitness Leadership serves as an excellent foundation for students entering other careers such as nursing, physical therapy, community health and business. Students may find that having two complementary areas of concentration and expertise makes them more marketable.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- Wayne State University

Admission Requirements/Eligibility

There are no special admission requirements to the program. Simply declare Fitness Leadership as your program of study when you apply to the college or register for classes. Early in the program you should contact the director of the program to understand the sequence of classes in the program.

Registry/Certification/Licensure Exam Information

Many students are interested in taking industry certification exams such as ACE or ACSM at the completion of the program. The certificate/associate degree from HFCC serves as a much higher level of certification than the various industry certification exams. Even though this is the case, many

students take the industry certification exam and do very well. The classes that will specifically prepare students for the various industry certification exams are HPE 150-Exercise Physiology and HPE 151-Methods for Teaching Exercise.

Minimum Number of Credits To Graduate (Including Options/Electives): 60

Courses

Required Core Courses	Cr. Hours
HPEA 117 - Weight Train & Phys Conditioning	2
HPEA 127 - Aquacise	1
HPE 140 - Lifetime Wellness	2
HPE 142 - Advanced First Aid	3
HPE 150 - Physiology of Exercise	3
HPE 151 - Methods of Teaching Aerobic Exercise	3
HPE 152 - Tests and Measurements	2
HPE 153 - Nutrition	2
HPE 154 - Facilities and Equipment	2
HPE 192 - Internship in Physical Education	2

Complete one team sport from the following courses:

HPEA 104, HPEA 110, HPEA 204, and/or HPEA 210.

Complete one Dance course from the following:

DNC - courses include Ballet, Jazz, Modern, Aerobic, and/or Tap.

Required Support Courses	Cr. Hours
BBA 131 - Introduction to Business	4
BIO 233 - Anatomy and Physiology I	4
BIO 234 - Anatomy and Physiology II	4

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

MATH 110 - Intermediate Algebra	4
MATH 112 - Trigonometry	3
MATH 115 - College Algebra	5
MATH 175 - Precalculus	5
PHYS 133 - Principles of Physics	4
BIO 131 - Introductory Biology	4
BIO 143 - Zoology	4
HPEA 155 - Relax Techniques for Stress Management	2
HPE 253 - Nutrition for the Professional	3
HPE 260 - Health, Nutrition, and PE	3

Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Fitness Leadership

Certificate of Achievement - Fine Arts and Fitness Division

Carole Sloan 313-845-6318 csloan@hfcc.edu
James Nelson 313-845-6316 jnelson@hfcc.edu

FITLD.CERT...
Athletic Memorial Building 7
Athletic Memorial Building 128

Description

The Health and Physical Education curriculum includes two programs in Fitness Leadership. Interested students can enroll in the Certificate of Achievement or the two-year Associate in Applied Science degree program.

The Fitness Leadership programs have been established in response to the increasing demand for highly trained, certified exercise instructors and personal trainers in national fitness clubs, corporate fitness centers, area-wide recreation facilities, and hospitals.

Fitness Leadership serves as an excellent foundation for students entering other careers such as nursing, physical therapy, community health and business. Students may find that having two complementary areas of concentration and expertise makes them more marketable.

Both programs offer a wide variety of courses including Exercise Physiology, Nutrition, Methods of Teaching Exercise, and First Aid.

HFCC's Fitness Leadership instructors are fitness leaders and professionals who are highly qualified to share their training and knowledge to help develop strong and dynamic exercise leaders.

Many HFCC graduates attend Eastern Michigan University or Wayne State University which have strong exercise science programs and excellent transfer agreements with HFCC.

Statistics provided by the American Council on Exercise, the American College of Sports Medicine, and other professional exercise organizations have strongly shown that students who have received training from a college perform well on certification exams.

Career Opportunities

Those who will benefit from the Fitness Leadership programs include aerobic instructors, physical educators, personal trainers, athletes, health-care professionals, nutritionists, and exercise enthusiasts.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- Wayne State University

Admission Requirements/Eligibility

There are no special requirements to the program. You simply need to claim Fitness Leadership as your course of study when you apply to the college or register for classes. Early in the program you should contact the director of the program to understand the sequence of classes in the program.

Registry/Certification/Licensure Exam Information

Many students are interested in taking industry certification exams such as ACE or ACSM at the completion of the program. The certificate/associate degree from HFCC serves as a much higher level of certification than the various industry certification exams. Even though this is the case, many students take the industry certification exams and do very well. The classes that will specifically prepare students for the various industry certification exams are HPE 150-Exercise Physiology and HPE 151-Methods for Teaching Exercise.

Minimum Number of Credits To Graduate (Including Options/Electives): 31

Courses

Required Core Courses	Cr. Hours
HPE 140 - Lifetime Wellness	2
HPE 142 - Advanced First Aid	3
HPE 150 - Physiology of Exercise	3
HPE 151 - Methods of Teaching Aerobic Exercise	3
HPE 152 - Tests and Measurements	2
HPE 153 - Nutrition	2
HPE 154 - Facilities and Equipment	2
HPE 192 - Internship in Physical Education	2
HPEA 127 - Aquacise	1
BIO 233 - Anatomy and Physiology I	4
BIO 234 - Anatomy and Physiology II	4
SPC 131 - Fundamentals of Speaking	3

General Business — No Concentration

Associate in Business - Business and Economics Division

Jared Boyd 313-945-9697 jpboyd@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

GBNOC.AB...
 Reuther Liberal Arts Building 304
 Reuther Liberal Arts Building 328

Programs of Study

Description

Henry Ford Community College’s associate degree in General Business with no concentration is the most basic and flexible degree offered by the Business and Economics Division. This degree requires a minimum of 20 credit hours in business classes. The General Business – No Concentration degree is designed to enable students to customize their academic programs to meet specific goals and is often used by students who are interested in transferring to a four-year institution.

Students may combine this degree with certificate programs offered by the Business and Economics Division or with a degree in another area to improve their employability. The division offers the following certificates:

- Bookkeeping
- Computer Software Applications
- Customer Service Professional
- Industrial Distribution — Business Concentration
- Office Administration
- Office Skills — Fundamentals
- Small Business Management and Entrepreneurship
- Supervision

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 60**

Courses

Required Core Courses Cr. Hours

Complete 20 credit hours from the following course prefixes: 20
 BAC, BBA, BCA, BCO, BEC, BFN, BLW, BMA, LGA
 and/or MGT.
Note:
 BCA 140 is a recommended course and will also satisfy Computer Literacy General Education requirement.

Required Support Course Cr. Hours

Complete one of the following MATH options.
 BMA 110 - Business Mathematics 3
 OR
 MATH 115 - College Algebra or higher numbered MATH 4
 course*
Note:
 * The following courses may not be used to fulfill the requirement: MATH 121, MATH 221, and MATH 225.

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Business, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Graphic Design

Associate in Arts - Fine Arts and Fitness Division

Kirk McLendon
James Nelson

313-845-6487
313-845-6316

mclendon@hfcc.edu
jnelson@hfcc.edu

GPHDS.AA...
MacKenzie Fine Arts Center 149
MacKenzie Fine Arts Center 128

Description

The College offers five certificate programs within the Graphic Design area: Animation, Illustration, Multimedia Design, Print Design, and Web Design, as well as an Associate in Arts degree in Graphic Design.

Students who complete the course requirements for one of the Certificate Programs and the Required Support Courses listed below and meet other College requirements listed below are eligible for an Associate in Arts degree in Graphic Design.

Students may take classes during fall, winter, spring, and summer semesters. Students should refer to the Schedule Planner at www.hfcc.edu/graphicdesign which shows the frequency and time of day Graphic Design classes are offered during the year. Students are also encouraged to meet a Graphic Design advisor to plan their schedule. Students may call 313-845-6487 or e-mail graphicdesign@hfcc.edu to schedule an advising appointment.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

Courses

Required Core Courses

Required Core Courses	Cr. Hours
Complete a certificate in Animation, Illustration, Multimedia Design, Print Design, or Web Design to fulfill a minimum of 36 Core credit hours of the Associate in Arts degree.	36

Note:

Students who have completed ART 106, 166, 266, or 267 should refer to the substitution chart below to see how these discontinued classes fit into the new programs.

- ART 106 may be substituted for ART 107.
- ART 166 may be substituted for ART 109 or ART 110.
- ART 266 may be substituted for ART 275.
- ART 267 may be substituted for ART 275.

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Hospitality Professional Management

Certificate of Achievement - Technology Division

Dennis Konarski
Jeff Click

313-845-6390
313-845-9651

dennis@hfcc.edu
jclick@hfcc.edu

HRMGT.CMLT...
Student and Culinary Arts Center 163E
Student and Culinary Arts Center 163D

Description

Modern-day management practices have become not only beneficial, but necessary in today's increasingly complex hospitality/travel industry. Key components of the Hospitality Professional Management Certificate include cost control, purchasing, marketing, and training at the front office level.

The courses completed in this certificate program may be applied towards an Associate in Applied Science in Hospitality Studies.

Career Opportunities

- Mid-Management Careers

Accreditation

Hospitality and Culinary programs at HFCC are fully accredited by the Accrediting Commission of the American Culinary Federation Educational Foundation of the National Restaurant Association.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 26**

Courses

Required Core Courses

Required Core Courses	Cr. Hours
HOSP 105 - Applied Foodservice Sanitation	2
HOSP 110 - Introduction to Hospitality Industry	3
HOSP 130 - Food and Nutrition	3
HOSP 150 - Dining Room Service and Operations	3
HOSP 160 - Hospitality Purchasing	3
HOSP 170 - Food and Beverage Controls	3
HOSP 210 - Hospitality Supervision and Leadership	3
HOSP 221 - Front Office Procedures and Guest Services	3
HOSP 250 - Hospitality and Travel Marketing	3

Recommended Course Sequence

Fall I	Winter I	Spring I
HOSP 105	HOSP 160	HOSP 221
HOSP 110	HOSP 170	
HOSP 130	HOSP 210	
HOSP 150	HOSP 250	

Hospitality Service Career

Certificate of Achievement - Technology Division

Dennis Konarski
Jeff Click

313-845-6390
313-845-9651

dennis@hfcc.edu
jclick@hfcc.edu

HRSER.CSGL...
Student and Culinary Arts Center 163E
Student and Culinary Arts Center 163D

Description	Courses										
<p>The Service Career field is endless with opportunities and challenging with so many types of dining operations positions available. Remarkable service from servers, managers and restaurant owners is a must for winning and keeping customers.</p> <p>The courses completed in this certificate program may be applied towards an Associate in Applied Science degree in Culinary Arts or Hotel/Restaurant Management.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>HOSP 101 - Wines of the World</td> <td>1</td> </tr> <tr> <td>HOSP 105 - Applied Foodservice Sanitation</td> <td>2</td> </tr> <tr> <td>HOSP 110 - Introduction to Hospitality Industry</td> <td>3</td> </tr> <tr> <td>HOSP 150 - Dining Room Service and Operations</td> <td>3</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	HOSP 101 - Wines of the World	1	HOSP 105 - Applied Foodservice Sanitation	2	HOSP 110 - Introduction to Hospitality Industry	3	HOSP 150 - Dining Room Service and Operations	3
Required Core Courses	Cr. Hours										
HOSP 101 - Wines of the World	1										
HOSP 105 - Applied Foodservice Sanitation	2										
HOSP 110 - Introduction to Hospitality Industry	3										
HOSP 150 - Dining Room Service and Operations	3										

**Minimum Number of Credits To Graduate
(Including Options/Electives): 9**

Recommended Course Sequence

Students may elect to complete the Hospitality Service Career Certificate in one semester - either in the Fall Term or the Winter Term.

Fall I	OR	Winter I
HOSP 101		HOSP 101
HOSP 105		HOSP 105
HOSP 110		HOSP 110
HOSP 150		HOSP 150

Hotel/Restaurant Management

Associate in Applied Science - Technology Division

Dennis Konarski
Jeff Click

313-845-6390
313-845-9651

dennis@hfcc.edu
jclick@hfcc.edu

HRMGT.AAS...
Student and Culinary Arts Center 163E
Student and Culinary Arts Center 163D

Description	Transfer Options/Requirements
<p>The Lodging Industry has advanced considerably from the simple “home away from home” philosophy. Over the years, technology has transformed the complex divisions in the hotel industry into an international enterprise of tourism. Computers, economics, personnel management and interpersonal communication are all skills which are required for success in the hotel and restaurant fields.</p> <p>This degree program can also be used as a transfer vehicle to a four-year baccalaureate program, but transferability of specific courses should be checked with the HFCC University Transfer, Advising, and Career Counseling Office. Henry Ford Community College has developed articulation agreements with Madonna University and Eastern Michigan University to facilitate the educational mobility of students. Students following a specific designed transfer agreement are able to complete 3 years at Henry Ford Community College and 1 year at the above universities with a Bachelor of Science degree in Hospitality Management.</p> <p>In working towards the degree, students can earn various Certificates of Achievements in Hospitality Studies. Students enrolled in the Hotel/Restaurant Management program are eligible to apply for various scholarships.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • Global Foodservice and Lodging Industry • Hotel Operations • Hospitality Marketing / Sales • Event Planning • Hospitality Computer Specialist • Mid Management Positions 	<p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor’s degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> • Eastern Michigan University • Ferris State University • Madonna University • Siena Heights University <p>Accreditation</p> <p>Hospitality and Culinary programs at HFCC are fully accredited by the Accrediting Commission of the American Culinary Federation Educational Foundation of the National Restaurant Association.</p> <p style="text-align: right;">Minimum Number of Credits To Graduate (Including Options/Electives): 67</p>

Programs of Study

Courses

Required Core Courses	Cr. Hours
HOSP 105 - Applied Foodservice Sanitation	2
HOSP 110 - Introduction to Hospitality Industry	3
HOSP 121 - Introduction to Quality Food Preparation - Lecture*	2
HOSP 123 - Introduction to Professional Cooking - Lab*	6
HOSP 130 - Food and Nutrition	3
HOSP 140 - Advanced Food Preparation	8
HOSP 150 - Dining Room Service and Operations	3
HOSP 160 - Hospitality Purchasing	3
HOSP 170 - Food and Beverage Controls	3
HOSP 210 - Hospitality Supervision and Leadership	3
HOSP 221 - Front Office Procedures and Guest Services	3
HOSP 250 - Hospitality and Travel Marketing	3
HOSP 290 - Hospitality Studies Co-Op**	2

Note:
 * HOSP 121 and HOSP 123 must be taken concurrently. HOSP 280 and HOSP 285 may be substituted for HOSP 121 and HOSP 123 for evening students.
 **Students may take HOSP 190 (minimum of 150 working hours for 2 semesters) instead of HOSP 290 - (minimum of 300 hours in 1 semester)

Required Support Courses	Cr. Hours
BBA 131 - Introduction to Business	4
BCA 140 - Software Applications	3
<i>Complete one of the following courses:</i>	
BMA 110 - Business Mathematics	3
MATH 104 - Mathematics for Food Service Careers	4
<i>Complete one of the following courses:</i>	
BAC 110 - Practical Accounting	4
BAC 131 - Principles of Accounting	4
<i>Complete one of the following courses:</i>	
POLS 131 - Introduction to American Government and Political Science	3
SSC 131 - A Survey of the Social Sciences	3

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Recommended Course Sequence Option One

Fall I	Winter I	Spring/Summer I	Fall II
HOSP 105	HOSP 130	HOSP 221	HOSP 160
HOSP 110	HOSP 140	BAC 110	HOSP 170
HOSP 121	HOSP 150	BCA 140	HOSP 210
HOSP 123	BMA 110		HOSP 250
MATH 104			BBA 131

Recommended Course Sequence Option Two

Winter I	Spring I	Fall I	Winter II	Spring/Summer II	Fall II
HOSP 105	HOSP 221	HOSP 130	HOSP 160	BCA 140	BAC 110
HOSP 110	BMA 110	HOSP 140	HOSP 170		BBA 131
HOSP 121		HOSP 150	HOSP 210		
HOSP 123		MATH 104	HOSP 250		

Illustration

Certificate of Achievement - Fine Arts and Fitness Division

Kirk McLendon	313-845-6487	mclendon@hfcc.edu	ILLUS.CMULT...
James Nelson	313-845-6316	jnelson@hfcc.edu	MacKenzie Fine Arts Center 149
			MacKenzie Fine Arts Center 128

Description

Illustration is one of the five certificate programs offered at HFCC. Earn an Illustration Certificate by completing the 36 credit hours of core courses. Students may complete an additional 24 credit hours of General Education and Elective Courses to earn an Associate in Arts degree. Classes are offered throughout the year during the day, evening and weekend.

As long as there have been newspapers, books, and magazines, there has been a need for hand-drawn art that tells a story or communicates an idea. Illustrators need to have excellent drawing skills, know the history of their craft, and be proficient with programs such as Photoshop and Illustrator.

Minimum Number of Credits To Graduate (Including Options/Electives): 36

Courses

Required Core Courses	Cr. Hours
ART 101 - Two-Dimensional Design	3
ART 102 - Drawing I	3
ART 107 - Photoshop	3
ART 112 - Drawing II	3
ART 113 - Life Drawing I	3
ART 115 - Intermediate Perspective	3
ART 116 - Painting I	3
ART 121 - Art History Survey I	3
ART 130 - History of Graphic Design	3
ART 165 - Typography	3
ART 265 - Illustration	3
ART 275 - Advanced Projects	3

Industrial Distribution — Business Concentration

Certificate of Achievement - Business and Economics Division

Diane Smith 313-845-9702 dsmith1@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

INDUSTBUS.CMLT...
 Reuther Liberal Arts Building 331
 Reuther Liberal Arts Building 328

Description	Courses																																										
<p>The industrial distribution channel is the most efficient and cost-effective means of moving products from manufacturers to users. Henry Ford Community College's Industrial Distribution – Business Concentration certificate is designed to provide students with the skills necessary to work in a customer-service capacity in the industrial distribution industry. The program emphasizes the development of the oral and written communication skills and customer service skills required to succeed in a distribution system.</p> <p>This certificate program was developed in consultation with the Industrial Career Pathways organization.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 24</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>BBA 110 - Business Language Skills</td><td>3</td></tr> <tr><td>BBA 131 - Introduction to Business</td><td>4</td></tr> <tr><td>BBA 133 - Business Behavior and Communication</td><td>3</td></tr> <tr><td>BBA 153 - Customer Service</td><td>3</td></tr> <tr><td>BBA 157 - Call Center/Help Desk Practicum</td><td>1</td></tr> <tr><td>BBA 161 - Introduction to Industrial Distribution</td><td>1</td></tr> <tr><td>BBA 231 - Business Office Communications</td><td>3</td></tr> <tr><td>BCA 101 - Computer Keyboarding <i>(or documented proficiency in computer keyboarding)</i></td><td>3</td></tr> <tr><td>BCA 140 - Software Applications</td><td>3</td></tr> <tr><td>BMA 110 - Business Mathematics</td><td>3</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4" style="background-color: #cccccc;">Recommended Course Sequence</th> </tr> <tr> <th style="background-color: #cccccc;">Term 1</th> <th></th> <th style="background-color: #cccccc;">Term 2</th> <th></th> </tr> </thead> <tbody> <tr> <td>BBA 110</td> <td>BCA 101</td> <td>BBA 131</td> <td>BBA 231</td> </tr> <tr> <td>BBA 153</td> <td>BCA 140</td> <td>BBA 133</td> <td>BMA 110</td> </tr> <tr> <td>BBA 161</td> <td></td> <td>BBA 157</td> <td></td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	BBA 110 - Business Language Skills	3	BBA 131 - Introduction to Business	4	BBA 133 - Business Behavior and Communication	3	BBA 153 - Customer Service	3	BBA 157 - Call Center/Help Desk Practicum	1	BBA 161 - Introduction to Industrial Distribution	1	BBA 231 - Business Office Communications	3	BCA 101 - Computer Keyboarding <i>(or documented proficiency in computer keyboarding)</i>	3	BCA 140 - Software Applications	3	BMA 110 - Business Mathematics	3	Recommended Course Sequence				Term 1		Term 2		BBA 110	BCA 101	BBA 131	BBA 231	BBA 153	BCA 140	BBA 133	BMA 110	BBA 161		BBA 157	
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Term 1		Term 2																																									
BBA 110	BCA 101	BBA 131	BBA 231																																								
BBA 153	BCA 140	BBA 133	BMA 110																																								
BBA 161		BBA 157																																									

Programs of Study

Industrial Distribution — Technical Concentration

Certificate of Achievement - Skilled Trades and Apprenticeship Division

Skilled Trades and Apprenticeship 313-845-6415

INDSTTEC.CMLT...
 Technology Building 115

Description	Courses																																						
<p>Students can take their industrial distribution career to the next level as a technical representative. Combining product specification and application with customer service, this is a rewarding and challenging career for those with both technical aptitude and an interest in sales.</p> <p>Currently more starting-level jobs in Industrial Distribution exist than the number of qualified people to fill these jobs. This trend is expected to continue.</p> <p>Individuals in Industrial Distribution:</p> <ul style="list-style-type: none"> • Support customers through phone or personal contact. • Represent manufacturers' new and existing products. • Provide customer service. • Manage inventory and warehouse functions. <p>Career Opportunities</p> <ul style="list-style-type: none"> • Business Managers • Buyers • Customer Service Representatives • Inside/Outside Sales Representatives • Inventory/Warehouse Managers • Technical Product Line Specialists <p>While salaries will vary based on experience and education, compensation is competitive.*</p> <p>Outside Sales: \$40,000-\$80,000 Purchasing: \$27,000-\$60,000 Branch Management: \$40,000-\$70,000 Customer Service: \$22,000-\$40,000 Inside Sales: \$28,000-\$65,000 Warehouse: \$21,000-\$38,000</p> <p><small>* Sources: American Society of Employers; Power Transmission Distributors Association.</small></p> <p>To learn more about Industrial Distribution, please visit www.industrialcareerspathway.org.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 19</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>TAFD 120 - Industrial Safety Awareness</td><td>2</td></tr> <tr><td>TAFD 150 - Applied Technology</td><td>3</td></tr> <tr><td>TAMA 110 - Industrial Applications of Basic Math Principles</td><td>2</td></tr> <tr><td>TAMA 120 - Industrial Applications of Algebraic Principles</td><td>3</td></tr> <tr><td>TAMN 100 - Shop Tools and Techniques</td><td>3</td></tr> <tr><td colspan="2"><i>Complete one of the following courses:</i></td></tr> <tr><td>TADV 100 - Basic Print Reading</td><td>2</td></tr> <tr><td>TAGD 110 - Basic Shape and Size Interpretation</td><td>3</td></tr> <tr><td colspan="2"><i>Students should select a minimum of 4 credit hours from the following:*</i></td></tr> <tr><td>TAEL 102 - DC and AC Electricity</td><td>3</td></tr> <tr><td>TAMT 110 - Mechanical Power Transmission</td><td>2</td></tr> <tr><td>TAIM 100 - Industrial Materials</td><td>3</td></tr> <tr><td>TAFP 150 - Fluid Power Systems</td><td>4</td></tr> <tr><td>TAMT 200 - Predictive Maintenance- Shaft Alignment</td><td>2</td></tr> <tr><td colspan="2"><i>Note:</i></td></tr> <tr><td colspan="2">Students may take either TADV 100 or TAGD 110.</td></tr> <tr><td colspan="2">TAFD 120, TAMA 110, TAMA 120, TAFD 150, and TAMN 100 are required courses.</td></tr> <tr><td colspan="2">* Course prerequisites are to be observed.</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	TAFD 120 - Industrial Safety Awareness	2	TAFD 150 - Applied Technology	3	TAMA 110 - Industrial Applications of Basic Math Principles	2	TAMA 120 - Industrial Applications of Algebraic Principles	3	TAMN 100 - Shop Tools and Techniques	3	<i>Complete one of the following courses:</i>		TADV 100 - Basic Print Reading	2	TAGD 110 - Basic Shape and Size Interpretation	3	<i>Students should select a minimum of 4 credit hours from the following:*</i>		TAEL 102 - DC and AC Electricity	3	TAMT 110 - Mechanical Power Transmission	2	TAIM 100 - Industrial Materials	3	TAFP 150 - Fluid Power Systems	4	TAMT 200 - Predictive Maintenance- Shaft Alignment	2	<i>Note:</i>		Students may take either TADV 100 or TAGD 110.		TAFD 120, TAMA 110, TAMA 120, TAFD 150, and TAMN 100 are required courses.		* Course prerequisites are to be observed.	
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Interior Design

Associate in Arts - Fine Arts and Fitness Division

James Nelson

313-845-6316

jnelson@hfcc.edu

INDSG.AA...

MacKenzie Fine Arts Center 128

Description	Courses																										
<p>Interior Design courses provide a solid basic foundation of study, emphasizing the development of theoretical and technical skills within a human environment and behavior context. Art foundation and specialized courses in Interior Design are integrated throughout the course of study.</p> <p>This area of study is designed to build upon sequential courses with specialized course work in anthropometrics and ergonomics, environment and behavior, architectural and furniture history, textiles, interior construction and materials, environmental systems, graphic communications and rendering, and include six interior design studio classes. Computer applications are used across the core courses to help students to develop a broad range of computer skills as they can be applied to Interior Design.</p> <p>Students who take the appropriate courses are equipped to seek entry-level positions in the field of Interior Design and the related disciplines or to transfer to a four year program. The first 42 credit hours listed meet minimum curriculum guidelines for NCIDQ exam qualification. The Interior Design specific sequence, which starts with ART 180 and ART 181, begins once a year with the Fall semester. Prospective Interior Design majors should meet with Interior Design program Director to discuss their courses of study. This is essential as courses are offered in sequence. Call the Interior Design program Director at 313-845-6316 or e-mail jnelson@hfcc.edu to schedule an appointment or for further information.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>ART 105 - Three-Dimensional Design</td> <td>3</td> </tr> <tr> <td>ART 180 - Design and User Needs</td> <td>3</td> </tr> <tr> <td>ART 181 - Interior Design - Studio I</td> <td>3</td> </tr> <tr> <td>ART 182 - Interior Design Materials and Construction Components</td> <td>3</td> </tr> <tr> <td>ART 183 - Interior Design Studio II</td> <td>3</td> </tr> <tr> <td>ART 184 - Textiles for Interiors</td> <td>3</td> </tr> <tr> <td>ART 280 - History of Styles: Architecture, Interiors, and Furnishings</td> <td>3</td> </tr> <tr> <td>ART 281 - Interior Design Studio III</td> <td>3</td> </tr> <tr> <td>ART 282 - Interior Design Environmental Systems</td> <td>3</td> </tr> <tr> <td>ART 283 - Lighting for Interior Design - Studio IV</td> <td>3</td> </tr> <tr> <td>ART 285 - Professional Practice for Interior Design - Studio V</td> <td>3</td> </tr> <tr> <td>ART 287 - Interior Design Synthesis - Studio VI</td> <td>3</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	ART 105 - Three-Dimensional Design	3	ART 180 - Design and User Needs	3	ART 181 - Interior Design - Studio I	3	ART 182 - Interior Design Materials and Construction Components	3	ART 183 - Interior Design Studio II	3	ART 184 - Textiles for Interiors	3	ART 280 - History of Styles: Architecture, Interiors, and Furnishings	3	ART 281 - Interior Design Studio III	3	ART 282 - Interior Design Environmental Systems	3	ART 283 - Lighting for Interior Design - Studio IV	3	ART 285 - Professional Practice for Interior Design - Studio V	3	ART 287 - Interior Design Synthesis - Studio VI	3
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ART 285 - Professional Practice for Interior Design - Studio V	3																										
ART 287 - Interior Design Synthesis - Studio VI	3																										

Minimum Number of Credits To Graduate (Including Options/Electives): 60

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Fall I	Winter I	Spring I
ART 180	ART 182	ART 105
ART 181	ART 183	ART 184
Fall II	Winter II	Spring/Summer II
ART 280	ART 282	ART 285
ART 281	ART 283	ART 287

Note:

ART 105 may be taken during any semester.

Programs of Study

International Business

Associate in Business - Business and Economics Division

Michael Garms 313-845-9691 mgarms@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

INTLBUSINESS.AB...
 Reuther Liberal Arts Building 327
 Reuther Liberal Arts Building 328

Description

Henry Ford Community College's International Business degree prepares students for careers in international business and related fields in the world economy. This program of study emphasizes a broad business knowledge with an understanding of how globalization integrates people, companies, and governments of different nations. Students will understand how globalization affects the environment, culture, political systems, economic development and prosperity, and societal well-being. Students will examine the benefits and costs associated with globalization and the impact of international trade, foreign investment, and information technology.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 61**

Courses

Required Core Courses	Cr. Hours
BAC 131 - Principles of Accounting	4
BAC 132 - Principles of Accounting	4
BBA 110 - Business Language Skills	3
BBA 131 - Introduction to Business	4
BBA 133 - Business Behavior and Communication	3
BBA 231 - Business Office Communications	3
BBA 250 - International Business	3
BBA 252 - Principles of Marketing	3
BBA 254 - Logistics and Supply Chain Management	3
BCA 140 - Software Applications	3
BEC 151 - Principles of Macro Economics	3
BEC 152 - Principles of Micro Economics	3
BLW 253 - Business Law and the Legal Environment	4
MGT 230 - Principles of Management	3

Required Support Courses	Cr. Hours
GEOG 132 - World Regional Geography	3
POLS 152 - International Relations	3

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Business, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Fall I	Winter I	Fall II	Winter II
BBA 131	BAC 131	BAC 132	BBA 252
BCA 140	BBA 110	BBA 133	BBA 254
ENG 131	BEC 151	BBA 231	BLW 253
	ENG 132	BBA 250	MGT 230
	GEOG 132	BEC 152	POLS 152

Note:

It is recommended that the student complete ENG 131 and fulfill the American Society, Events, Institutions and Culture General Education course requirement in Fall I.

It is recommended that the student complete ENG 132 or ENG 135 course requirement in Winter I.

Programs of Study

Legal Assistant

Associate in Business - Business and Economics Division

Kevin Adams
Elaine Saneske

313-845-9693
313-845-9704

kadams@hfcc.edu
esaneske@hfcc.edu

LEGAT.AB...
Reuther Liberal Arts Building 332
Reuther Liberal Arts Building 328

Description

Henry Ford Community College's Legal Assistant program is designed to prepare students for a career in the legal profession. Legal Assistants/Paralegals perform important legal support work such as legal research, legal document preparation, client and witness interviewing, interfacing with courts and administrative agencies, and the application of technical information. Upon completion of the program, graduates may choose to enter the workforce as Legal Assistants/Paralegals or may choose to continue their education by transferring to a four-year baccalaureate-degree institution.

Legal Assistants/Paralegals must work under the supervision of an attorney. Legal Assistants/Paralegals are not lawyers and are not permitted to provide legal services directly to the public except as permitted by law.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Eastern Michigan University
- Lawrence Technological University
- Siena Heights University
- University of Michigan - Dearborn
- Walsh College

Accreditation

The Legal Assistant program is approved by the American Bar Association.

Core Competencies by Course

LGA 120: Students will demonstrate knowledge of solutions to critical ethical challenges facing paralegals and an understanding of the various core competencies in the Legal Assistant program.

LGA 121: Students will use both print and electronic sources of law to locate treatises, law review articles, legal encyclopedias, and other secondary source materials that help explain the law and to locate applicable statutes, administrative regulations, constitutional provisions, court cases, and other primary source materials. Students will read, evaluate, analyze, and properly cite print and electronic sources of law and apply them to issues requiring legal analysis. Students will "cite check" legal sources and create strategies for basic legal research. Students will prepare written research memoranda incorporating proper English grammar and proper legal citation formats.

LGA 122: Students will create strategies for advanced legal research. Students will identify, locate, and appropriately use print and electronic resources to update and verify the reliability of cited legal authority. Students will prepare written research reports in specific legal formats incorporating proper English grammar and proper legal citation formats. Students will analyze and categorize key facts in a writing style that conveys legal theory in a clear, concise manner.

LGA 130: Students will identify legal issues in prospective litigation case (mock case) scenarios and apply recognized legal authority to such specific factual situation. Students will be able to draft the complaint or answer in a civil suit.

LGA 133: Students will demonstrate the ability to create a Durable Power of Attorney and Advanced Health Care Directives. Students will identify the proper procedures for processing a model estate scenario. Students will demonstrate the ability to research the Michigan Estates and Protected Individuals Code and apply it to specific factual situations involving Trusts and Wills.

LGA 135: Students will demonstrate an understanding of law relating to marriage, annulment, alimony, child support, marital property, and the Probate Court system. Students will draft client correspondence and legal documents, using proper format and appropriate content; and create strategies for family law disputes.

LGA 136: Students will conduct client interviews and prepare the documents necessary to initiate a testate/intestate probate proceeding. Students will demonstrate the ability to research and describe the application of the Michigan Estate and Protected Individuals Code and apply it to situations involving a decedent's estate. Students will locate and modify standardized probate forms found in formbooks and draft Motions for a particular situation.

LGA 137: Students will be able to demonstrate the ability to identify legal issues in mock real estate cases and create strategies for resolution of the issues involved. Students will apply principles of professional ethics to specific factual situations.

LGA 138: Students will identify legal issues in business creation (mock case) scenarios and create strategies for resolution. Students will draft business organization documents including Articles of Organization, Bylaws, Operating Agreements, or Buy-Sell agreements.

LGA 139: Students will identify the fundamental elements of a legally binding contract. Students will identify Issues in contract disputes case scenarios (mock case) and create strategies for resolving the issues. Students will be able to draft basic contracts for the sale of personal property.

LGA 141: Students will identify legal issues in personal injury case scenarios (mock case) and apply recognized legal authority to a specific factual situation involving Intentional Tort or Negligence. Students will analyze factual situations to determine when to apply exceptions to general legal rules.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

Courses

Required Core Courses	Cr. Hours
BLW 253 - Business Law and the Legal Environment	4
LGA 120 - Introduction to the Law and Paralegalism	2
LGA 121 - Legal Writing and Research I	2
LGA 122 - Legal Writing and Research II	3
LGA 130 - Trial Practice and Appeals Civil and Criminal	3
LGA 133 - Wills and Trusts	2
LGA 135 - Family Law	3
LGA 136 - Probate Administration (Administration of Decedents Estates)	3
LGA 137 - Property Law	2
LGA 138 - Corporate and Tax Law	3
LGA 139 - Commercial Law and Collection	2
LGA 141 - Personal Injury and Torts	3

Note:

LGA course levels above LGA 122 may be taken concurrently with LGA 121.

Required Support Courses	Cr. Hours
BCA 140 - Software Applications	3
CRJ 251 - Criminal Law	4
ENG 132 - College Writing and Research	3
SPC 131 - Fundamentals of Speaking	3

Complete 6 credit hours from the following courses: 6

- Business and Economics: BEC 133
- Social and Behavioral Sciences: POLS 132, 135, 152, 153, 154, 155, 157, PSY 131, 161, 253; ANTH 131, 151, 152; SOC 132, 151, 152, 251; HIST 111, 112, 113, 130, 151, 152, 155, 157
- English: ENG 231, 233, 234, 235
- Foreign Language: ARA 131, 132; FRE 131, 132; GER 131, 132; SPN 131, 132
- Humanities: HUM 101
- Mathematics: MATH 112, 115, 140
- Sciences: BIO 130, 131, 139
- Fine Arts: ART 121, 122; MUS 130, 132, 133; STH 131, 238
- Criminal Justice: CRJ 131

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Business, may also be used to fulfill General Education requirements when applicable.

Elective Courses	Cr. Hours
Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100)	
<i>These courses are suggestions for electives:</i>	
LGA 150 - Case Management OR	2
LGA 292 - Legal Assistant Internship OR	2
LGA 293 - Legal Assistant Internship OR	3
LGA 294 - Legal Assistant Internship	4

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Management

Associate in Business - Business and Economics Division

Corinne Asher
Elaine Saneske

313-845-9867
313-845-9704

casher@hfcc.edu
esaneske@hfcc.edu

MNGMT.AB...
Reuther Liberal Arts Building 319B
Reuther Liberal Arts Building 328

Description

The goal of Henry Ford Community College's associate degree in Management is to assist students in gaining the necessary knowledge and competencies to succeed in acquiring an entry-level or promoting to a higher-level management position. Students will learn the fundamentals of management, creative problem solving, and interpersonal skills for supervision and team building. The knowledge and skills obtained in this program are relevant to a variety of business organizations.

Students may earn a Certificate in Supervision as they fulfill the requirements of the Management degree program.

Minimum Number of Credits To Graduate (Including Options/Electives): 60

Courses

Required Core Courses

	Cr. Hours
MGT 230 - Principles of Management	3
MGT 231 - Supervision and Teambuilding	3
MGT 240 - Creative Problem Solving	3
<i>Complete 6 credit hours from the following courses:</i>	6
MGT 232 - Human Resources Management	3
MGT 237 - Psychology in the Workplace	3
MGT 238 - Labor-Management Relations	3
MGT 241 - Small Business Management & Entrepreneurship	3

Required Support Courses

	Cr. Hours
BBA 110 - Business Language Skills	3
BBA 131 - Introduction to Business	4
BBA 133 - Business Behavior and Communication	3
BBA 231 - Business Office Communications	3
BCA 140 - Software Applications	3
SPC 131 - Fundamentals of Speaking	3
BMA 110 - Business Mathematics	3
<i>Complete one of the following courses:</i>	
BAC 110 - Practical Accounting	4
BAC 131 - Principles of Accounting	4

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Business, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

BEC 133 - Basic Economics OR	3
BEC 151 - Principles of Macro Economics OR	3
BEC 152 - Principles of Micro Economics	3
AND	
BLW 253 - Business Law and the Legal Environment	4
AND	
BFN 253 - Principles of Finance OR	3
BBA 252 - Principles of Marketing	3

Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Term 1	Term 2	Term 3	Term 4
BBA 110	BEC 133	BAC 110	BBA 231
BBA 131	BMA 110	ENG 132	BBA 252
BBA 133	ENG 131	MGT 231	BLW 253
BCA 140	MGT 230	MGT 232	MGT 238
SPC 131	POLS 131		MGT 240

Manufacturing Trades

Associate in Applied Science - Skilled Trades and Apprenticeship Division
 Skilled Trades and Apprenticeship 313-845-6415

MFGTD.AAS...
 Technology Building 115

Description	Courses								
<p>The Associate in Applied Science degree in Manufacturing Trades program is designed for industrial apprentices or other skilled trades persons who have completed or are in the last semester of related instruction requirements for journey person certification or the equivalent. Students may apply the credits earned in their trade programs toward the 60 credit hours required for the degree.</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> • Group Leader • Production Foreman • Skilled Trade Foreman • Tool Engineer • Service Technician • Product Design • Quality Control Technician • Tool Designer <p>Transfer Options/Requirements</p> <p>The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.</p> <p>Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:</p> <ul style="list-style-type: none"> • Eastern Michigan University • Ferris State University • Lawrence Technological University • Siena Heights University • University of Michigan - Dearborn • Wayne State University 	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td><i>A minimum of 38 credit hours is required through the Apprenticeship Program.*</i></td> <td style="text-align: center;">38</td> </tr> <tr> <td colspan="2"><i>Note:</i></td> </tr> <tr> <td colspan="2">* Apprenticeship programs vary in the number of credit hours earned. The minimum number is 38 credit hours. All program requirements must be met in order for an apprentice to qualify for a certificate.</td> </tr> </tbody> </table> <p>Associate in Applied Science Degree Requirements</p> <p>Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.</p> <p>General Education</p> <p>Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.</p> <p>Elective Courses</p> <p>Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).</p> <p>Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.</p>	Required Core Courses	Cr. Hours	<i>A minimum of 38 credit hours is required through the Apprenticeship Program.*</i>	38	<i>Note:</i>		* Apprenticeship programs vary in the number of credit hours earned. The minimum number is 38 credit hours. All program requirements must be met in order for an apprentice to qualify for a certificate.	
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**Minimum Number of Credits To Graduate
 (Including Options/Electives): 60**

Programs of Study

Medical Assistant

Certificate of Achievement - Health Careers Division

Ronald Bodurka
Health Careers Office

313-845-9877
313-845-9877

rbodurka@hfcc.edu
jmiller@hfcc.edu

MASST.CMLT...

Health Careers Education Center 132
Health Careers Education Center 132

Description	
<p>The Medical (Office) Assistant is a Level II (Complex Skills Certificate) Certificate of Achievement designed to prepare professional multi-skilled individuals for employment in physicians' offices, clinics, and other ambulatory health care facilities. Both administrative and clinical duties are emphasized in the classroom and laboratory with directed practical experience in selected physicians' offices, hospitals, and clinics.</p> <p>The medical assistant may be responsible for patient scheduling, receptionist duties, medical record management, correspondence, insurance procedures, and accounts receivable. Clinical duties may include: interviewing and teaching patients; taking vital signs; preparing patients for assisting the physician during examination; performing routine laboratory testing, phlebotomy, and electrocardiography; sterilizing supplies; and administering medications.</p> <p>The Medical Assistant Program requires 36 credit hours to earn a certificate. Externships are arranged by program faculty utilizing many of the clinical agencies throughout this region.</p>	<p>Admission to the program is based upon satisfying the admission requirements.</p> <p>Admission Requirements</p> <ul style="list-style-type: none"> A minimum high school grade-point average of C+ (2.5) or a minimum average score of 55 on the GED test, or a minimum college grade-point average of C (2.25) for both transfer students and Henry Ford Community College students. An ASSET/COMPASS score of 43/84 or successful completion of ENG 081. An ASSET/COMPASS score of 23/39 for numerical skills or completion of MATH 101 or MATH 074 with a grade of C or better. Typing proficiency of at least 30 words per minute as a prerequisite for MOA 170. <p>Developmental work may be assigned to qualify applicants for placement if minimum requirements have not been met.</p> <p>Good physical and mental health as determined by a physician. Students in the Medical Assistant program are expected to meet the same physical and mental requirements as an employed medical assistant. A representative Medical Assistant Job Profile, available upon request from the Health Careers Office, lists the specific physical and mental requirements as well as the environmental conditions of the occupation. Each student must have a physical examination.</p>
<p>Career Opportunities</p> <p>According to recent reports from the U.S. Bureau of Labor Statistics, employment of medical assistants is expected to grow much faster than the average for all occupations through the year 2014 as the health services industry expands because of technological advances in medicine, and a growing and aging population.</p>	<p>Criminal Background Check and Drug Screen:</p> <p>Consistent with the Michigan Public Health Code and the requirements of our clinical affiliates, a Criminal Background Check and Drug Screen is required for all students in MOA program prior to beginning clinical assignments. The cost for this test is in addition to the basic tuition and fee schedule. For questions regarding this policy, contact the Health Careers Office.</p>
<p>Employment growth will be driven by the increase in the number of group practices, clinics, and other healthcare facilities that need a high proportion of support personnel, particularly the flexible medical assistant who can handle both administrative and clinical duties.</p> <p>Information about career placement and job success is available through either the Health Careers Office or the College Placement Office.</p>	<p>Students must be cleared with their Health Appraisal Forms, Criminal Background Checks and Drug Screen to be eligible for their clinical rotations.</p>
<p>Occupational Exposure/Risk</p> <p>Since medical assistants deal with the public, they must have good communication skills and a courteous manner. They have to put patients at ease as well as explain physicians' instructions. The clinical duties require a reasonable level of manual dexterity and visual acuity, and medical assistants must respect the confidential nature of medical and patient information.</p>	<p>Additional Program Requirements</p> <p>The Medical Assistant program may be completed in one year following a full-time schedule if the admission criteria are satisfied, or the program may be extended and completed on a part-time basis. In either case, careful scheduling is required and each student must satisfy the program's admission criteria. Students are strongly encouraged to consult the Health Careers Advisor in planning their class schedules.</p>
<p>In medical assisting, both in school and on the job, exposure to infectious diseases and latex may be minimal to moderate depending on the setting in which you are working. Those with latex sensitivity or allergies should consult with a physician prior to entering the program for guidance on the merits of continuing in a health care career.</p>	<p>While MOA 110, AH 100, PSY 131 and BIO 134 follow both day and evening schedules, the remaining courses in the program follow primarily a day schedule. Students should contact the Health Careers Office for specific schedule information.</p>
<p>Admission Requirements/Eligibility</p> <p>Formal admission to this program is required; however, students are permitted to take the first semester series of courses prior to being formally accepted and admitted into the program. AH 100, BIO 134, MOA 100, MOA 110, MOA 120 and PSY 131 may be taken prior to the formal acceptance into the program. Please note that MOA 100, MOA 110 and MOA 120 all have a prerequisite of an ASSET/COMPASS reading score of 43/84 or successful completion of ENG 081.</p> <p>Beginning in the second semester with MOA 150, students must then satisfy the program's admission criteria and be formally admitted into the program by the Health Careers Division. Acceptance to the general College does not constitute nor guarantee admission to the Medical Assistant Program. Students are strongly encouraged to consult the Health Careers Advisor at 313-845-9877.</p>	<p>Program Duration Limits/Updates/Changes</p> <p>All educational experiences are under the guidance of the MOA program. Student progress is evaluated in the classroom, laboratory and clinical setting throughout the program. Progression in the program is based upon the student meeting the following requirements:</p> <ol style="list-style-type: none"> Adherence to the program requirements outlined in the MOA Student Handbook. Achievement of a minimum grade of C or better in all MOA and required courses including the last in the sequence (MOA 190). Maintenance of an overall cumulative grade-point average of 2.0 or better.

4. All MOA courses taken at HFCC must be successfully completed within three consecutive calendar years.

Registry/Certification/Licensure Exam Information

Upon completion of the accredited program, students will be eligible for AAMA Certified Medical Assistant (CMA) examination. This program is one of the few select medical assistant programs in this region to maintain accreditation through CAAHEP. Many employers prefer medical assistants that are either CMAs or at least CMA eligible. The CMA credential is a national certification recognized by employers across the country.

Accreditation

The Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (CRB-AAMAE).

Commission on Accreditation of Allied Health Education Programs, 1361 Park St., Clearwater, FL 33756, 727-210-2350.

Accreditation standards require that students do not receive compensation/payment, monetary or otherwise, from any clinical site for any portion of their clinical externship (MOA 190-Medical Office Externship).

**Minimum Number of Credits To Graduate
(Including Options/Electives): 36**

Courses

Required Core Courses	Cr. Hours
MOA 100 - Medical Office Procedures I-Administrative	3
MOA 110 - Processing Health Insurance Claims	2
MOA 120 - Medical Office Computer Applications	2
MOA 150 - Medical Office Assistant Procedures II-Clinical	5
MOA 160 - Basic X-Ray Techniques	2
MOA 170 - Medical Correspondence	3
MOA 190 - Medical Office Externship	4

Note:

Students must maintain a minimum C grade or better in all MOA required and support courses including the last in the sequence, MOA 190.

Accreditation standards require that students do not receive compensation/payment, monetary or otherwise, from any clinical site for any portion of their clinical externship (MOA 190-Medical Office Externship).

Please note that MOA 150 is only offered during the Winter Term.

Required Support Courses	Cr. Hours
AH 100 - Medical Terminology	4
HPE 142 - Advanced First Aid	3
PSY 131 - Introductory Psychology	3

Complete one of the following course options:

BIO 134 - Essentials of Anatomy and Physiology	5
OR	
BIO 233 - Anatomy and Physiology I AND	4
BIO 234 - Anatomy and Physiology II	4

Recommended Course Sequence

Fall I	Winter I	Spring I
AH 100	MOA 150	MOA 190
BIO 134	MOA 160	
MOA 100	MOA 170	
MOA 110	PSY 131	
MOA 120	HPE 142	

Note:

Note prerequisites for MOA 150 and MOA 190.

MOA 190 can be taken in the Fall II Term.

A minimum grade of C is required in all courses.

Students are responsible for their own transportation to clinical sites and any expenses incurred.

Medical Insurance Specialist

Certificate of Achievement - Health Careers Division

Ronald Bodurka 313-845-9877
Health Careers Division Office 313-845-9877

rbodurka@hfcc.edu
jmiller@hfcc.edu

MEDINS.CMLT...
Health Careers Education Center 132
Health Careers Education Center 132

Description

The Medical Insurance Specialist is a Level II (Complex Skills Certificate) Certificate of Achievement designed to provide entry-level skills for medical billing specialists. These individuals process the information necessary for reimbursement of health care services. The medical insurance biller is responsible for collection of preadmission/pretreatment insurance information through submission of claims to insurance carrier or patient. Verification of insurance coverage and determination of whether any predetermination, pre-certification, or second-opinion requirements exist is another important aspect of the job.

Training is provided in verification of insurance coverage, assignment of diagnostic and procedural codes, as well as both manual and computerized claim preparation. Review and follow-up procedures for the major carriers are included in addition to posting and balancing of accounts. The student will be able to recognize, evaluate, and interpret inconsistencies, discrepancies, and inaccuracies in the billing procedure. Physician billing as well as facility billing procedures are developed.

The Medical Insurance Specialist Certificate of Achievement requires a minimum of 48 credit hours which may be completed in two years by attending full time, or it may be extended following a part-time schedule. In either case, careful scheduling is required. Students are encouraged to consult the Health Careers Advisor in planning their class schedules.

An optional Business Co-op for Medical Billing is available during the last semester in the program.

Medical insurance specialist is the second stage of the three step program option. The students may elect to stop-out at the end of any one of the three stages depending upon their career and educational objectives.

- Medical Receptionist, Level I Certificate, 16.5 credit hours
- **Medical Insurance Specialist**, Level II Certificate, 48 credit hours
- Medical Practice/Facility - Business Management Associate in Business degree, 70 credit hours

Interested students must work closely with the Health Careers Advisor in order to develop their own individual educational plan. For additional information or an appointment, students should contact the Health Careers Office at 313-845-9877.

Career Opportunities

The employment outlook for medical insurance specialists is good, but very competitive especially for entry-level positions. Information about career placement is available through the College Placement Office which also assists students in finding employment.

Admission Requirements/Eligibility

The Medical Insurance Specialist Certificate does not have program specific admission requirements. However MOA 100 and MOA 110 have a prerequisite of an ASSET/COMPASS reading score of 43/84 or the successful completion of ENG 081. To be an effective medical biller you should have strong basic math skills, and solid keyboarding skills. Medical billers are expected to meet progressively demanding accuracy and productivity standards.

Students are strongly encouraged to consult the Health Careers Advisor at 313-845-9877.

Additional Program Requirements

Progression in the program is based upon the student meeting the following requirements:

1. Adherence to the program requirements outlined in the MOA/MR/MIS Student Handbook.
2. Achievement of a minimum grade of C or better in all MOA and required courses.
3. Maintenance of an overall cumulative grade point average of 2.0 or better.
4. All MIS program courses must be successfully completed within three consecutive calendar years.

Program Duration Limits/Updates/Changes

HFCC continuously attempts to improve each program, and as a result courses and/or requirements may be modified. Curriculum, course content, and admission criteria are subject to change by action of the College faculty and administration.

Minimum Number of Credits To Graduate (Including Options/Electives): 48

Courses

Required Core Courses	Cr. Hours
AH 100 - Medical Terminology	4
BBA 110 - Business Language Skills	3
BBA 153 - Customer Service	3
BBA 231 - Business Office Communications	3
BCA 140 - Software Applications	3
BMA 110 - Business Mathematics	3
HIT 150 - Basic Coding: Theory and Practice	3
HIT 230 - Ambulatory Coding	3
MOA 100 - Medical Office Procedures I-Administrative	3
MOA 110 - Processing Health Insurance Claims	2
MOA 165 - Physician Billing Concepts	4
MOA 168 - Facility Billing Concepts	4
MOA 181 - Medical Collection & Legal Issues	3
MOA 205 - Insurance Coding and Reimbursement	3
<i>Complete one of the following courses:</i>	
BAC 110 - Practical Accounting	4
BAC 131 - Principles of Accounting	4

Recommended Course Sequence

Fall I	Winter I	Fall II	Winter II
AH 100	BBA 110	HIT 230	BAC 110
BBA 153	BMA 110	MOA 165	BBA 231
BCA 140	HIT 150	MOA 168	MOA 181
MOA 100	MOA 110		MOA 205

Note:

Students may elect BAC 110 or BAC 131.

Please note that BIO 134 or BIO 233/234 (Anatomy & Physiology) are highly recommended for those students especially interested in medical coding.

Medical Practice — Clinical Management

Associate in Applied Science - Health Careers Division

Ronald Bodurka 313-845-9877 rbodurka@hfcc.edu
 Health Careers Division Office 313-845-9877 jmiller@hfcc.edu

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 Health Careers Education Center 132
 Health Careers Education Center 132

Description

The Medical Practice - Clinical Management program is a 1 + 1 program that will lead to an Associate in Applied Science degree centered on the Medical Assistant. The first portion of this program focuses upon the preparation of the Medical Assistant, while the second portion of the program builds upon that foundation preparing the medical assistant to then perform routine administrative duties in physicians' offices, clinics, and other ambulatory health care facilities. Students may elect to stop out at either one of the two stages depending upon their career or educational objectives.

- Medical (Office) Assistant, Level II Certificate of Achievement, 36 credit hours
- **Medical Practice - Clinical Management** Associate in Applied Science degree, 66 credit hours.

This program may be completed in two years by attending full time, or it may be extended following a part-time schedule. In either case, careful scheduling is essential. Students are encouraged to consult the Health Careers Advisor in order to develop an individual educational plan. For additional information or an appointment, students should contact the Health Careers Office at 313-845-9877.

Career Opportunities

According to recent reports from the U.S. Bureau of Labor Statistics, employment of medical assistants is expected to grow much faster than the average for all occupations through the year 2014 as the health services industry expands because of technological advances in medicine, and a growing and aging population.

Information about career placement and job success is available through either the Health Careers Office or the College Placement Office.

Occupational Exposure/Risk

In medical assisting, both in school and on the job, exposure to infectious diseases and latex may be minimal to moderate depending on the setting in which you are working. Those with latex sensitivity or allergies should consult with a physician prior to entering the program for guidance on the merits of continuing in a health care career. During the course of the program students learn infection control guidelines and procedures and strict adherence to these guidelines will reduce the risk of exposure to infectious diseases.

Admission Requirements/Eligibility

Since medical assistants deal with the public, they must have good communication skills and a courteous manner. They have to put patients at ease as well as explain physicians' instructions. The clinical duties require a reasonable level of manual dexterity and visual acuity, and Medical Assistants must respect the confidential nature of medical and patient information.

Formal admission to this program is required; however, students are permitted to take the first semester series of courses prior to being formally accepted and admitted into the program. AH 100, BIO 134, MOA100, MOA 110, MOA 120 and PSY 131 may be taken prior to the formal acceptance into the Medical Assistant portion of the program.

Beginning in the second semester with MOA 150, students must then satisfy the program's admission criteria and be formally admitted into the program by the Health Careers Division. Admission to the program is based upon satisfying the admission requirements. Please note MOA 100 and MOA 120 all have a prerequisite of an ASSET/COMPASS reading score of 43/84 or successful completion of ENG081.

Acceptance to the general College does not constitute nor guarantee admission to the Medical Assistant program.

Students are strongly encouraged to consult the Health Career Care Advisor at 313-845-9877.

Admission Requirements

- A minimum high school grade-point average of C+ (2.5) or a minimum average score of 55 on the GED test, or a minimum college grade-point average of C (2.25) for both transfer students and Henry Ford Community College students.
- An ASSET/COMPASS reading score of 43/84 or successful completion of ENG 081.
- An ASSET/COMPASS score of 23/39 for numerical skills or completion of MATH 101 or MATH 074 with a grade of C or better.
- Typing proficiency of at least 30 words per minute as a prerequisite for MOA 170.

Developmental work may be assigned to qualify applicants for placement if minimum requirements have not been met.

Good physical and mental health as determined by a physician. Students in the Medical Assistant program are expected to meet the same physical and mental requirements as an employed medical assistant. A representative Medical Assistant Job Profile, available upon request from the Health Careers Office, lists the specific physical and mental requirements as well as the environmental conditions of the occupation. Each student must have a physical examination.

Criminal Background Check and Drug Screen

Consistent with Section 20173 of the Michigan Public Health Code and the requirements of our clinical affiliates, a Criminal Background Check and Drug Screen is required for all students in the MOA program prior to beginning clinical assignments. The cost for this test is in addition to the basic tuition and fee schedule. For questions regarding this policy, contact the Health Careers Office.

Students must be cleared with their Health Appraisal Forms, Criminal Background Checks and Drug Screen to be eligible for their clinical rotations.

Additional Program Requirements

Accreditation standards require that students do not receive compensation/payment, monetary or otherwise, from any clinical site for any portion of their clinical externship (MOA 190-Medical Office Externship).

Program Duration Limits/Updates/Changes

All educational experiences are under the guidance of the MOA program. Student progress is evaluated in the classroom, laboratory and clinical setting throughout the program. Progression in the program is based upon the student meeting the following requirements:

1. Adherence to the program requirements outlined in the MOA Student Handbook.
2. Achievement of a minimum grade of C or better in all MOA and required courses including the last in the sequence (MOA 190).
3. Maintenance of an overall cumulative grade-point average of 2.0 or better.
4. All MOA courses taken at HFCC must be successfully completed within three consecutive calendar years.

Programs of Study

Registry/Certification/Licensure Exam Information

Upon completion of the medical assistant portion of the program, students will then be eligible for AAMA Certified Medical Assistant (CMA) examination. This program is one of the few select medical assistant programs in this region to maintain accreditation through CAAHEP. Many employers prefer medical assistants that are either CMAs or at least CMA eligible. The CMA credential is a national certification recognized by employers across the country.

Accreditation

The medical assistant portion of the program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (CRB-AAMAE).

Commission on Accreditation of Allied Health Education Programs, 1361 Park St., Clearwater, FL 33756, 727-210-2350.

Minimum Number of Credits To Graduate (Including Options/Electives): 66

Courses	
Required Core Courses	Cr. Hours
AH 100 - Medical Terminology	4
BBA 110 - Business Language Skills	3
BBA 133 - Business Behavior and Communication	3
BBA 153 - Customer Service	3
MGT 230 - Principles of Management	3
MGT 231 - Supervision and Teambuilding	3
MGT 232 - Human Resources Management	3
MGT 240 - Creative Problem Solving	3
MOA 100 - Medical Office Procedures I-Administrative	3
MOA 110 - Processing Health Insurance Claims	2
MOA 120 - Medical Office Computer Applications	2
MOA 150 - Medical Office Assistant Procedures II-Clinical	5
MOA 160 - Basic X-Ray Techniques	2
MOA 170 - Medical Correspondence	3
MOA 190 - Medical Office Externship	4

Required Support Courses	Cr. Hours
HPE 142 - Advanced First Aid	3
PSY 131 - Introductory Psychology	3
<i>Complete one of the following Biology options:</i>	
BIO 134 - Essentials of Anatomy and Physiology	5
OR	
BIO 233 - Anatomy and Physiology I AND	4
BIO 234 - Anatomy and Physiology II	4

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Fall I	Winter I	Spring I	Fall II	Winter II
AH 100	HPE 142	MOA 190	BBA 110	ENG 132
BIO 134	MOA 150		BBA 133	MGT 231
MOA 100	MOA 160		BBA 153	MGT 232
MOA 110	MOA 170		ENG 131	MGT 240
MOA 120	PSY 131		MGT 230	SOC 131

Note:

Students may elect either ENG 132 or ENG 135.

Students may elect POLS 131, SOC 131 or SSC 131.

Medical Practice/Facility Business Management

Associate in Business - Business and Economics Division

Corinne Asher 313-845-9867 casher@hfcc.edu
 Elaine Saneske 313-845-9645 esaneske@hfcc.edu

MPFBM.AB...
 Reuther Liberal Arts Building 319B
 Reuther Liberal Arts Building 328

Programs of Study

Description

The goal of Henry Ford Community College's associate degree in Medical Practice/Facility Business Management is to assist students in gaining the necessary knowledge and competencies to manage the specialized business functions of a medical practice or medical facility. Students will learn concepts of medical billing, coding, and insurance claim forms as well as accounting, customer service, management, medical terminology, and effective oral and written communications. The knowledge and skills obtained in this program are used in managing the "front office" or business section of a medical practice of several physicians, a hospital unit, or a medical equipment supplier.

The Medical Practice/Facility Business Management program builds on the Medical Insurance Specialist certificate. Students may take the additional required credit hours after completing the certificate to earn this Associate in Business degree.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 70**

Courses

Required Core Courses	Cr. Hours
AH 100 - Medical Terminology	4
BBA 110 - Business Language Skills	3
BBA 131 - Introduction to Business	4
BBA 133 - Business Behavior and Communication	3
BBA 153 - Customer Service	3
BBA 231 - Business Office Communications	3
BCA 140 - Software Applications	3
BMA 110 - Business Mathematics	3
HIT 150 - Basic Coding: Theory and Practice	3
HIT 230 - Ambulatory Coding	3
MGT 230 - Principles of Management	3
MGT 231 - Supervision and Teambuilding	3
MOA 100 - Medical Office Procedures I-Administrative	3
MOA 110 - Processing Health Insurance Claims	2
MOA 165 - Physician Billing Concepts	4
MOA 168 - Facility Billing Concepts	4
MOA 181 - Medical Collection & Legal Issues	3
MOA 205 - Insurance Coding and Reimbursement	3
<i>Complete one of the following courses:</i>	
BAC 110 - Practical Accounting	4
BAC 131 - Principles of Accounting	4

Associate in Business Degree Requirements

Students must also complete the specific degree requirements for the Associate in Business Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Business Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Business, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Term 1	Term 2	Term 3	Term 4
AH 100	BBA 110	ENG 132	BAC 110
BBA 133	BBA 131	HIT 230	BBA 231
BBA 153	BMA 110	MGT 230	MGT 231
BCA 140	ENG 131	MOA 165	MOA 181
MOA 100	HIT 150	MOA 168	MOA 205
	MOA 110		

Note:
 Students may elect either ENG 132 or ENG 135.
 Students may elect either BAC 110 or BAC 131.

Medical Receptionist

Certificate of Achievement - Health Careers Division

Ronald Bodurka 313-845-9877 rbodurka@hfcc.edu
 Health Careers Division Office 313-845-9877 jmiller@hfcc.edu

MEDREC.CSGL...
 Health Careers Education Center 132
 Health Careers Education Center 132B

Description

Medical Receptionist is a 16.5 credit hour Level I (Basic Skills) Certificate of Achievement. The Medical Receptionist certificate has been designed to prepare individuals to function with supervision in a health care office providing customer service as well as patient intake and discharge services. The curriculum includes medical office procedures such as scheduling appointments, managing the telephone, filing, mail duties, preparing and maintaining patient records, basic insurance claims, word processing, basic spreadsheet and database skills, as well as medical office policies such as privacy requirements.

This program may be completed in one semester or it may be used a stepping stone for the Medical Insurance Specialist certificate and then the Associate in Business degree in Medical Practice/Facility Business Management. The students may elect to stop out at the end of any one of the three stages depending upon their career and educational objectives.

- **Medical Receptionist**, Level I Certificate of Achievement, 16.5 credit hours
- **Medical Insurance Specialist**, Level II Certificate of Achievement, 48 credit hours
- **Medical Practice/Facility Business Management**, Associate in Business degree, 70 credit hours

Career Opportunities

The employment outlook for the Medical Receptionist is good, but competitive especially for entry-level positions. Information about career placement is available through the College Placement Office which also assists students in finding employment.

Admission Requirements/Eligibility

Since medical receptionists deal with the public, they must have good communication skills and a courteous manner. Receptionists have to put patients at ease as well as explain basic scheduling or insurance instructions. The duties require a reasonable level of manual dexterity and visual acuity, and medical receptionists must respect the confidential nature of medical and patient information.

The Medical Receptionist program does not have program specific admission requirements. However, MOA 100 and MOA 110 have a prerequisite of an ASSET/COMPASS reading score of 43/84 or the successful completion of ENG 081. To be an effective medical receptionist, you should have good basic math skills, excellent communication skills, as well as solid keyboarding skills. Interested students must work closely with an HFCC academic advisor in order to develop their own individual education plan.

Progression in the program is based upon the student meeting the following requirements:

1. Adherence to the program requirements outlined in the MOA/MR/MIS Student Handbook.
2. Achievement of a minimum grade of C or better in all MOA and required courses.
3. Maintenance of an overall cumulative grade point average of 2.0 or better.
4. All MOA courses taken at HFCC must be successfully completed within two consecutive calendar years.

Students are strongly encouraged to consult the Health Careers Advisor at 313-845-9877.

Additional Program Requirements

The Medical Receptionist program may be completed in one semester following a full-time schedule, or the program may be extended and completed on a part-time basis. In either case, careful scheduling is required. Students are strongly encouraged to consult the Health Careers Advisor in planning their class schedules at 313-845-9877.

Program Duration Limits/Updates/Changes

HFCC continuously attempts to improve each program, and as a result courses and/or requirements may be modified. Curriculum, course content, and admission criteria are subject to change by action of the College faculty and administration.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 16.5**

Courses

Required Core Courses	Cr. Hours
AH 100 - Medical Terminology	4
AH 105 - Basic Life Support for Healthcare Providers	0.5
BBA 153 - Customer Service	3
BCA 140 - Software Applications	3
HCS 103 - Employment Skills for Health Careers	1
MOA 100 - Medical Office Procedures I-Administrative	3
MOA 110 - Processing Health Insurance Claims	2

Recommended Course Sequence

- Term 1**
 AH 100
 AH 105
 BBA 153
 BCA 140
 HCS 103
 MOA 100
 MOA 110

Note:
 Students must maintain a minimum grade of C or better in all MOA and required courses.

Multi-Skilled Facility Maintenance Technician

Associate in Applied Science - Technology Division

Greg Laskowsky 313-317-1550 glakowsky@hfcc.edu
 David Wiltshire 313-845-9637 djwiltshire@hfcc.edu

MSFMT.AAS...
 Technology Building 115D
 Technology Building 115A

Description

This program will prepare students for a career in building/plant facility maintenance. Students can complete a minimum of 51 credit hours for a certificate. With an additional minimum of 19 credit hours a student may earn an associate degree.

Students will be exposed to various skills that are necessary for this skilled-trades classification. Primary focuses are job safety, basic electricity, heating and cooling, sheet metal fabrication, EPA refrigeration certification, power engineering (exposure to boilers and hydronic systems), building controls, hydraulics, plumbing and pipefitting, millwright basics (applied tech), and welding.

The student will be exposed to and gain the required knowledge for establishing employment in this fast growing economy. Many large and small companies are combining trades and as a result, are seeking individuals for employment in this fast-growing job category.

Class credits earned at HFCC can be used for transferring. See 3 for 1 articulation agreements with 4 year universities. Additional information is available in the University Transfer, Advising, and Career Counseling Center or from your academic advisor.

Career Opportunities

- HVAC (Heating and Cooling)
- Power Engineering
- Building Controls
- Plumbing
- Electrical
- Welding
- Hydraulics
- Millwright
- Renewable Energy

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 70**

Courses

Required Core Courses	Cr. Hours
ENT 104 - Heating Technology (PO)	4
ENT 105 - Introduction to RACH (PO)	2
ENT 108 - Introduction to Heating and Cooling Codes	2
ENT 113 - Refrigeration Technology (Electrical, EPA Certification)	4
ENT 119 - Air Conditioning Technology	4
ENT 141 - Power Engineering I- Energy Conversion Fundamental (PO)	2
ENT 219 - RACH Light Commercial Systems	3
ENT 269 - Project Management	2
TAFD 112 - Construction Blueprint Reading	2
TAFP 150 - Fluid Power Systems	4
TAMJ 110 - Materials Joining and Fabrication Fundamentals	3
TAMN 100 - Shop Tools and Techniques	3
TAPP 100 - Fundamentals of Plumbing and Pipefitting	3
TAPP 110 - Drains, Waste and Vents	2
TAPP 120 - Heating Systems	2
TAPP 250 - Plumbing Code	2

<i>Complete one of the following courses:</i>	
ENT 103 - DC and AC Electricity	3
TAEL 102 - DC and AC Electricity	3
<i>Complete one of the following courses:</i>	
ENT 106 - Sheet Metal Fabrication for Systems	2
TASM 100 - Basic Sheet Metal Layout and Fabrication	3
<i>Complete one of the following courses:</i>	
MFMT 103 - Industrial Computer Application	2
TAFD 115 - Computer Applications for Skilled Trades	2
<i>Complete one of the following courses:</i>	
TAFD 115, TAFD 120, TAFD 130 or TAFD 150.	2-3

Required Additional Courses

Required Additional Courses	Cr. Hours
ENG 132 - College Writing and Research	3
<i>Complete one of the following courses:</i>	
CHEM 131 - Principles of Chemistry	4
PHYS 131 - Liberal Arts Physics	4
<i>Complete one of the following courses:</i>	
POLS 131 - Introduction to American Government and Political Science	3
SSC 131 - A Survey of the Social Sciences	3
<i>Complete 4 credit hours of MATH numbered 100 or above.</i>	
	4

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Multimedia Design

Certificate of Achievement - Fine Arts and Fitness Division

Kirk McLendon 313-845-6487 mclendon@hfcc.edu
 James Nelson 313-845-6316 jnelson@hfcc.edu

MULTMED.CMULT...
 MacKenzie Fine Arts Center 149
 MacKenzie Fine Arts Center 128

Description	Courses																														
<p>Multimedia Design is one of five Certificate Programs offered at HFCC. Earn a Multimedia Design Certificate by completing the 36-38 credit hours of core courses. Students may complete an additional 22-24 credit hours of General Education and Elective courses to earn an Associate in Arts degree. Classes are offered throughout the year during the day, evening and weekend.</p> <p>Computers did not simplify the lives of graphic designers, but made them more interesting. Designers working in multimedia must be able to blend animation, audio, video, and graphic design into a cohesive arrangement. Design skills and computer savvy are important for multimedia design.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 39</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ART 101 - Two-Dimensional Design</td><td>3</td></tr> <tr><td>ART 102 - Drawing 1</td><td>3</td></tr> <tr><td>ART 107 - Photoshop</td><td>3</td></tr> <tr><td>ART 108 - Flash</td><td>3</td></tr> <tr><td>ART 130 - History of Graphic Design</td><td>3</td></tr> <tr><td>ART 165 - Typography</td><td>3</td></tr> <tr><td>ART 245 - Interactive Design</td><td>3</td></tr> <tr><td>ART 255 - Animation Basics</td><td>3</td></tr> <tr><td>ART 275 - Advanced Projects</td><td>3</td></tr> <tr><td>CIS 234 - Advanced Flash</td><td>4</td></tr> <tr><td>TCM 151 - Digital Audio Editing</td><td>1</td></tr> <tr><td>TCM 251 - Audio Production</td><td>3</td></tr> <tr><td>TCM 157 - Digital Video Editing</td><td>1</td></tr> <tr><td>TCM 257 - Video Production I</td><td>3</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	ART 101 - Two-Dimensional Design	3	ART 102 - Drawing 1	3	ART 107 - Photoshop	3	ART 108 - Flash	3	ART 130 - History of Graphic Design	3	ART 165 - Typography	3	ART 245 - Interactive Design	3	ART 255 - Animation Basics	3	ART 275 - Advanced Projects	3	CIS 234 - Advanced Flash	4	TCM 151 - Digital Audio Editing	1	TCM 251 - Audio Production	3	TCM 157 - Digital Video Editing	1	TCM 257 - Video Production I	3
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TCM 257 - Video Production I	3																														

Music

Associate in Arts - Fine Arts and Fitness Division

Kevin Dewey 313-845-6474 kdewey@hfcc.edu
 James Nelson 313-845-6316 jnelson@hfcc.edu

MUSIC.AA...
 MacKenzie Fine Arts Center 132
 MacKenzie Fine Arts Center 128

Description	Courses																												
<p>HFCC music courses are designed for music majors, liberal arts and technical students, and members of the community. Any music course can be applied toward fulfillment of the Humanities requirement. HFCC's many bands, choirs, jazz bands, and vocal ensembles are open to all by audition.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 60</p>	<p>Associate in Arts Degree Requirements</p> <p>Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.</p> <hr/> <p>General Education</p> <p>Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.</p> <hr/> <p>Elective Courses</p> <p>Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).</p> <p><i>These courses are suggestions for electives:</i></p> <table border="1"> <tbody> <tr> <td>PSCI 135 - Sound & Light in Fine-Arts</td> <td>4</td> </tr> </tbody> </table> <p>Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected. PSCI 135 is a suggested course that will also satisfy the Math and/or Science requirement.</p>	PSCI 135 - Sound & Light in Fine-Arts	4																										
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Nursing

Associate in Applied Science - Nursing Division

Katherine Howe
Anna Brown

313-845-9635
313-845-9635

khowe@hfcc.edu
abrown@hfcc.edu

NURSE.AAS...
Health Careers Education Center 122A
Health Careers Education Center 122

Description

Henry Ford Community College is the first Michigan associate degree nursing program and one of the first seven such programs in the nation. The program has received many awards and grants for curricula design, innovative teaching strategies, creative curriculum scheduling, and collaborative partnerships, which lead to such things as defining competencies of associate degree nursing and increasing nursing graduates.

The program of study combines 65 credits of General Education and nursing courses, using classrooms, laboratories, and clinical placements to provide learning in structured health care settings. With credit for courses taken in their prior education, Licensed Practical Nurses (LPNs) who choose to obtain the associate degree in nursing, enter the program at the second semester level. LPN students should make an appointment to review their status with the LPN Facilitator or nursing office, and to see the options available for them.

General Education courses must be taken before or concurrently with nursing courses, as stipulated in the curriculum. Nursing courses must be taken in consecutive semesters. **All students wishing to pursue nursing must achieve a minimum grade of "C" (no minus) in every required pre-requisite, general education or nursing course. Courses may be repeated ONLY ONCE in order to obtain a grade of "C" or better.**

Applicants to the nursing program must understand that they will be involved in the direct care of clients and must not judge nor expect to choose which clients they will serve. Refusal to serve assigned patients will be grounds for dismissal. In order to be considered for admission to or retention in the program, applicants must possess:

1. Sufficient visual acuity necessary for accurate assessment and safe nursing care to clients, such as physical assessment, preparation and administration of all medications and direct observation of clients.
2. Sufficient auditory perception to receive verbal communication from clients and members of the health team and to assess client health status with such devices as cardiac monitors, stethoscopes, I.V. infusion pumps, dopplers, fire alarms, call lights and cries for help.
3. Sufficient gross/fine motor coordination to respond promptly and implement skills required in meeting health care needs of clients, including manipulation of equipment and supplies.
4. Sufficient physical abilities to move around client's rooms, work in treatment areas, and administer cardiopulmonary procedures.
5. Sufficient strength to perform physical activities frequently requiring the ability to lift, push, pull objects more than fifty pounds and transfer objects and persons of more than one hundred pounds.
6. Sufficient communication skills (speech, reading, writing) to interact with clients and communicate their health status and needs promptly and effectively.
7. Sufficient intellectual and emotional capability to plan and implement care for clients.
8. Sufficient psychological stability essential to perform at the required levels in the clinical portions of the nursing program.
9. Ability to sustain long periods of concentration to make decisions such as selecting correct techniques, equipment, and safety measures to assure maximum care and safety of clients. A person under the influence of alcohol or consciousness-altering drugs could not meet the above criterion.
10. Sufficient physical stamina to remain standing for long periods of time.

Career Opportunities

All graduates can acquire full-time employment upon passing the

licensing examination for registered nurse. Opportunities for employment in nursing exist in hospital, clinic, and home care environments. Nurses work in factories, military services, schools, public health, teaching, and many other areas, as education and experience increase.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- Madonna University
- Michigan State University
- Oakland University
- University of Detroit Mercy
- University of Michigan-Ann Arbor
- Wayne State University

Occupational Exposure/Risk

Applicants to the nursing program may be exposed to infectious diseases during their nursing program or future employment in health care facilities. Persons should not become health care workers without realizing and accepting this risk. Proper education and strict adherence to well established infection-control guidelines, however, can reduce this risk to a minimum. Thorough education in infection control procedures is an important part of the nursing program of study.

Latex Allergies

Gloves, tubing, and other products used in client care are frequently made of latex. Contact urticaria, angioedema, allergic rhinitis, asthma or anaphylaxis can result through exposure and immediate hypersensitive responses to natural rubber latex (NRL). Early recognition of sensitization to NRL is crucial to prevent the occurrence of life-threatening reactions in sensitized healthcare workers. In nursing education and on the job, exposure to latex consistently occurs. If a student becomes sensitized to latex, it is suggested that another career choice be considered. The Nursing Division strongly advises that students sensitized or allergic to latex consult a physician for guidance on the merits of continuing in a health care career. NRL sensitized students who choose to continue in the nursing program, do so at their own risk. Neither the college nor the Nursing Division can be responsible for the problems resulting from such a decision.

Admission Requirements/Eligibility

Certain procedures must be followed and academic requirements fulfilled, prior to admission to the nursing program. Applicants must first be admitted to the college and designate nursing as their curriculum. Applicants must have a high school GPA of 2.7 or better. A college GPA

of 2.7 or higher must be established if the candidate has been out of high school over ten years. The program has a limited enrollment and admits the bulk of its students in the fall semester, with a smaller group admitted in the winter semester. Admission is on a first-qualified first-served basis.

The three stages for admission to the nursing program for generic students and licensed practical nurses seeking the A.D.N. are:

1. Obtain copies of the specific Admission Requirements for Nursing from the Admissions Office or the Nursing Office.
2. Complete the requirements to get onto the Wait List for the program.

No pre-requisite, non-nursing support or nursing course can be repeated more than one time to receive a “C” (no minus) or better grade. High school grades are only valid within 10 years of attendance.

GPA- 2.7 or better maintained

- High School cumulative GPA of 2.7 or better, or
- Minimum G.E.D. test score of 550 or higher, or
- Completion of 12 credit hours at HFCC at 2.7 or higher, or
- Transfer credit of 2.7 or higher or an additional 12 credit hours at HFCC to establish required G.P.A.

High school GPA of “A” or “B” (3.0) throughout a one year laboratory course, or BIO 131 Introduction to Biology, or its transfer equivalent or better, with a minimum grade of “C” (no C-).

Chemistry

High school GPA of “A” or “B” (3.0) throughout a one-year laboratory course, or CHEM 131 Principles of Chemistry, or its equivalent or better, with a minimum grade of “C” (no C-).

Math

High school GPA of “A” or “B” (3.0) throughout a one-year math course, or MATH 074 Pre-Algebra, or its transfer equivalent, with a minimum grade of “C” (no C-).

Placement Tests

Placement tests, required developmental course work, and all admission requirements must be completed before students are considered for admission to the program. The required Nurse Entrance Test (NET) is offered by the nursing division. A second failure of the test requires taking courses in areas of weakness. Free assistance is available through the Learning Lab. **A third failure of the NET test prevents entry into the nursing program. NET tests must be taken at HFCC.** The NET requirements are:

1. Math Proficiency on the NET test- **A minimum of 65** is required.
2. Reading Proficiency on the NET test- **A minimum of 65** is required.
3. NET composite must be a minimum of 65%.
4. **The NET test must be retaken every two years, for those who have not entered the program or for those who readmit to the program. Any new criteria established by the nursing division must be met.**

Basic Life Support for Healthcare Professionals (CPR)

All students are required to complete and maintain a course in Basic Cardiac Life Support for Healthcare Professionals. It is strongly suggested that CPR be taken between May and July, just prior to entering the nursing program. It must be kept current throughout the program.

Completion of ENG 131, ENG 132 and PSY 131, with a minimum grade of “C” (no C-), is required. These courses are required for placement on the Wait List.

Successful completion of a drug screening and criminal background check is required.

Additional Program Requirements

Applicants are invited to and must attend informational and orientation meetings scheduled by the Associate Dean of Nursing. Final acceptance is contingent upon fulfilling and maintaining minimum program requirements and proof of the following by specified deadline dates:

- Health Insurance
- Physical examination

- Required titers from previous immunizations and needed immunizations from titer results, if necessary.
- BLS certification for health care providers
- Drug screening and background check

While on the Wait List and anticipating an invitation into the nursing program, qualified applicants should continue to complete all remaining required, non-nursing courses: BIO 233/234, AH 120, SOC 131, PSY 253, and the computer test (CLT 100) or course to demonstrate computer competency required by the college. Students entering in the winter semester must have BIO 233/234, AH 120, PSY 253 and SOC 131 completed, since the nursing courses are offered in eighteen months and time to finish non-nursing requirements is limited.

In addition, LPNs coming back to school for their ADN, must submit the following items to the nursing office:

1. LPN Advanced Placement application.
2. An official transcript from the applicant’s practical nurse school.
3. Proof of a current LPN Michigan license.

If LPNs cannot meet these criteria, they may enter the program as generic students and take the standard nursing curriculum. Specific procedures for the Advanced Placement track for LPNs may be obtained in the nursing office in the Health Careers Education Center, H-122.

Program Duration Limits/Updates/Changes Progression and Graduation

The nursing program is designed to keep pace with the times. It is subject to change without notice to comply with requirements of accrediting agencies, clinical facilities, or the college, to meet the changing health care needs of society and to prepare students for nursing now and in the future. For the most current information, students should contact the nursing office.

All educational experiences are under the direction and guidance of the nursing faculty. Student progress is evaluated in the clinical setting, classroom and nursing laboratories. Progression in nursing courses is based on a student’s:

1. Adherence to program requirements and policies outlined in the Nursing Student Handbook.
2. Achievement of the minimum grade of “C” (no C-) for nursing and all other non-nursing and required support courses.
3. Competency in math dosage calculation at the required percentage and in the number of test attempts allowed by policy.
4. Competency in pharmacology in two test attempts.
5. Satisfactory theory and clinical performance. Failure in either area is failure of the course.

Withdrawal and Readmission

Students who are not successful in nursing courses, do not progress to the next level of courses. **If a student falls out of one or both first semester nursing courses (NSG 120/126), they can restart the program. The restart is only one time and only at this point. A current NET test, GPA of 2.7 or higher, and fulfillment of any new program criteria are necessary to restart.** If a student falls out of one of the first semester courses, chooses to readmit, and then fails a course in the second semester, they are out of the nursing program and cannot return. If a student fails both NSG 150 and NSG 155, they cannot return to the program. If a student passes both beginning nursing courses, but fails one in the second semester and one in the third semester (NSG 221 or NSG 222) or fourth semester (NSG 250 or NSG 255), the student must appear before the Admission/ Readmission Committee to appeal one more opportunity to finish the program, after remediation work is completed. Students who fail two nursing courses in the last two semesters must also appear before the Committee to appeal for continuance. All students who fail a course, or fall out of a nursing course for any other reason, must have an Exit Interview with the Associate Dean, indicate in writing their interest in being readmitted, and fulfill their remediation work with “C” grades or better

before they are considered for readmission. Their GPA must be 2.5 or better to readmit to the program.

Program Duration Limits

All courses for the nursing program must be completed within a total of three consecutive calendar years. BIO 233/234, or transfer course equivalents, must be successfully completed in no more than two attempts and must not be older than five years as students enter the nursing program. Anatomy and Physiology of less than 8 semester credits or taken over five years ago, must be repeated.

Nursing Program Changes

The College and the Nursing Division reserve the right to change policies in effect at the time of catalog publication. The nursing program continuously updates its program of study to meet changing health needs. Requirement changes, updates, and all information regarding the nursing program can be obtained through the nursing office (H-122) or the Admissions Assistants for nursing (located in the University Transfer, Advising, and Career Counseling Center area of the College).

Registry/Certification/License Examination Information

The nursing program prepares graduates for entry-level positions in the nursing profession. Successful completion of the program of study qualifies graduates to receive an Associate in Applied Science degree and apply to take the National Council Licensure Examination (NCLEX-RN) leading to state license as a registered nurse.

Applicants should be aware that the Michigan Board of Nursing might deny a license to an applicant who has been convicted of a criminal offense or is addicted to drugs or alcoholic beverages.

Clinical Placements

Placement of students in clinical agencies is increasingly difficult to arrange. Clinicals occur in many different ways. They may be on one, long day, two early a.m. days or two p.m. evenings. They may also occur on weekends. **Students who are unwilling or unable to make arrangements to switch/change their assigned clinical placements to accommodate their lives may have to step out of the nursing program.**

Accreditation

The program is approved by the Michigan State Board of Nursing and accredited by the National League for Nursing accrediting Commission (NLNAC), 61 Broadway, New York, NY 10016. Phone: 1-800-669-1656 ext. 153.

Minimum Number of Credits To Graduate (Including Options/Electives): 65

Note:

NET - Nursing Entrance Test information is available at <http://adm.hfcc.edu/~jmorford/NET/>

Courses

Required Core Courses	Cr. Hours
NSG 120 - Nursing and Health Care Systems I	2
NSG 126 - Nursing and Self-Care I	7
NSG 150 - Nursing and Self-Care II	5
NSG 155 - Nursing and Self-Care III	5
NSG 221 - Nursing and Self-Care IV - Part I	5
NSG 222 - Nursing and Self-Care IV - Part II	5
NSG 250 - Nursing and Self-Care V	7
NSG 255 - Nursing and Health Care Systems II	3

Note:

Each NSG course may be repeated only once. If any nursing course is failed after two attempts, the student will no longer qualify for the Nursing program. If a student fails both NSG 120 and NSG 126, they may restart the program one time. Other than that, students who fail any two nursing courses in the first year are ineligible to return to the program.

A minimum grade of 'C' is required in ALL coursework.

Required Support Courses	Cr. Hours
AH 120 - Pharmacology for Allied Health	3
BIO 233 - Anatomy and Physiology I	4
BIO 234 - Anatomy and Physiology II	4
PSY 131 - Introductory Psychology	3
PSY 253 - Life Span Development	3
SOC 131 - Introduction to Sociology	3
ENG 131 - Introduction to College Writing	3
ENG 132 - College Writing and Research	3
Computer Literacy Test (CLT 100) or Equivalent Course	

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Fall I	Winter I	Spring/Summer I	Fall II	Winter II
NSG 120	NSG 150	SOC 131	NSG 221	NSG 250
NSG 126	NSG 155		NSG 222	NSG 255
BIO 233	BIO 234			
AH 120	PSY 253			

Note:

ENG 131, ENG 132 and PSY 131 must be completed prior to entering the Nursing Program. It is recommended to complete all other required General Education courses prior to starting the nursing program or during Spring/Summer semesters. All General Education courses should be completed as early as possible to allow more time to study nursing courses.

Nursing — Advancement of LPNs to RNs

Associate in Applied Science - Nursing Division

Dr. Cynthia Roman

313-845-6303

CARoman1@hfcc.edu

NURLP.AAS...

Health Careers Education Center 122A

Description

LPNs (Licensed Practical Nurses) pursuing their-ADN (Associate Degree in Nursing) who have attended an accredited LPN program and who have an active Michigan PN license to practice are welcome to apply to the nursing program at HFCC as advanced placement students.

Licensed Practical Nurses may earn credit toward their Associate Degree in Nursing by written examination and demonstration of clinical competence, submission of a portfolio, or by taking an accelerated track in selected courses. Each applicant must meet the minimum requirements for acceptance into the nursing program. Reasonable modifications of the requirements may be made by the Facilitator of the LPN Advanced Placement program or the Associate Dean of Nursing.

Interested students should contact the LPN-ADN Facilitator to inquire about program details and how they can make a smooth transition into the associate degree nursing program. Contact: CARoman1@hfcc.edu or 313-845-6303.

Career Opportunities

The health care industry in the region is and will continue to be one of the largest employers of graduates in Southeastern Michigan. Opportunities for nursing exist in hospitals, clinics and home health care. According to the Bureau of Labor Statistics the employment of registered nurses is expected to grow faster than the average for all occupations through 2012. In fact, more new jobs are expected to be created for RNs than any other occupation (US Bureau of Labor and Statistics).

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- Madonna University
- Michigan State University
- Oakland University
- University of Detroit Mercy
- University of Michigan - Ann Arbor
- Wayne State University

Occupational Exposure/Risk

Applicants who consider a career in nursing should be aware that during the course of their nursing education and subsequent employment they are likely to be working in situations where exposure to infectious diseases is possible. This is an occupational risk for all health care workers. Persons should not become health care workers unless they recognize and accept this risk. Proper education and strict adherence to well established infection-control guidelines, however, can reduce the risk to a minimum. Thorough education in infection control procedures is an important part of the nursing program of study.

Latex Allergies

Since 1989, health care providers and their patients have experienced a rise in allergic responses to latex. Gloves, tubing, and other products used in the care of clients are frequently made from latex. Immediate hypersensitivity responses to natural rubber latex (NRL) occur to one or more NRL proteins. The result can be contact urticaria, angioedema, allergic rhinitis, asthma, or anaphylaxis. Early recognition of sensitization to NRL is crucial to prevent the occurrence of life-threatening reactions in sensitized healthcare workers.

In nursing, both in school and on the job, exposure to latex consistently occurs. If a student is or becomes sensitized to latex, it is suggested that another career choice be considered. Non-latex gloves or those without powder (reduces airborne particles of NRL) can be purchased, but it is impossible at this time to get totally away from the problem. The Nursing Division strongly advises those students sensitized or allergic to latex to consult a physician for guidance on the merits of continuing in a health care career. NRL sensitized students who choose to continue in the nursing program do so at their own risk. Neither the college nor the Nursing Division can be responsible for the problems resulting from such a decision.

Admission Requirements: Eligibility

In order to be admitted into the nursing program certain procedures must be followed and academic requirements fulfilled. Applicants must first be admitted to the College and designate Advancement of LPNs to RNs as their curriculum. Applicants must have a high school GPA of 2.7 or higher. If any college courses have been taken, a cumulative GPA of 2.7 or higher is required. The program has a limited enrollment and admits several times per year based on space availability. Admission is on a first-qualified, first-served basis. Students are encouraged to complete the admission requirements as early as possible.

The three stages for admission to the Nursing program are:

1. Applicants obtain copies of the specific admission requirements from the Admissions Office or the Nursing Office.
2. Applicants must meet the admission requirements.
3. Applicants are invited to and must attend pre-enrollment and orientation meetings scheduled by the Associate Dean of Nursing. Final acceptance is contingent upon fulfilling and maintaining minimum program requirements and submitting proof of the following by the deadline dates:
 - A. Health insurance
 - B. Physical examination
 - C. Required immunizations
 - D. BLS certification for health care providers

Admission Requirements: Education

GPA (Most current course of study is considered)

1. High School academic GPA (2.7 or higher), OR
2. Minimum G.E.D. test score of 550 or higher, OR
3. Completion of 12 credit hours at HFCC (2.7 or higher), OR
4. Transfer credit GPA of 2.7 or higher. (If not achieved, a GPA of 2.7 or higher must be established with 12 credit hours taken at HFCC).

Biology

High school GPA of B (3.0) in a one-year laboratory course, or BIO 131-Introduction to Biology, or its transfer equivalent with a minimum grade of C (C- not accepted).

Chemistry

High school GPA of B (3.0) in a one-year laboratory course, or CHEM 131-

Principles of Chemistry, or its transfer equivalent with a minimum grade of C (C- not accepted).

Math

High school GPA of B (3.0) in a one-year math course, or MATH 074, or its equivalent with a minimum grade of C (C- not accepted).

Placement Tests

Placement testing, required developmental course work, and all admission requirements must be completed before students are considered for admission to the program. This requirement is satisfied by passing the Nursing Entrance Test (NET) offered by the Nursing Division. NET testing requires a minimum composite percentage of 65. A second failure requires remediation in areas of weakness. A third failure results in inability to enter the nursing program. Free assistance is available through the learning lab if you do not pass immediately.

1. Math Proficiency

A minimum of 65 is required.

2. Reading Level Ability

The NET reading requirement may be satisfied by passing the test with an instructional level of 65, or greater. All applicants who score below the acceptable level after one retest are required to take developmental course work

Basic Life Support for Healthcare Professionals

All students are required to complete a course in Basic Cardiac Life Support for Healthcare Professionals. This course should be taken between May and July, just prior to entering the nursing program.

Completion of ENG 131, 132 and PSY 131, 253 with a minimum grade of C (C- not accepted).

Successful completion of a criminal background check and drug screening, according to HFCC policy.

Additional Program Requirements

All LPN-ADN students must have BIO 233, 234; PSY 131, 253; and ENG 131, 132 completed successfully prior to entry to the nursing program. It is strongly suggested that SOC 131, be completed before admission to the program.

In addition LPNs must submit to the Nursing Program Office:

1. The LPN Advanced Placement application.
2. An official transcript from the applicant's practical nursing school.
3. Proof of a current LPN Michigan license.

Specific procedures for the Advanced Placement track may be obtained from the Nursing Office located in the Health Careers Placement Center H-122.

All nursing students must pass a drug test and a criminal background check. You must pay for drug testing. The paperwork and process will be explained to you when you meet with the LPN Advanced Placement Facilitator, Dr. Cynthia Roman. If you do not pass your Physical examination, Criminal Background Check, and Drug Test, you cannot take nursing courses, as you are ineligible to enter the clinical area. Clinical experience is required to successfully complete the nursing program.

Program Duration Limits/Updates/Changes

Progression and Graduation

The nursing program is designed to keep pace with the times. It is subject to change without notice to comply with requirements of accrediting agencies, clinical facilities, or the College, to meet the changing health care needs of society, and to prepare students for nursing now and for the future. For current information, students should contact the Nursing Office.

All educational experiences are under the direction and guidance of the nursing faculty. Student progress is evaluated in the clinical setting,

classroom, and nursing laboratories. Progression in nursing courses is based on a student's:

1. Adherence to program requirements as outlined in the Nursing Student Handbook.
2. Achievement of the minimum grade of C for nursing and other required support courses.
3. Competency in math dosage calculation.
4. Competency in pharmacology.
5. Satisfactory clinical performance.

Withdrawal and Readmission

Students who are not successful in a nursing course do not progress to the next nursing course (with the exception of NSG 150, NSG 155 both offered the same semester). Unsuccessful students withdraw from the program. Students, who receive less than a C grade in theory, fail to maintain competency in math dosage calculation, or receive an unsatisfactory grade in clinical practice for any nursing course are unsuccessful. Students not successful in passing a nursing course may be considered for readmission to the nursing program one time only.

All readmission applicants are considered only after first-time applicants are accepted into the course or program. Acceptance for readmission also depends on the following:

1. Applicant's overall performance.
2. Steps taken for remediation.
3. Availability of space.
4. Program duration limits.

Students who are not successful in first-semester nursing courses may reapply to restart the program through the Admissions Office. Readmission into the second, third, or fourth semester is done by petitioning the Associate Dean and nursing faculty after completing an exit interview. After the first semester, students may restart the program one time only.

Students not successful in nursing courses must have an exit interview with the Associate Dean and must indicate in writing their interest in being readmitted to a nursing course sixty days or more in advance of the first day of class and demonstrate that remediation is fulfilled. Students who readmit to a nursing course more than one time must re-enter through recommendation of the Admissions/Readmission Committee and positive faculty recommendation.

Program Duration Limits

All nursing courses taken at Henry Ford Community College or other colleges must be successfully completed within a total of three consecutive calendar years. BIO 233 and BIO 234-Anatomy and Physiology I and II, or transfer equivalent courses that were taken five or more years prior to enrollment in beginning nursing courses must be repeated.

Nursing Program Changes

The College reserves the right to change policies in effect at the time of catalog publication. The Nursing program continuously updates its program of study to meet changing health needs. Further up-to-date information concerning curriculum and requirements for admission, progression, and graduation is available to applicants and other students upon request from the Nursing Office in the Health Careers Educational Center Building H-122 or the Admissions Assistant for Health Careers/ Nursing in the Learning Resource Center.

Registry/Certification/Licensure Exam Information

The nursing program prepares graduates for entry-level positions in the nursing profession. Successful completion of the program of study qualifies graduates to receive an Associate in Applied Science degree and apply to take the National Council Licensure Examination leading to state licensure as a registered nurse.

Applicants should be aware that the Michigan Board of Nursing might deny a license to an applicant who has been convicted of a criminal offense or is addicted to drugs or alcoholic beverages.

Accreditation

The program is approved by the Michigan State Board of Nursing and accredited by the National League for Nursing Accrediting Commission, 60 Broadway, New York, New York, 10016.

Student complaints regarding the Nursing Program may be reported directly to the National League for Nursing Accrediting Commission (NLNAC), 61 Broadway, New York, New York 10016. The telephone number is 1-800-669-1656, ext. 153.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 66**

Courses

Required Core Courses	Cr. Hours
NSG 091 - Nursing Systems II; LPN Transition	1
Granted with proof of valid LPN license. NSG 120 and NSG 126 (9 cr hrs).	9
NSG 150 - Nursing and Self-Care II (pending exemption, based on LPN transcript)	5
NSG 155 - Nursing and Self-Care III	5
NSG 221 - Nursing and Self-Care IV - Part I	5
NSG 222 - Nursing and Self-Care IV - Part II	5
NSG 250 - Nursing and Self-Care V	7
NSG 255 - Nursing and Health Care Systems II	3

Note:

All LPN-ADN students must meet with the LPN Coordinator.

LPN transcripts will be reviewed for previous mental health NSG courses. Upon transcript evaluation, a decision will be made about which course(s) a student must take in the second semester of the program.

NSG 150 may be required based upon review.

Each nursing course may be repeated only once. If two different nursing courses are failed, the student will be seen by the Admissions/Readmissions Committee to determine the outcome. Ordinarily, the student will no longer qualify for the HFCC Advancement of LPNs to RNs program.

NSG 120 and NSG 126 classes will be awarded once NSG 091 is passed and proof of current LPN license is provided.

Required Support Courses	Cr. Hours
AH 120 - Pharmacology for Allied Health	3
BIO 233 - Anatomy and Physiology I	4
BIO 234 - Anatomy and Physiology II	4
PSY 131 - Introductory Psychology	3
ENG 131 - Introduction to College Writing	3
ENG 132 - College Writing and Research	3
PSY 253 - Life Span Development	3
SOC 131 - Introduction to Sociology	3

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Fall I	Winter I	Spring I	Fall II	Winter II
NSG 091	NSG 155	SOC 131	NSG 221	NSG 250
AH 120	NSG 150		NSG 222	NSG 255

Note:

ENG 131/132, PSY 131/253 and BIO 233/234 must be completed prior to entering the Nursing Program. It is recommended to complete all other required General Education courses prior to starting the nursing program or during the Spring/Summer semesters. All support courses must be completed successfully in the required semester or before.

NSG 150 exemption is granted after review of LPN transcripts.

Nursing Care Skills

Certificate of Achievement - Nursing Division

Patrice Irving
Katherine Howe

313-845-6534
313-845-9635

pirving@hfcc.edu
khowe@hfcc.edu

NURSE.CSGL...

Health Careers Education Center 1031
Health Careers Education Center 122A

Description

This 11-week program prepares you to work as a Nurse Aide. The program also makes a great foundation for the associate degree program in nursing. Complete the 16 credits in the Nursing Assistant Program successfully for an immediate job placement. If you begin work as a Nurse Aide, many employers will help you pay for your associate degree!

Nurse Aides assist nurses in rendering care to clients with varying degrees of wellness and illness. They work in acute and chronic settings, as well as the home. The basic nursing skills necessary to perform the duties of a nurse aide are acquired. The course incorporates 90 hours of theory, 128 hours of laboratory practice, and 52 hours in a clinical agency. The course requires attendance from 8:30 a.m. - 4:30 p.m., 4 days a week. Mastery of learning principles prevails. Students repeat theory and clinical testing to meet 80% theory and 100% skills competency, within the time parameters of the course. Successful mastery allows testing at the state level to receive the CENA designation.

Applicants to the nurse aide course should be aware that health care personnel work in direct care with clients. In order to be considered for admission or to be retained in this course, all applicants should possess:

1. Sufficient visual acuity necessary for accurate assessment and nursing care, such as required in the direct care and observation of clients, noting irregularities in client appearance, taking accurate temperatures, blood pressures, etc.
2. Sufficient auditory perception to receive verbal communication from clients and members of the health team and to assess the health status of people through the use of monitoring devices i.e. stethoscopes and the ability to hear fire alarms, as well as cries for help.
3. Sufficient gross and fine motor coordination to respond promptly and to implement the skills required in meeting health care needs of clients, including the manipulation of equipment.
4. Sufficient physical abilities to move around in client rooms and work and treatment areas and administer client care procedures.
5. Sufficient strength to perform physical activities frequently requiring the ability to push and pull objects more than fifty pounds and to transfer objects and persons of more than one-hundred pounds.
6. Sufficient communication skills (speech, reading, writing) to interact with clients and to communicate their health status and needs promptly and effectively.
7. Sufficient intellectual and emotional capability to plan and implement care for clients.
8. Sufficient psychological stability essential to perform at the required levels in the clinical portions of the nursing program.
9. Capability to sustain long periods of concentration to make decisions such as selecting correct techniques, equipment, and safety measures to assure maximum care and safety of clients. A person under the influence of alcohol or consciousness-altering drugs could not meet the above criterion.
10. Sufficient physical stamina to remain standing for long periods of time.

Career Opportunities

Students who complete the Nursing Care Skills 100 course work in hospitals, nursing homes and in home health care. They often return to school at a later date to become nurses or other health care workers.

Occupational Exposure/Risk

Applicants who consider a career in health care should be aware that during their education and subsequent employment they are likely to be

working in situations where exposure to infectious diseases is possible. This is an occupational risk for all health care workers. Persons should not become health care workers unless they recognize and accept this risk. Proper education and strict adherence to well established infection-control guidelines, however, can reduce the risk to a minimum. Thorough education in infection control procedures is an important part of the program of study.

Latex Allergies

Since 1989, health care providers and their patients have experienced a rise in allergic responses to latex. Gloves, tubing, and other products used in the care of clients are frequently made from latex. Immediate hypersensitivity responses to natural rubber latex (NRL) occur to one or more NRL proteins. The result can be contact urticaria, angioedema, allergic rhinitis, asthma, or anaphylaxis. Early recognition of sensitization to NRL is crucial to prevent the occurrence of life-threatening reactions in sensitized healthcare workers. Both in school and on the job, exposure to latex consistently occurs. If a student is or becomes sensitized to latex, it is suggested that another career choice be considered. Non-latex gloves or those without powder (reduces airborne particles of NRL) can be purchased, but it is impossible at this time to get totally away from the problem. The Nursing Division strongly advises those students sensitized or allergic to latex to consult a physician for guidance on the merits of continuing in a health care career. NRL sensitized students who choose to continue do so at their own risk. Neither the college nor the Nursing Division can be responsible for the problems resulting from such a decision.

Admission Requirements/Eligibility

Students with a history of alcohol-related driving offenses and or felony convictions will find it difficult if not impossible to gain employment in health care. A drug screening and criminal background check are required to enter the program. The process will be explained in Information Sessions in the Nursing Skills Program. Drug screening must also be paid by the student. This also is explained during the new student Information Session. Students who are not cleared for clinical placement through the Physical Examination, the Criminal Background Check and the Drug Screen will not be able to complete the NCS 100 course.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 16**

Courses

Required Core Courses	Cr. Hours
NCS 100 - Competency Evaluated Nurse Aid	16

Office Administration

Certificate of Achievement - Business and Economics Division

Diana Baron 313-317-1583 dbaran@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

BAIMOFFADM.CMLT...
 Reuther Liberal Arts Building 330
 Reuther Liberal Arts Building 328

Description

Henry Ford Community College's certificate in Office Administration provides students with the knowledge and skills to assume an administrative role in today's modern office environment. Students will learn the most commonly used computer software applications and critical communication and management skills. The program finishes with a capstone course where all aspects of the program are integrated to give students a comprehensive understanding of the operations of contemporary offices. Individuals who are already employed may find that the Office Administration certificate increases the opportunity for promotion.

While working towards this certificate, students may apply course credits towards a Certificate in Computer Software Applications. The Office Administration certificate may also be used as a building block towards the achievement of an Associate in Business degree in Administrative and Information Management.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 30**

Courses

Required Core Courses	Cr. Hours
BBA 110 - Business Language Skills	3
BBA 133 - Business Behavior and Communication	3
BBA 231 - Business Office Communications	3
BBA 235 - Office Administration Practicum	4
BCA 106 - Introduction to Windows	2
BCA 140 - Software Applications	3
BCA 143 - Word Processing	3
BCA 145 - Spreadsheet Applications	3
MGT 230 - Principles of Management	3
MGT 231 - Supervision and Teambuilding	3

Recommended Course Sequence

Recommended Course Sequence Option One

Fall I	Winter I
BBA 110	BBA 231
BBA 133	BBA 235
BCA 106	BCA 143
BCA 140	BCA 145
MGT 230	MGT 231

Recommended Course Sequence Option Two

Fall I	Winter I	Fall II	Winter II
BBA 110	BCA 143	BBA 133	BBA 235
BCA 106	BCA 145	BBA 231	MGT 231
BCA 140		MGT 230	

Note:

Recommended Course Sequence Option One is comprised of the first semester of 14 credit hours and the second semester of 16 credit hours.

Recommended Course Sequence Option Two is comprised of the first semester of 8 credit hours, second semester of 6 credit hours, third semester of 9 credit hours, and fourth semester of 7 credit hours.

Office Skills — Fundamentals

Certificate of Achievement - Business and Economics Division

Diana Baron 313-317-1583 dbaran@hfcc.edu
 Elaine Saneske 313-845-9704 esaneske@hfcc.edu

OFFICESKILLS.CMLT...
 Reuther Liberal Arts Building 330
 Reuther Liberal Arts Building 328

Description

Henry Ford Community College's Office Skills — Fundamentals certificate prepares students to provide basic administrative support under the supervision of office managers, administrative assistants, secretaries, and other office personnel. Students will learn computer keyboarding; the Windows operating system; and the basics of the Microsoft Office Suite of Word, Excel, and Access. Students will review the language arts and learn business grammar and the basic principles underlying business communication to create effective business documents.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 17**

Courses

Required Core Courses	Cr. Hours
BBA 110 - Business Language Skills	3
BBA 133 - Business Behavior and Communication	3
BBA 231 - Business Office Communications	3
BCA 101 - Computer Keyboarding	3
BCA 106 - Introduction to Windows	2
BCA 140 - Software Applications	3

Recommended Course Sequence

Term 1	Term 2
BBA 110	BBA 133
BCA 101	BBA 231
BCA 106	BCA 140

Paramedic

Associate in Applied Science - Health Careers Division

Shannon Bruley 313-317-6582 sbruley@hfcc.edu
 Ronald Bodurka 313-845-9877 rbodurka@hfcc.edu

PAMED.AAS...
 Health Careers Education Center 133L
 Health Careers Education Center 132

Description

Emergency Medical Technology offers an exciting and challenging health-care career for individuals interested in providing emergency care in the pre-hospital or hospital emergency department setting.

Due to health-care reform issues and the growing recognition of the Emergency Medical Technician, also known as an EMT, a professional member of the health-care team, career opportunities for EMTs of all levels of licensure are developing and expanding.

Basic Emergency Medical Technicians are trained in basic life support procedures and the principles of care and transportation of the sick and injured. Basic EMT licensure qualifies the student for an entry-level position as an emergency care provider with municipal and private ambulance services as well as some hospital emergency departments. The basic EMT license is often a prerequisite for employment as a firefighter. (Progressive fire departments in our service area require a paramedic license. An EMT Basic license is the first step in meeting this criterion.)

Paramedics are highly trained members of the health-care community often responsible for bringing life-saving diagnostic and treatment skills to the patient at the scene of an emergency. Paramedics receive intense training in EKG interpretation, emergency pharmacology, and advanced life-support procedures. The scope of practice of the paramedic is rapidly expanding, creating a number of new employment opportunities.

The EMS Program at HFCC offers the options of certificates of achievement in Basic EMT and Paramedic, or the option of an Associate in Applied Science degree. The program is designed to meet the needs of students interested in entry-level training as well as those seeking career advancement.

The HFCC Paramedic Program has been awarded the highest level of approval through the Bureau of Emergency Medical Services & Trauma Systems, Michigan Department of Community Health.

Computer Usage

This program, from EMS 100 level and up, requires students to utilize a computer and the internet. All students have computer & internet access through our campus library.

Career Opportunities

Paramedics are in high demand. According to the U.S. Department of Labor, Bureau of Labor Statistics, "Employment of emergency medical technicians and paramedics is expected to grow faster than the average for all occupations through 2012" (Occupational Outlook Handbook, 2004-2005 Reprint).

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Siena Heights University
- University of Michigan - Dearborn

Occupational Exposure/Risk

In emergency medical services, both in school and on the job, exposure to infectious diseases and latex may be minimal to moderate depending on the setting in which you are working. Exposure to illness and infectious disease is an occupational risk for all health care workers. Persons should not

become health care workers unless they recognize and accept this risk. Proper education and strict adherence to well established infection-control guidelines can reduce the risk to a minimum. Persons who have latex sensitivity or allergies should consult with a physician prior to entering the program for guidance on the merits of continuing in a health care career.

Admission Requirements/Eligibility

The first year of studies for the Emergency Medical Services degree is open enrollment. Students should place into ENG 131 in order to be most successful. Students wishing to enter the second year of studies, which includes the paramedic core, must apply through the EMS office in Health Careers. Required Core Course sequencing begins in the Fall semester. Early advising for course sequencing is highly recommended. Acceptance to the college is granted to most applicants and neither constitutes nor guarantees admission to the Paramedic program. Students are accepted into the program based on a "first-qualified, first-accepted" basis. All potential placements must be registered on the wait list in the EMS office.

For EMS 200-level courses, students will need to satisfy the following prerequisites:

1. EMT-Basic MI License (with a current National Registry Certificate preferred), BIO 233, BIO 234, AH 100, AH 120 and AH 105 (or equivalent)*
2. ASSET Math Score of 39 on the Numerical Skill Unit or COMPASS Pre-Algebra score of 39 or successful completion of MATH 074.
3. ASSET Reading Score of 43 or COMPASS reading score of 84 or successful completion of ENG 081.

A grade of C or better is required for successful completion of all courses (core and support) required in the EMS program. Students not receiving a C or better cannot continue in the program until they have successfully repeated the course(s) earning a C or better. Students who do not successfully complete all co-requisite courses in the EMS Program cannot continue with that same class of students. Therefore, students who fail must repeat all coursework (200+ and up) from the beginning up to the point that they failed, and then progress in sequence with the new class of paramedic students. Students who need to repeat paramedic must request to be put on the waiting list for the following year. Re-admittance is subject to seat capacity and prior performance.

Health Appraisal

Each student is required to complete a Health Appraisal Form, copies of which are available in the Health Careers Office. This appraisal includes a physical, blood titers (to validate immunity to childhood immunizations), TB test, Hepatitis B and boosters if necessary. The cost for this appraisal is in addition to the basic tuition and fee schedule.

Students in the EMS program are expected to meet the same physical and mental requirements as emergency medical technicians. A representative job profile, also available in the Health Careers Office, lists the specific physical and mental requirements as well as the environmental conditions of the occupation.

Criminal Background Check and Drug Screen

Consistent with Section 20173 of the Michigan Public Health Code and the requirements of our clinical affiliates, a Criminal Background Check and Drug Screen* is required for all students in EMS programs prior to beginning clinical assignments. The cost for this test is in addition to the basic tuition and fee schedule.

Students with felony convictions on their record should not enroll into the program as we have a zero-tolerance stance from our clinical affiliates. If an individual is granted an expungement, then he/she would be considered for eligibility. Students with a history of alcohol related driving offenses and/or felony convictions will find it difficult if not impossible to

gain employment in public safety careers.

Students who are not cleared for clinical through the Health Appraisal, Criminal Background Check and Drug Screen will not be able to complete the EMS education programs.

Uniforms

Uniform shirts are provided through the program at the Basic EMT level. Pants, shoes, work belt, stethoscope, and National Registry exam fees are in addition to the basic tuition and fee schedule.

Job Placement

Information about career placement and job success is available through either the Health Careers Office or the College's Job Placement Office.

Program Duration Limits/Updates/Changes

Once a student is admitted/enrolled into the paramedic portion of the EMS degree, that student must complete with that same group of students. If for any reason a student must stop attending after successfully completing any portion thereof, and wish to complete, the student must reapply through the EMS office for the desired year of return. Because of the rapid changes in healthcare, legislation, and resulting course content, successfully completed EMS classes must be repeated in order to assure competence. This applies to all second year students who start, stop, and then return for completion. Early advising through the EMS office is essential.

The College continuously attempts to improve each program and as a result, courses and/or requirements may be modified. Curriculum, course content, and admission criteria are subject to change by action of the College faculty and administration. Contact the Health Careers Office at 313 845-9877 for any current program updates or visit www.hfcc.edu.

Registry/Certification/Licensure Exam Information

If an individual is a convicted felon, it could disqualify him/her from obtaining the necessary National Registry Certification. For the specific National Registry EMS Policy, go to <http://www.nremtorg/about/policyfelony.asp>. After obtaining a National Registry Certificate, individuals can apply for a Michigan Licensure, which is necessary to practice EMS as a profession. If an individual is a convicted felon, questions regarding potential licensure should be directed to the Michigan Department of Community Health, Bureau of Health Professions, or go to the following web site: <http://www.michigan.gov/mdch>.

Accreditation

Henry Ford Community College is an approved EMS Program Sponsor through the Michigan Department of Community Health, Bureau of EMS & Trauma Systems. Through this approval, all graduates/completers of the EMS program(s) are eligible to sit for the national registry exams for the designation of Nationally Registered Emergency Medical Technician-Basic or Nationally Registered Emergency Medical Technician-Advanced.

Minimum Number of Credits To Graduate (Including Options/Electives): 76

Courses	
Required Core Courses	Cr. Hours
EMS 100 - EMT - Basic Fundamentals	9
EMS 106 - EMT - Basic Procedures	2.5
EMS 109 - EMT - Basic Clinical Externship	2
EMS 200 - Paramedic I	3
EMS 205 - Paramedic Lab I	3
EMS 210 - Paramedic II	3
EMS 215 - Paramedic Lab II	4
EMS 220 - Paramedic III	4
EMS 225 - Paramedic Lab III	2
EMS 230 - Paramedic IV	4
EMS 240 - Paramedic V	3
EMS 290 - Advanced Clinical I	4

EMS 295 - Advanced Clinical II	4
EMS 299 - Advanced Clinical III	4

Required Support Courses	Cr. Hours
AH 100 - Medical Terminology*	4
AH 105 - Basic Life Support for Healthcare Providers*	0.5
AH 120 - Pharmacology for Allied Health	3
BIO 233 - Anatomy and Physiology I	4
BIO 234 - Anatomy and Physiology II	4

Note: * Students should take AH 100 and AH 105 before taking any course with an EMS prefix.

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

HPEA 117 - Weight Train & Phys Conditioning	2
HPEA 155 - Relax Techniques for Stress Management	2

Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Term 1	Term 2	Term 3	Term 4
AH 105	EMS 100	AH 120	BIO 234
AH 100	EMS 106	BIO 233	POLS 131
ENG 131	EMS 109	ENG 132	CLT 100
Fall II	Winter II	Spring II	
EMS 200	EMS 215	EMS 225	
EMS 205	EMS 220	EMS 240	
EMS 210	EMS 230	EMS 299	
EMS 290	EMS 295		

CLINICAL

Basic: We require two rotations in the field, usually 8 a.m.-8 p.m., with Monday through Sunday scheduling options and two rotations in the hospital emergency room, with scheduling options available 24/7. Clinical for EMT Basics will be explained thoroughly at the EMS 109 orientation.

Paramedic: EMS clinicals are made available at the discretion of our host EMS Departments and Hospitals. Students are encouraged to keep flexible schedules during school to accommodate the advanced clinical experience. At the paramedic level (EMS clinical 290, EMS 295 and EMS 299), many of the rotations outside of the ER are daytimes and during the traditional work week. Examples of this are OR and Cardiac Cath labs. Clinical is explained, in depth, at the Paramedic orientation in August, before the FALL II start of paramedic courses.

Clinical courses, basic and advanced, show TBA in the Time/Day area of the schedule. We try very hard to individualize clinical rotations to each student's needs.

The Second Year: Sequencing for EMS 200+ level course-work is not optional. Paramedic (EMS 200+) courses begin in Fall and end in Spring without exception. Prior to that, courses can be taken in any course/semester order as long as the EMS 100, EMS 106 and EMS 109 courses are taken as co-requisites.

Students are responsible for their own transportation to clinical sites and any expenses incurred.

Pharmacy Technician

Certificate of Achievement - Health Careers Division

Theresa Mozug
Ronald Bodurka

313-317-6548
313-845-9877

tmozug@hfcc.edu
rbodurka@hfcc.edu

PHARM.CMLT...
Health Careers Education Center 132J
Health Careers Education Center 132

Description

The Pharmacy Technician is a Level II (Complex Skills Certificate) Certificate of Achievement program. This one-year certificate program is designed to prepare professional multi-skilled individuals for employment as an entry-level pharmacy technician in hospital, retail, community or other institutional pharmacies. Clinical duties are emphasized in the classroom and laboratory with directed practical experience in selected hospital, out patient, home infusion, long-term care and compounding pharmacies.

Pharmacy Technicians are skilled health specialists who, under the direction and supervision of a pharmacist, assist in the varied activities of a pharmacy department. The Pharmacy Technician may be responsible for:

- A. Preparing and dispensing medications in accordance with standard procedures and laws under the supervision of a registered pharmacist.
- B. Transcribing and processing physician orders.
- C. Preparing intravenous admixtures, including chemotherapy medications.
- D. Maintaining patient profiles and medication records electronically.
- E. Preparing bulk formulations and compounding.
- F. Maintaining inventories of pharmaceutical supplies.
- G. Communicating effectively with patients and members of the health care team.

The Pharmacy Technician Program requires 38 credit hours to earn a certificate. Students in the program will have the opportunity to practice their skills using pharmacy-specific equipment and supplies. The program begins only once per year in the fall semester. The externship rotations are arranged and supervised by the program's technical coordinator. The program is affiliated with sixteen hospital pharmacies, thirty or more out-patient (retail and community) pharmacies, and several home infusion and long-term care pharmacies.

Pharmacy Technician vs. Pre-Pharmacy Programs

HFCC offers its students two distinct pharmacy options. One option is a one-year Pharmacy Technician program. The technician curriculum is designed to prepare the students for employment assisting pharmacists after completion of the program. The courses in the Pharmacy Technician program are designed to prepare the students for employment immediately and not designed for transfer nor intended for those students primarily interested in applying to pharmacy schools.

If a student's primary intent is on becoming a pharmacist, then the second pharmacy option at HFCC is the Associate in Science Pre-Pharmacy Program curriculum that should be followed. The Pre-Pharmacy Academic Transfer Program is designed for the transfer of course work for those students primarily interested in applying to pharmacy schools.

Career Opportunities

According to recent reports from the U.S. Bureau of Labor Statistics, employment opportunities for pharmacy technicians in this region are expected to remain strong through this decade. The shortage of pharmacists and pharmacy technicians is expected to continue as the health services industry expands because of technological advances in medicine and an aging population. In addition, employment growth will be driven by the increase in the number of out patient pharmacies, home infusion pharmacies, compounding pharmacies and other pharmacy related facilities that need skilled support personnel, particularly pharmacy technicians.

General information about career placement and job success is available through either the Health Careers Office or the College's Placement Office. In addition, salary expectations are discussed during the PHT program pre-acceptance interview.

Occupational Exposure/Risk

Exposure to infectious diseases and latex may be minimal to moderate depending on the setting in which you are working. Those with latex sensitivity or allergies should consult with a physician prior to entering the program for

guidance on the merits of continuing in a health care career. During the course of the program students learn infection control guidelines and procedures and strict adherence to these guidelines will reduce the risk of exposure to infectious diseases.

Admission Requirements/Eligibility

The Pharmacy Technician program begins each year with the fall semester. Early application is essential for counseling and admission into the program. In addition to the general college application, a separate specific application for the Pharmacy Technician program is required and processed through the Admissions Office. Acceptance into the College is generally granted to most applicants, but this does not constitute nor guarantee admission to the program. Final approval to enroll in the program comes from the Health Careers division. An interview with the program's Technical Coordinator is required.

The Admission Requirements for the Pharmacy Technician Program are:

1. A minimum high school academic grade point average of C+ (2.25). This requirement may also be satisfied by completion of at least 12 college credit hours with an academic grade point average of 2.25 (non-skill courses) for both transfer students and Henry Ford Community College students.
2. An ASSET/COMPASS reading score of 43/84 or successful completion of ENG 081.
3. An ASSET/COMPASS test score sufficient to qualify for MATH 080 or higher.
4. Typing proficiency of at least 25 words per minute. This requirement may be satisfied with successful completion (C or better) of a keyboarding course.

Health Appraisal

Students in the Pharmacy Technician program are expected to meet the same physical and mental requirements as an employed pharmacy technician. A representative Pharmacy Technician Job Profile is available upon request from the Health Careers Office or during the interview with the program's Technical Coordinator. The job profile lists the specific physical and mental requirements as well as the environmental conditions of the occupation. Each student must have a physical examination and vaccination record on file before admission to externship rotations. The Health Appraisal Form addresses the issue of normal color perception, eye-hand coordination, and any history of substance abuse.

Criminal Background Check and Drug Screen

Consistent with Section 20173 of the Michigan Public Health Code and the requirements of our clinical affiliates, a Criminal Background Check and Drug Screen is required for all students in PHT program prior to beginning clinical assignments. The cost for this test is in addition to the basic tuition and fee schedule. For questions regarding this policy, contact the Health Careers Office.

Students who are not cleared for clinical through the Health Appraisal, Criminal Background Check and Drug Screen will not be able to complete the program.

Additional Program Requirements

Note: Required core courses can be taken only after formal admission to the PHT program through the Health Careers Division.

All educational experiences are under the guidance of the PHT program. Student progress is evaluated in the classroom, laboratory and clinical setting throughout the program. Progression in the program is based upon the student meeting the following requirements:

1. Adherence to the program requirements outlined in the PHT Student Handbook.
2. Achievement of a minimum grade of C or better in all PHT and required courses.
3. Maintenance of an overall cumulative grade-point average of 2.0 or better.

The Program Application Process

Step 1 - Select your career program

- It is recommended that each applicant meet with a Health Careers Advisor 313-845-9877 to discuss program options and then to create an academic plan to qualify for the selected program. It is suggested that you first select and apply to your program of choice before you begin any of the prerequisite course work.

Step 2 - Apply to the program

- First time applicants to HFCC will indicate the program selection on the application to the college. This process automatically applies you to your program of choice.
- Current HFCC students selecting to change their program of study to a health career program must complete a specific program application. Program applications are available in the Health Career/Nursing Admissions Office.

The Admissions office is located in the University Transfer, Advising, and Career Counseling Center, room LRC 117B and the Health Careers Office is located in the Health Careers Education Center.

Step 3 - Deliver information and track application

- It is the student's responsibility to make certain that all transcripts, grades and/or necessary records are submitted to the Health Careers/Nursing Admissions office, room LRC 117B.
- Program applicants transferring college credit from another institution must have an official transcript mailed to: Henry Ford Community College, Transfer Evaluation, 5101 Evergreen Road, Dearborn, MI 48128.
- Applicants must also submit a student copy of all of their transcripts to the Health Careers/Nursing Admissions office.
- It is strongly recommended that you personally track your specific program application through the Health Careers/Nursing Admissions office, room LRC 117B, 313-317-6525.
- Students are strongly encouraged to monitor their program admission status via the WebAdvisor Program Evaluation link.
- It is imperative that all student contact information such as phone numbers and addresses is kept current through the Registration office. If we are unable to contact you, we then will move to the next qualified applicant.

Step 4 - Qualifying and admission

- Students are qualified when all of the program's admission criteria have been satisfied.
- Applicants are then admitted on a first-qualified, first-accepted basis for available positions. A student's application date to the program either by indication on the HFCC application or the separate program application may be used to determine placement on the qualified list if necessary - the earlier the better.

Program Duration Limits/Updates/Changes

Transfer of Pharmacy Technician courses from other institutions will be accepted only from programs accredited by the American Society of Health-System Pharmacists and will be evaluated on an individual basis.

The Pharmacy Technician Program may be completed in one year (full-time) or two years (part-time). In either case, careful course sequencing is required and each student must satisfy the program's admission criteria.

There are specific admission criteria which must be satisfied in order to be admitted into this program; however, students are permitted to take the required support courses prior to being formally accepted and admitted into the program. AH 100, MATH 101, HCS 131, and BBA 110 or MOA 170 may be taken prior to formal acceptance into the program.

HFCC continuously attempts to improve each program, and as a result courses and/or requirements may be modified. Curriculum, course content, and admission criteria are subject to change by action of the College faculty and administration.

Registry/Certification/Licensure Exam Information

Upon completion of the accredited program, students will be eligible for the

Pharmacy Technician Certification Board examination (PTCB) to earn the Certified Pharmacy Technician (CPhT) credential. This program is one of three college-based programs in Michigan to maintain accreditation through ASHSP. Some local area hospital pharmacy employers require pharmacy technicians to be certified (CPhT). In addition, out-patient pharmacy employers prefer pharmacy technicians who are CPhTs or at least CPhT eligible. In the near future both in-patient and out-patient pharmacy technicians will need certification. The CPhT credential is a national certification recognized by employers across the country.

Any questions regarding the national certification exam, including qualifications and/or eligibility, should be directed to the Pharmacy Technician Certification Board (PTCB) at 202-429-7576.

Accreditation

The Pharmacy Technician Program is accredited through the American Society of Health-System Pharmacists (ASHSP).

Accreditation Agency:
American Society of Health-Systems Pharmacists
7272 Wisconsin Avenue, Bethesda, Maryland 20814
301-657-3000

Minimum Number of Credits To Graduate (Including Options and Electives: 38)

Courses	
Required Core Courses	Cr. Hours
PHT 100 - Introduction to Pharmacy Technology	2
PHT 124 - Pharmacology I for Pharmacy Technicians	3
PHT 125 - Pharmacology II for Pharmacy Technicians	3
PHT 132 - Basic Pharmacy Software Applications	2
PHT 150 - Pharmaceutical Calculations	3
PHT 165 - Issues in Pharmacy	2
PHT 175 - Applied Pharmacy Systems	4
PHT 119 - Out Patient Pharmacy Externship	2
PHT 193 - Pharmacy Externship	3
Required Support Courses	Cr. Hours
AH 100 - Medical Terminology	4
HCS 131 - Computers in Health Care	3
MATH 101 - Mathematics for Health Careers	4
<i>Complete one of the following courses:</i>	
BBA 110 - Business Language Skills	3
MOA 170 - Medical Correspondence	3

Recommended Course Sequence

Fall I	Winter I	Term 3
AH 100	PHT 119	PHT 193
PHT 100	PHT 125	
PHT 124	PHT 150	
PHT 132	PHT 165	
HCS 131	PHT 175	
MATH 101	BBA 110	

Note:

The required core courses must be taken in the sequence listed. The required support courses must be taken in the sequence or taken earlier in order to lighten the student's course load.

Students may complete this program in two years on a part-time basis; however, careful scheduling is required.

All educational experiences are under the guidance of the PHT program. Student progress is evaluated in the classroom, laboratory and clinical setting throughout the program. Progression in the program is based upon the student meeting the following requirements:

- Adherence to the program requirements outlined in the PHT Student Handbook.
- Achievement of a minimum grade of C or better in all PHT and required courses.
- Maintenance of an overall cumulative grade-point average of 2.0 or better.

Students are responsible for their own transportation to clinical sites and any expenses incurred.

Physical Therapist Assistant

Associate in Applied Science - Health Careers Division

Cynthia Scheuer, PT, MS
Stephen Pedley

313-317-6575
313-317-6576

cscheuer@hfcc.edu
sepedley@hfcc.edu

PTAST.AAS...

Health Careers Education Center 133I
Health Careers Education Center 133D

Description

The Profession

Physical therapist assistants (PTAs) are skilled health care providers who assist in providing planned patient care programs under the direction and supervision of a physical therapist. As members of the rehabilitation team, PTAs perform treatments designed to relieve pain, promote healing and improve functional ability. Once a treatment plan is designed by a physical therapist, the PTA may be responsible for carrying out this treatment plan.

The Program

The Physical Therapist Assistant (PTA) Program is a two year program designed to prepare individuals for employment as entry-level physical therapist assistants. Students who meet all admission requirements are considered qualified and are admitted to the program once per year in the fall semester on a first qualified-first admitted basis. Students who are interested in this program should submit the separate PTA Program application as soon as possible. The application can be obtained from the Health Careers Division Office by calling 313-845-9877.

Core courses in the program are only offered during the day and only in the semester as indicated in the Required Course Sequence. Support courses are usually offered in a variety of semesters and times. Students in this program will have learning experiences in the classroom, laboratory and in local physical therapy facilities. The final semester is spent in full-time (40 hrs/week) clinical externships.

The student must complete a total of 79 credit hours of course work. (8 pre-admission, 3 General Education, 17 Required Support Courses and 48 required PTA courses). Due to the number of credit hours required for program completion and the intensity of the program, students are encouraged to complete as many of the Support/General Education classes as possible prior to entering the program.

The first courses that a student should complete are those required for program admission followed by the other Required Support/General Education courses.

Career Opportunities

Opportunities for PTAs are excellent at this time and are projected to increase through at least the year 2012. PTAs may choose to practice in a variety of settings, including hospitals, rehab centers, sports medicine clinics, public and private schools, outpatient physical therapy clinics, nursing homes, and home health settings. Information about career placement and job success is available through either the Health Careers Office or the College Placement Office.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Siena Heights University
- University of Michigan - Dearborn

Occupational Exposure/Risk

In physical therapy, both in school and on the job, exposure to infectious diseases and latex may be minimal to moderate depending on the setting in which you are working. Those with latex sensitivity or allergies should consult with a physician

prior to entering the program for guidance on the merits of continuing in a health care career. During the course of the program students learn infection control guidelines and procedures and strict adherence to these guidelines will reduce the risk of exposure to infectious diseases.

Admission Requirements/Eligibility

1. Minimum GPA of 2.8 - may be satisfied by one of the following:
 - High school GPA of 2.8 OR
 - College GPA of 2.8 (if student has completed at least 12 credits excluding less than 100-level courses)
2. ASSET Reading score of 43 or better OR COMPASS Reading score of 84 or better.*
3. Assessment test scores sufficient to allow for placement into ENG 131*. This requirement may also be satisfied by successful completion of the required developmental courses.
4. Minimum math requirement is Algebra*- may be satisfied by one of the following
 - COMPASS Algebra score of 46 or better, OR
 - Successful completion of MATH 080-Beginning Algebra, or equivalent, with a C or better.
5. Successful completion of BIO 233-Anatomy & Physiology I, or equivalent, with a C or better, within five years of admission.*
6. Successful completion of AH 100-Medical Terminology, or equivalent, with a C or better.
7. Twenty hours or more of observation in a physical therapy setting observing a PTA at work with a letter of confirmation from the supervisory PT or PTA.

*There may be other pre-admission coursework the student needs to complete based on results of placement tests and/or high school coursework.

The Program Application Process

Step 1 - Select your career program

- It is recommended that each applicant meet with a Health Careers Advisor 313-845-9877 to discuss program options and then to create an academic plan to qualify for the selected program. It is suggested that you first select and apply to your program of choice before you begin any of the prerequisite course work.

Step 2 - Apply to the program

- First time applicants to HFCC will indicate the program selection on the application to the college. This process automatically applies you to your program of choice.
- Current HFCC students selecting to change their program of study to a health career program must complete a specific program application. Program applications are available in the Health Career/Nursing Admissions Office. The Admissions office is located in the University Transfer, Advising, and Career Counseling Center, room LRC 117B and the Health Careers Office is located in the Health Careers Education Center.

Step 3 - Deliver information and track application

- It is the student's responsibility to make certain that all transcripts, grades and/or necessary records are submitted to the Health Careers/Nursing Admissions office, room LRC 117B.
- Program applicants transferring college credit from another institution must have an official transcript mailed to: Henry Ford Community College, Transfer Evaluation, 5101 Evergreen Road, Dearborn, MI 48128.
- Applicants must also submit a student copy of all of their transcripts to the Health Careers/Nursing Admissions office.
- It is strongly recommended that you personally track your specific program application through the Health Careers/Nursing Admissions office, room LRC 117B, 313-317-6525.
- Students are strongly encouraged to monitor their program admission status via the WebAdvisor Program Evaluation link.
- It is imperative that all student contact information such as phone numbers

and addresses is kept current through the Registration office. If we are unable to contact you, we then will move to the next qualified applicant.

Step 4 - Qualifying and admission

- Students are qualified when all of the program’s admission criteria have been satisfied.
- Applicants are then admitted on a first-qualified, first-accepted basis for available positions. A student’s application date to the program either by indication on the HFCC application or the separate program application may be used to determine placement on the qualified list if necessary - the earlier the better.

Additional Program Requirements

Health Appraisal

Potential students must have an interest in working with the ill and disabled. Good physical strength, observation skills and communication skills are just some of the abilities required for this job. A more detailed sample job profile is available through the Health Careers Office 313-845-9877. Each student must pass a basic physical examination prior to entering the program and a more detailed examination (including checking blood titers for immunity) prior to the start of clinical externships. Any students requesting special accommodations for program admission and progression should contact the Assisted Learning Office at 313-845-9617.

Criminal Background Check and Drug Screen

Consistent with Section 20173 of the Michigan Public Health Code and the requirements of our clinical affiliates, a Criminal Background Check and Drug Screen is required for all students in PTA program prior to beginning clinical assignments. The cost for this test is in addition to the basic tuition and fee schedule. For questions regarding this policy, contact the Health Careers Office.

Students who are not cleared for clinical through the Health Appraisal, Criminal Background Check and Drug Screen will not be able to complete the PTA program.

Program Deposit

At the time of formal admission to the program, each applicant is required to pay a \$100 fee to secure a position. One month after classes start in the fall, the \$100 fee is refunded to the student if the student is still active in the program.

Program Duration Limits/Updates/Changes

All PTA courses taken at HFCC must be successfully completed within three consecutive calendar years.

HFCC continuously attempts to improve each program and as a result, courses and/or requirements may be modified. Curriculum, course content, and admission criteria are subject to change by action of the College faculty and administration.

Registry/Certification/Licensure Exam Information

Successful passage of the PTA Licensure Exam is currently not required to practice in the State of Michigan; however, it is highly recommended. Students who are graduates of this program do qualify to sit for the National Physical Therapist Assistant Examination.

Accreditation

Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 N. Fairfax St., Alexandria, VA 22314, 703-706-3245.

Minimum Number of Credits To Graduate (Including Options/Electives): 79

Courses	
Required Core Courses	Cr. Hours
PTA 102 - Introduction to Physical Therapy Practice	2
PTA 108 - Therapeutic Techniques I	3
PTA 118 - Exercise Techniques I	2

PTA 119 - Exercise Techniques II	4
PTA 132 - Kinesiology for PTAs	3
PTA 142 - Therapeutic Modalities	3
PTA 165 - Life Span Development for PTAs	2
PTA 225 - Applied Pathology for PTAs	4
PTA 250 - Extremity Orthopedics	4
PTA 254 - Spinal Orthopedics	3
PTA 262 - Rehabilitation of Neurological Conditions I	2
PTA 264 - Rehabilitation of Neurological Conditions II	4
PTA 270 - Physical Therapist Assistant Seminar	1
PTA 291 - Clinical Externship I	2
PTA 295 - Clinical Externship II	9

Required Support Courses	Cr. Hours
BIO 234 - Anatomy and Physiology II	4
ENG 132 - College Writing and Research	3
HPE 142 - Advanced First Aid	3
PHYS 133 - Principles of Physics	4
SPC 131 - Fundamentals of Speaking	3
<i>Complete one of the following courses:</i>	
POLS 131 - Intro. to Amer Gov't and Political Science	3
SSC 131 - A Survey of the Social Sciences	3
<i>Note:</i>	
Anatomy and Physiology courses that were taken five or more years prior to enrollment in the PTA program must be repeated.	

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:
Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Required Course Sequence

Term I	Fall I	Winter I	Fall II	Winter II
AH 100	BIO 234	HPE 142	PTA 250	PTA 270
BIO 233	ENG 132	PTA 108	PTA 254	PTA 295
ENG 131	PTA 102	PTA 118	PTA 262	
PHYS 133	PTA 132	PTA 119	PTA 264	
SSC 131	PTA 165	PTA 142	PTA 291	
	SPC 131	PTA 225		

Note:
Required support courses not taken prior to program admission must be taken as follows:
 • BIO 234 and PHYS 133 completed prior to Winter I Term.
 • All others completed prior to Winter II.
 • Students are responsible for their own transportation to the clinical sites.
 • Students are encouraged to take the CLT 100 Computer Literacy Test. However, if there is a failure to pass the test, the student will be required to successfully pass an approved course to satisfy the Computer Literacy requirement.
 • All PTA courses taken at HFCC must be successfully completed within 3 consecutive years.

Plant Maintenance Trades

Associate in Applied Science - Skilled Trades and Apprenticeship Division
 Skilled Trades and Apprenticeship 313-845-6415

PLMTT.AAS...
 Technology Building 115

Description	Courses								
<p>The Associate in Applied Science for Plant Maintenance Trades is designed for industrial apprentices or other skilled trades persons who have completed or are in the last semester of related instruction requirements for journey person certification or the equivalent. Students may apply the credits earned in their trade programs toward the 60 credit hours required for the degree. Please see Admission Requirements/Eligibility for some of the trades eligible for this degree.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td><i>A minimum of 38 credit hours is required through the Apprenticeship Program.*</i></td> <td style="text-align: center;">38</td> </tr> <tr> <td colspan="2"><i>Note:</i></td> </tr> <tr> <td colspan="2">* Apprenticeship programs vary in the number of credit hours required. The minimum number is 38. All program requirements must be met in order for an apprentice to qualify for a certificate. The credits acquired apply towards the Associate in Applied Science degree.</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	<i>A minimum of 38 credit hours is required through the Apprenticeship Program.*</i>	38	<i>Note:</i>		* Apprenticeship programs vary in the number of credit hours required. The minimum number is 38. All program requirements must be met in order for an apprentice to qualify for a certificate. The credits acquired apply towards the Associate in Applied Science degree.	
Required Core Courses	Cr. Hours								
<i>A minimum of 38 credit hours is required through the Apprenticeship Program.*</i>	38								
<i>Note:</i>									
* Apprenticeship programs vary in the number of credit hours required. The minimum number is 38. All program requirements must be met in order for an apprentice to qualify for a certificate. The credits acquired apply towards the Associate in Applied Science degree.									

Career Opportunities

- Group Leader
- Production Foreman
- Skilled Trade Foreman
- Tool Engineer
- Service Technician
- Product Design
- Quality Control Technician
- Tool Designer

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- Ferris State University
- Lawrence Technological University
- Siena Heights University
- University of Michigan - Dearborn
- Wayne State University

Admission Requirements/Eligibility

Some of the trades eligible for this degree are: Automotive/Truck Mechanic, Commercial and Residential Electrician, Industrial Electrician, Industrial Hydraulics, Industrial Truck Repair, Instrumentation, Machine Repair, Maintenance, Millwright, Plumber, Pipefitter, Power House Mechanic, Refrigeration and Air Conditioning, Sheet Metal Worker, Stationary Steam Engineer, and Welder.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 60**

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Programs of Study

Pre-Elementary Education

Associate in Arts - Other Academic Division

Deborah Zopf
Diane Green

313-845-6430
313-845-9748

dzopf@hfcc.edu
diane@hfcc.edu

PELED.AA...
Learning Technology Center 227A
Learning Resources Center 117

Description

In 2005, Phi Theta Kappa selected HFCC's Pre-Education program as one of ten community colleges nationally that best meets the needs of students who will become teachers of math and science. In addition, in 2001 the Pre-Education program was chosen as one of six exemplary community college teacher education programs in America by Recruiting New Teachers, Inc., an affiliate of the Carnegie Foundation of New York.

The Associate in Arts degree in Pre-Elementary Education requires 60 credit hours of coursework, all of which can be transferred to most four-year teacher preparation programs without loss of credit. The elective component of this program allows students to select courses that apply toward the bachelor's degree at their intended transfer institution. Students are encouraged to consult the university transfer guide sheets in the University Transfer, Advising, and Career Counseling Center located in Learning Resources Center.

Career Opportunities

Pre-Elementary Education program graduates may seek employment in child development centers. For those wishing to teach in K-8 schools, completion of a four-year teacher preparation program with teacher certification is necessary.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- Marygrove College
- University of Michigan - Dearborn
- Wayne State University

Course Transfer Information

Students interested in transferring should note: HPE 260 transfers to the University of Michigan-Dearborn and is a recommended course for students transferring to UM-D. HPE 140 and HPE 260 transfer to Eastern Michigan University and are recommended courses for students transferring to EMU. HPE 140, HPE 142 and HPE 260 transfer to Wayne State University and are recommended courses for students transferring to WSU. Consult the transfer guide for the university in which you wish to transfer to determine the HPE course that will apply to your bachelor's degree.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

Courses

Required Core Courses

Required Core Courses	Cr. Hours
CIS 221 - Instructional Technology for Elementary Teachers	3
ENG 246 - Introduction to Children's Literature	3
MATH 121 - Mathematics for Elementary Teachers I	3
MATH 221 - Mathematics for Elementary Teachers II	3
PSY 131 - Introductory Psychology	3
PSY 256 - Educational Psychology	3
PSY 294 - Educational Psychology Practicum	1
<i>Complete 4 credit hours of Science classes (100-level or higher, one course must include a lab.)</i>	4

Required Support Courses

Required Support Courses	Cr. Hours
ENG 131 - Introduction to College Writing	3
ENG 132 - College Writing and Research	3
<i>Complete one of the following courses:</i>	
HIST 151 - American History I	3
POLS 131 - Introduction to American Government and Political Science	3

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Pre-Pharmacy

Associate in Science - Health Careers Division

Theresa Mozug
Ronald Bodurka

313-317-6548
313-845-9877

tmozug@hfcc.edu
rbodurka@hfcc.edu

PHARM.AS...
Health Careers Education Center 132J
Health Careers Education Center 132

Description

The Program

This Associate in Science degree program in Pre-Pharmacy is designed as an academic transfer program for those students interested in becoming pharmacists. The courses outlined in the program of study have been carefully selected using the basic admission requirements for a number of pharmacy programs as a guide.

This program is designed to prepare students with a solid foundation using a set of carefully selected courses, which will maximize the transfer of course work. These courses were selected considering the general admission criteria used by pharmacy schools and the formal transfer agreements HFCC maintains with many of the universities throughout Michigan. Pre-Pharmacy students are strongly encouraged to work closely with the Pharmacy Coordinator before they select their courses in order to be certain that these courses are covered by the transfer agreements.

Transfer Credit Guarantee

Under HFCC's Transfer Credit Guarantee, HFCC will refund the tuition for any approved transfer course passed at HFCC with at least a C grade if that course work does not transfer to a college or university*. Such classes must be listed as transferable on the transfer institution's official guide sheets on file in the University Transfer, Advising, and Career Counseling Center. To identify those select transfer courses, it is essential for students to maintain close contact with our pharmacy coordinator.

Nearly all the pharmacy schools now grant the degree of Doctor of Pharmacy (Pharm. D.), which requires at least six years or more of post-secondary study. The HFCC Pre-Pharmacy program is designed to cover the first steps in that process. The very nature of the profession requires a strong math and science foundation. Also, the admissions test that a number of programs use in their selection process requires a solid reading comprehension ability. Students with a strong academic background who are able to start with the advanced courses required in this program may complete it in two years. Those students needing additional support or prerequisite courses may require more than two years to complete the program.

*See the HFCC College Catalog for the full details of the guarantee.

Pharmacy Options

HFCC offers our students two distinct program options. The first option is the Pre-Pharmacy Academic Transfer program, which is designed for the transfer of course work for those students primarily interested in applying to pharmacy schools. The second program option at HFCC is our one-year Pharmacy Technician program. The technician curriculum is designed to prepare the students for employment assisting pharmacists after completion of the program. Unlike the Pre-Pharmacy program, the courses in the Pharmacy Technician program are designed to prepare the students for employment immediately and not designed for transfer nor intended for those students primarily interested in applying to pharmacy schools. (See the Pharmacy Technician brochure for more information on that one-year certificate program).

If a student's primary intent is on becoming a pharmacist, then the Associate in Science degree in Pre-Pharmacy program is the curriculum, which should be followed.

Admission Requirements/Eligibility

Educational Requirements

Admission to pharmacy schools is highly competitive and very selective.

Typically, pharmacy programs will use some variation of grades and admission test scores in their selection process. The specific admission criteria for schools of pharmacy vary between each individual program. For a list of the three programs in

Michigan as well as the 17 plus pharmacy programs in the general Midwest region, please contact the Health Careers office. Because admission to pharmacy schools is so competitive, students interested in becoming a pharmacist should explore all of their options and need to review the current admission requirements for not just one but several pharmacy schools.

HFCC maintains close contact with a number of pharmacy programs in an effort to keep the program of study and course transfer agreements up-to-date. Annually, admission representatives from a number of pharmacy programs are on campus to visit with and discuss their programs with HFCC students.

Students need to contact, visit and frequently monitor for themselves the admission requirements for their target Pharmacy Schools as these requirements do periodically change.

Minimum Number of Credits To Graduate (Including Options/Electives): 71

Courses	
Required Core Courses	Cr. Hours
PHT 144 - Pharmacy College Admission Testing (PCAT) and Current Issues in Pre-Pharmacy	2
BIO 152 - Biology: Cells and Molecular Biology	4
BIO 233 - Anatomy and Physiology I	4
BIO 234 - Anatomy and Physiology II	4
BIO 251 - Microbiology	5
CHEM 141 - Principles of General and Inorganic Chemistry I	5
CHEM 142 - Principles of General and Inorganic Chemistry II	5
CHEM 241 - Organic Chemistry I	4
CHEM 242 - Organic Chemistry II	4
CHEM 243 - Organic Chemistry Laboratory I	2
MATH 180 - Calculus I	5
PHYS 131 - Liberal Arts Physics	4
Required Support Courses	Cr. Hours
ENG 132 - College Writing and Research	3
PHIL 131 - Introduction to Logic	3
POLS 131 - Introduction to American Government and Political Science	3
SPC 131 - Fundamentals of Speaking	3
<i>Complete one of the following courses:</i>	
BCA 140 - Software Applications	3
CIS 100 - Introduction to Information Technology	3
<i>Complete one of the following courses:</i>	
BEC 151 - Principles of Macro Economics	3
BEC 152 - Principles of Micro Economics	3

Associate in Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Science Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses for the may also be used to fulfill Associate in Science Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Science degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Fall I	Winter I	Spring	Summer I	Fall II	Winter II
BIO 152	CHEM 142	CHEM 241	POLS 131	BIO 233	BEC 151
CHEM 141	ENG 132			CHEM 242	BIO 234
CIS 100	PHT 144			MATH 180	BIO 251
ENG 131	PHYS 131			PHIL 131	CHEM 243
	SPC 131				HPE

Note:

Pre-Pharmacy students are strongly encouraged to work closely with the Pharmacy Coordinator before they select their courses in order to be certain that these courses are covered by the transfer agreements.

Students may take either BCA 140 or CIS 100.

Students may take either BEC151 or BEC 152.

PHT 144 is an online course and is non-transferable.

Students should check with their intended transfer institutions to verify if a wellness course is required.

Wayne State University: BIO 134 is an acceptable alternative to BIO 233 and BIO 234.

Additional courses for Pharmacy School eligibility:

Wayne State University: PSL 3220/BIO 4120 at WSU

Ferris State University: BIO 306 at FSU,
SOC 131 or PSY 131 at HFCC.

Pre-Secondary Education

Associate in Arts - Other Academic Division

Deborah Zopf
Diane Green

313-845-6430
313-845-9748

dzopf@hfcc.edu
diane@hfcc.edu

PSCED.AA...
Learning Technology Center 227A
Learning Technology Center 117

Description

In 2005, Phi Theta Kappa selected HFCC as one of ten community colleges nationally that best meet the needs of students who will become teachers of math and science (PreK-12). In addition, the Pre-Education program was chosen in 2001 as one of the six exemplary community college teacher education programs in America by Recruiting New Teachers, Inc., an affiliate of the Carnegie Foundation of New York.

The Associate in Arts degree in Pre-Secondary Education requires 60 credit hours of course work, enabling students to complete General Education requirements and begin coursework in their teaching majors and minors. Because the university teacher preparation programs vary, students are advised to consult the transfer guides for the school to which they intend to transfer when selecting courses.

Career Opportunities

Pre-Secondary Education program graduates who complete a bachelor degree with teacher certification may teach in middle, junior or high schools.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Eastern Michigan University
- Marygrove College
- University of Michigan - Dearborn
- Wayne State University

Course Transfer Information

Students interested in transferring should note: HPE 260 transfers to the University of Michigan-Dearborn and is a recommended course for students transferring to UM-D. HPE 140, HPE 142 and HPE 260 transfer to Eastern Michigan University and are recommended courses for students transferring to EMU. HPE 140, HPE 142 and HPE 260 transfer to Wayne State University and are recommended courses for students transferring to WSU. Consult the transfer guide for the university in which you wish to transfer to determine the HPE course that will apply to your bachelor's degree.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

Courses

Required Core Courses	Cr. Hours
CIS 223 - Instructional Technology for Secondary Teachers	3

Required Support Courses	Cr. Hours
ENG 131 - Introduction to College Writing	3
ENG 132 - College Writing and Research	3
POLS 131 - Introduction to American Government and Political Science	3
PSY 131 - Introductory Psychology	3
Complete 3 credit hours of History requirements from courses with the following prefix: HIST	3

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggested for electives:

PSY 256 - Educational Psychology	3
PSY 260 - Adolescent Psychology	3
PSY 294 - Educational Psychology Practicum	1

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Pre-Special Education

Associate in Arts - Other Academic Division

Deborah Zopf
Diane Green

313-845-6430
313-845-9748

dzopf@hfcc.edu
diane@hfcc.edu

PSPED.AA...
Learning Technology Center 227A
Learning Technology Center 117

Description

The Pre-Education program was chosen in 2001 as one of six exemplary community college teacher education programs in America by Recruiting New Teachers, Inc., an affiliate of the Carnegie Foundation of New York.

The Associate in Arts degree in Pre-Special Education requires 60 credit hours of coursework, all of which can be transferred to most teacher training institutions without loss of credit.

Career Opportunities

Pre-Special Education program graduates who complete a bachelor's degree with teacher certification may teach special education classes in many disability areas such as mental impairments, visual impairments, learning disabilities, emotional impairments, physical impairments, hearing impairments, speech impairments, and autism.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Central Michigan University
- Eastern Michigan University
- Michigan State University
- University of Detroit Mercy
- University of Michigan-Ann Arbor
- Wayne State University

Course Transfer Information

Students interested in transferring should note: HPE 260 transfers to the University of Michigan-Dearborn and is a recommended course for students transferring to UM-D. HPE 140, HPE 142 and HPE 260 transfer to Eastern Michigan University and are recommended courses for students transferring to EMU. HPE 140, HPE 142 and HPE 260 transfer to Wayne State University and are recommended courses for students transferring to WSU. Consult the transfer guide for the university in which you wish to transfer to determine the HPE course that will apply to your bachelor's degree.

**Minimum Number of Credits To Graduate
(Including Options/Electives): 60**

Courses

Required Core Courses	Cr. Hours
ENG 246 - Introduction to Children's Literature	3

Required Support Courses	Cr. Hours
ENG 131 - Introduction to College Writing	3
ENG 132 - College Writing and Research	3
POLS 131 - Introduction to American Government and Political Science	3
PSY 131 - Introductory Psychology	3

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Print Design

Certificate of Achievement - Fine Arts and Fitness Division

Kirk McLendon 313-845-6487 mclendon@hfcc.edu
 James Nelson 313-845-6316 jnelson@hfcc.edu

PRINTDSN.CMLT...
 MacKenzie Fine Arts Center 149
 MacKenzie Fine Arts Center 128

Description	Courses																																						
<p>Print Design is one of five Certificate Programs offered at HFCC. Earn a Print Design Certificate by completing the 36 credit hours of core courses. Students may complete an additional 24 credit hours of General Education courses to earn an Associate in Arts degree. Classes are offered throughout the year during the day, evening and weekend.</p> <p>The demise of the printed page at the hands of the Internet has been greatly exaggerated. The majority of graphic designers design for print. A good eye for type, strong layout skills, and a technical understanding of the printing process are important in this field. Proficiency with Photoshop, Illustrator and either QuarkXPress or InDesign is required.</p> <p>An additional 24 credit hours of General Education courses may be taken with any of the five Graphic Design certificates to obtain an Associate in Arts degree.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 36</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ART 101 - Two-Dimensional Design</td><td>3</td></tr> <tr><td>ART 102 - Drawing 1</td><td>3</td></tr> <tr><td>ART 107 - Photoshop</td><td>3</td></tr> <tr><td>ART 112 - Drawing II</td><td>3</td></tr> <tr><td>ART 121 - Art History Survey I</td><td>3</td></tr> <tr><td>ART 130 - History of Graphic Design</td><td>3</td></tr> <tr><td>ART 165 - Typography</td><td>3</td></tr> <tr><td>ART 172 - Color Theory</td><td>3</td></tr> <tr><td>ART 265 - Illustration</td><td>3</td></tr> <tr><td colspan="2"><i>Complete one of the following courses:</i></td></tr> <tr><td>ART 109 - QuarkXpress</td><td>3</td></tr> <tr><td>ART 110 - InDesign</td><td>3</td></tr> <tr><td colspan="2"><i>Complete one of the following courses:</i></td></tr> <tr><td>ART 113 - Life Drawing I</td><td>3</td></tr> <tr><td>ART 115 - Intermediate Perspective</td><td>3</td></tr> <tr><td colspan="2"><i>Note:</i></td></tr> <tr><td colspan="2">Students may take either ART 109 or ART 110.</td></tr> <tr><td colspan="2">Students may take either ART 113 or ART 115.</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	ART 101 - Two-Dimensional Design	3	ART 102 - Drawing 1	3	ART 107 - Photoshop	3	ART 112 - Drawing II	3	ART 121 - Art History Survey I	3	ART 130 - History of Graphic Design	3	ART 165 - Typography	3	ART 172 - Color Theory	3	ART 265 - Illustration	3	<i>Complete one of the following courses:</i>		ART 109 - QuarkXpress	3	ART 110 - InDesign	3	<i>Complete one of the following courses:</i>		ART 113 - Life Drawing I	3	ART 115 - Intermediate Perspective	3	<i>Note:</i>		Students may take either ART 109 or ART 110.		Students may take either ART 113 or ART 115.	
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Programs of Study

Radiographer

Associate in Applied Science - Health Careers Division

Sharon W. Wu, BA, R.T.
Amanda Boye

313-317-6595
313-317-9813

swu@hfcc.edu
aboey@hfcc.edu

RADTC.AAS...

Health Careers Education Center 133C
Health Careers Education Center 133A

Description

Mission and Goals of the Radiographer Program

Mission

The Mission of the HFCC Radiographer Program is to graduate competent, entry-level radiologic technologists.

Goals

1. Graduates will be clinically competent.
2. Graduates will adopt the personal and professional behaviors of an entry-level radiologic technologist.
3. Graduates will be employable and certified in sufficient number to meet the needs of the community.

The Profession

Radiologic Technology is that segment of medicine devoted to patient diagnosis through the use of ionizing radiation. Specifically, radiation is used to create images of tissues, organs, bones, and vessels that comprise the human body. When requested by a physician, it is the radiographer who is responsible for creating these images in a safe and precise manner. The radiologist, a physician who is specifically trained in the interpretation of these images, performs diagnosis of the final image.

A major responsibility of the radiographer lies in the proper use of radiation. When not properly utilized, ionizing radiation has the potential to be damaging to both patient and user. Therefore, the radiographer is trained to understand radiation and be aware of its potential hazards. This knowledge serves to protect the patient and the radiographer, creating a safe work environment.

The Program

The Radiographer Program is a 24 month, full-time program with clinical and academic courses scheduled Monday through Friday. It is recommended that outside employment not exceed 20 hours per week.

The academic courses will be conducted at Henry Ford Community College. The radiography clinical assignments will be held at a variety of health care settings throughout the Detroit region.

Career Opportunities

Demand for radiographers should remain strong due to the rising population of older persons, the segment of the population with the greater frequency of health care needs. Information regarding employment trends for radiographers in Michigan is available through the HFCC Placement Office 313-845-9618.

A representative job profile for radiographer can be obtained through the Health Careers Office. Students requiring accommodation should directly contact the HFCC Assisted Learning Services at 313-845-9617.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Siena Heights University
- University of Michigan - Dearborn

Occupational Exposure/Risk

In Radiologic Technology, both in school and on the job, frequent exposure to radiation, sharps, patient secretions, bodily wastes, infectious patients, electricity, equipment noise and latex is possible. Exposure to latex may be moderate depending on the setting in which you are working. Those with latex sensitivity or allergies should consult with a physician prior to entering the program for guidance on the merits of continuing in a health care career.

Admission Requirements/Eligibility

1. GPA of 2.5: High school GPA of 2.5 (on a 4.0 scale) or a college GPA of at least 2.5 for the last 12 academic credits. (Note: Once a college GPA has been established, high school GPA is no longer considered.)
 2. ASSET Reading score of 43 or better OR COMPASS Reading score of 84 or better.
 3. ASSET or COMPASS Writing Test score sufficient for placement in ENG 131. This requirement may also be fulfilled by successful completion of required developmental English courses.
 4. Math: ASSET or COMPASS Algebra score 46 or better OR MATH 080 or MATH 100 with a C grade or better.
 5. Successful completion of BIO 233-Anatomy and Physiology I, with a C grade or better.
 6. Successful completion of AH 100-Medical Terminology, with a C grade or better.
 7. Basic occupational experience: May be fulfilled with one of the following:
 1. Completion of MOA 160 with a C grade or better. It is highly recommended that students take this course.
 2. Twenty hours of observation in a radiography department at a hospital or clinic with a letter of support from a supervisor.
 3. Successful completion of a high school health careers course.
- Summer prior to starting the program: CPR certification American Heart Association, Basic Life Support, Health Care Provider. Fulfilled by taking AH 105-Basic Life Support. AND Students must attend a program orientation prior to acceptance into the RAD program.

The Program Application Process

Step 1 - Select your career program

- It is recommended that each applicant meet with a Health Careers Advisor 313-845-9877 to discuss program options and then to create an academic plan to qualify for the selected program. Apply up front and start taking prerequisites.

Step 2 - Apply to the program

- First time applicants to HFCC will indicate the program selection on the application to the college. This process automatically applies you to your program of choice.
- Current HFCC students selecting to change their program of study to a

health career program must complete a specific program application. Program applications are available in the Health Career/Nursing Admissions Office located in the Counseling Office, room LRC 117B and in the Health Careers Office in the Health Careers Education Center.

Step 3 - Deliver information and track application

- It is the student's responsibility to make certain that all transcripts, grades and/or necessary records are submitted to the Health Careers/Nursing Admissions office, room LRC 117B.
- Program applicants transferring college credit from another institution must have an official transcript mailed to: Henry Ford Community College, Transfer Evaluation, 5101 Evergreen Road, Dearborn, MI 48128.
- Applicants must also submit a student copy of all of their transcripts to the Health Careers/Nursing Admissions Office.
- It is strongly recommended that you personally track your specific program application through the Health Careers/Nursing Admissions Office, room LRC 117B, 313-317-6525.
- Students are strongly encouraged to monitor their program admission status via the WebAdvisor Program Evaluation link.
- It is imperative that all student contact information such as phone numbers and addresses is kept current through the Registration office. If we are unable to contact you, we then will move to the next qualified applicant.

Step 4 - Qualifying and admission

- Students are qualified when all of the program's admission criteria have been satisfied.
- Applicants are then admitted on a first qualified, first accepted basis for available positions. A student's application date to the program either by indication on the HFCC application or the separate program application may be used to determine placement on the qualified list if necessary, the earlier the better.

Additional Program Requirements

Health Appraisal Form

Each Radiographer student will be required to submit an acceptable Health Appraisal Form. Copies of the form are available through the Health Careers Office.

Criminal Background Check and Drug Screen

Consistent with Section 20173 of the Michigan Public Health Code the requirements of clinical rotation partners a Criminal Background Check and Drug Screen clearances will be required to participating in any clinical rotations.

Program Deposit

At the time of formal admission to the program, each applicant is required to pay a \$100 fee to secure a position. One month after classes start in the fall, the \$100 fee is refunded to the student if the student is still active in the program.

Program Duration Limits/Updates/Changes

HFCC continuously attempts to improve each program, and as a result courses and/or requirements may be modified. Curriculum, course content, and admission criteria are subject to change by action of the College faculty and administration.

Graduation

Graduates of the Radiographer Program will be awarded an Associate in Applied Science degree, as well as a certificate in Radiography. Graduates who intend to take the American Registry of Radiologic Technologists (AART) certification examination are required to meet all general and ethical qualifications of the AART.

A list of qualifications is available upon request at AART 651-687-0048 or at www.arrt.org.

Health Care Coverage

It is the student's responsibility to have health care coverage in place during the entire program. Hospitalization insurance can be purchased through the College.

Clinical Assignments

Radiology students begin a continuous twenty-four-month clinical rotation during the first semester of the program. Clinical time is 8:00 a.m.-4:30 p.m. with specific days of assignment changing from semester to semester. Beginning in the third semester of training, students are assigned clinical rotations on the afternoon shift.

Listed below is a tentative breakdown of assigned clinical days for each semester.

First Semester: Fall

Monday/Wednesday/Friday

Second Semester: Winter

Monday/Wednesday/Friday

Third Semester: Spring

Monday/Wednesday/Friday

Fourth Semester: Summer

Monday - Friday

Fifth Semester: Fall

Tuesday/Thursday/Friday

Sixth Semester: Winter

Tuesday/Thursday/Friday

Seventh Semester: Spring

Monday/Tuesday/Thursday/Friday

Registry/Certification/Licensure Exam Information

Students who intend to take the American Registry of Radiologic Technology Certification Examination are required to meet all general and ethical qualifications of the ARRT. A list of qualifications is included in the student handbook. Conviction of a crime may prevent a student from taking this examination. This material is also available upon request by calling the ARRT at 651-687-0048 or online at www.arrt.org.

Accreditation

The Joint Review Committee on Education in Radiologic Technology, 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182, 312-704-5300, accredits the program, www.jrcert.org.

Minimum Number of Credits To Graduate (Including Options/Electives): 71.5

Courses

Required Core Courses	Cr. Hours
RAD 101 - Introduction to Radiography	1
RAD 109 - Clinical Education I	3
RAD 111 - Principles of Radiation Protection	2
RAD 114 - Basic Patient Care in Radiography	3
RAD 118 - Radiographic Positioning I	3
RAD 158 - Radiographic Positioning II	3
RAD 161 - Imaging Equipment	1
RAD 171 - Principles of Exposure and Film Evaluation	3
RAD 188 - Radiographic Positioning III	2.5
RAD 190 - Clinical Education II	3
RAD 194 - Clinical Education III	1
RAD 197 - Clinical Education IV	3
RAD 209 - Clinical Education V	3
RAD 214 - Pathology and Cross Sectional Anatomy	2
RAD 227 - Radiographic Positioning IV	3
RAD 257 - Radiographic Positioning V	2
RAD 267 - Radiation Physics	4
RAD 270 - Image Acquisition and Display	3
RAD 274 - Radiation Biology	2
RAD 284 - Principles of Computed Tomography	1
RAD 286 - Registry Review	2
RAD 290 - Clinical Education VI	3
RAD 295 - Clinical Education VII	

Required Support Courses	Cr. Hours
BIO 234 - Anatomy and Physiology II	4
HCS 131 - Computers in Health Care	3
<i>Complete one the following courses:</i>	
POLS 131 - Introduction to American Government and Political Science	3
SSC 131 - A Survey of the Social Sciences	3

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Fall I	Winter I	Spring I	Summer I
RAD 101	BIO 234	HCS 131	RAD 197
RAD 109	RAD 158	RAD 188	
RAD 111	RAD 161	RAD 194	
RAD 114	RAD 171		
RAD 118	RAD 190		
	RAD 257		
Fall II	Winter II	Spring II	
RAD 209	ENG 131	ENG 132	
RAD 214	POLS 131	RAD 284	
RAD 227	RAD 270	RAD 286	
RAD 267	RAD 274	RAD 295	
	RAD 290		

Note:

The required core courses must be taken in sequence. The required support courses can be taken in sequence or taken earlier in order to lighten the student's course load. Support courses for the RAD program may be taken earlier than indicated in the program of study, but not later.

Students must receive at least a C in all RAD courses, including the last course, RAD 286-Registry Review, to graduate from the program.

It is highly recommended that students take support courses prior to formal admission to the RAD program to lighten the class load while in the program.

Students may take either POLS 131 or SSC 131.

Students may take either ENG 132 or ENG 135.

Religious Studies

Associate in Arts - Fine Arts and Fitness Division

William Secrest 313-845-6441 wsecrest@hfcc.edu
 Kim Schopmeyer 313-845-6443 kschop@hfcc.edu

RELIGSTUDIES.AA...
 Reuther Liberal Arts Building 104
 Reuther Liberal Arts Building 108

Programs of Study

Description
 The Religious Studies program provides a broad overview of the world's religious traditions. Students explore the histories, beliefs, practices and philosophies of these religions using the analytical principles of the social sciences and humanities. The program provides a foundation for transfer to universities where students can continue their studies in religion or other disciplines. Completion of the associate degree in Religious Studies constitutes the first two years of college coursework.

The foundations of the program include courses in comparative world religions, the Bible as literature, and additional courses that address modes of religious experience, cultural myths and symbols in religion. Additional courses provide in-depth study in either Western religious traditions of Judaism, Christianity and Islam or the Eastern religions, particularly Hinduism and Buddhism.

Additional required courses include study in philosophy, history, anthropology and world regional geography. A variety of elective courses for the Religious Studies program consist of classes in archaeology, art, world languages, history and the anthropology of the Middle East. Students must also complete all general education requirements that provide a foundation for writing and computer literacy.

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 60**

Courses	
Required Core Courses	Cr. Hours
ENG 245 - The Bible as Literature	3
WR 131 - Comparative Religion	3
<i>Complete one of the following courses:</i>	
WR 130 - Introduction to the Study of Religion	3
WR 240 - Myths and Symbols: Deciphering the Messages of Sacred Traditions	3
<i>Complete one of the following courses:</i>	
WR 232 - Western Religions: Judaism, Christianity and Islam	3
WR 233 - Eastern Religions	3

Required Support Courses	Cr. Hours
ANTH 131 - Introduction to Anthropology	3
ENG 132 - College Writing and Research	3
GEOG 132 - World Regional Geography	3
HIST 111 - Ancient World History	3
PHIL 133 - History of Philosophy to the 18th Century	3
<i>Complete one of the following courses:</i>	
POLS 131 - Intro. to American Gov't and Political Science	3
SOC 131 - Introduction to Sociology	3
SSC 131 - A Survey of the Social Sciences	3
<i>Complete one of the following courses:</i>	
BCA 140 - Software Applications	3
CIS 100 - Introduction to Information Technology	3

Associate in Arts Degree Requirements
 Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses for the may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education
 Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

ANTH 152 - Middle Eastern Peoples and Cultures	3
ANTH 153 - Introduction to Archeology	3
ARA 131 - Elementary Modern Standard Arabic I	4
ART 224 - Art of Islam	3
GER 131 - Elementary German I	4
HIST 112 - Early Modern World History	3
PHIL 131 - Introduction to Logic	3
PHIL 135 - History of Modern Philosophy	3
POLS 200 - Introduction to Peace and Conflict Studies	3
SSC 131 - A Survey of the Social Sciences	3
SWC 131 - Science In Western Culture	3

Note:
 Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Renewable Energy

Certificate of Achievement - Technology Division

Dan Lindholm
David Wiltshire

313-845-6336
313-845-9637

dlinholm@hfcc.edu
djwiltshire@hfcc.edu

RENEW...
Technology Building 164G
Technology Building 115A

Description	Courses												
<p>The courses listed below have been developed to form a ten credit hour Renewable Energy Certificate. The content of the courses will be structured to inform the student of both present and upcoming concepts in renewable energy. This certificate should interest students who are looking for an alternative to the current reliance on fossil fuels.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 10</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>REEN 101 - Survey of Renewable Energy Sources</td> <td style="text-align: center;">2</td> </tr> <tr> <td>REEN 110 - Geothermal Systems and Water Furnace Technology</td> <td style="text-align: center;">2</td> </tr> <tr> <td>REEN 120 - Wind, Solar, and Fuel Cell Technology</td> <td style="text-align: center;">2</td> </tr> <tr> <td>REEN 130 - Smart Home Control Technology</td> <td style="text-align: center;">2</td> </tr> <tr> <td>REEN 140 - Co-Generation and Back Up Power</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	REEN 101 - Survey of Renewable Energy Sources	2	REEN 110 - Geothermal Systems and Water Furnace Technology	2	REEN 120 - Wind, Solar, and Fuel Cell Technology	2	REEN 130 - Smart Home Control Technology	2	REEN 140 - Co-Generation and Back Up Power	2
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REEN 110 - Geothermal Systems and Water Furnace Technology	2												
REEN 120 - Wind, Solar, and Fuel Cell Technology	2												
REEN 130 - Smart Home Control Technology	2												
REEN 140 - Co-Generation and Back Up Power	2												

Respiratory Therapist

Associate in Applied Science - Health Careers Division

Charles Dunlap	313-317-6581	cwdunap@hfcc.edu
Michelle Kipisz	313-845-9877	mkipisz@hfcc.edu
Debra Szymanski	313-317-6580	dszyman@hfcc.edu

RESTH.AAS....

Health Careers Education Center 133F
Health Careers Education Center 133H
Health Careers Education Center 133H

Description

The Profession

Respiratory therapists are health care professionals, dedicated to providing life-supporting, life-enhancing care to newborns, children, adults and the elderly. Respiratory therapists work under qualified medical direction to assess, treat, manage, provide diagnostic evaluation, educate and care for patients with deficiencies and abnormalities associated with the cardiopulmonary system. Therapists work throughout hospitals, most often in intensive care units and emergency settings. Therapists are a special blend of patient-centered caregivers and technically sharp, analytical thinkers. Some therapists concentrate on pulmonary rehabilitation and continuing care in patient homes or extended care facilities while others specialize in pediatric/neonatal care. The respiratory therapist may also work in areas such as cardiopulmonary diagnostics, medical equipment sales, management and education.

The Program

The respiratory therapist program provides a blend of classroom and clinical experiences. Program faculty work closely with clinical sites and employers to prepare graduates for today's rapidly changing health care environment. The first year of the program involves completion of technical and support courses. Beginning with the spring semester and throughout the second year of the program, students are required to complete advanced technical courses and a wide variety of clinical rotations. The technical and clinical courses will be conducted during the day. Support courses such as ENG 131 generally are available during both days and evenings.

Graduates of the program are awarded an Associate in Applied Science degree and are eligible to apply for the National Board of Respiratory Care (NBRC) examination(s) leading to the national credential designation of Registered Respiratory Therapists (RRT) and state licensure as a Respiratory Therapist. Information on the exam process is available through the NBRC at www.nbrc.org.

Program of Study

The student must complete a total of 76-73 credits of course work (8 credits pre-admission coursework, 6 credits required General Education coursework, 7-10 credits required support courses and 52 credits required RTH courses). Due to the number of credit hours required for program completion and the intensity of the program, students are encouraged to complete as many of the support/general education classes as possible prior to entering the program. The first courses that a student should complete are those required for program admission followed by the other Required Support/General Education courses.

Career Opportunities

The outlook for RTs has never been better. According to the Bureau of Labor Statistics, employment is expected to increase faster than average through the year 2012. The American Association for Respiratory Care (AARC) offers a wide variety of information on a career in Respiratory Therapy at www.aarc.org.

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work

towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Siena Heights University
- University of Michigan - Dearborn

Occupational Exposure/Risk

Applicants considering a career in Respiratory Therapy should be aware that during their course of study and in subsequent employment in the field they are likely to work in situations where exposure to infectious disease is possible. This is an occupational risk for all health care workers. Persons should not become health care workers unless they recognize and accept this risk. Proper education and strict adherence to well-established infection-control guidelines can reduce the risk to a minimum. Thorough education in infection control procedures is an important part of the respiratory therapist program of study.

Admission Requirements

1. Minimum GPA of 2.50 - may be satisfied by one of the following:
 - College GPA of 2.50 (if student has completed at least 12 credit hours excluding lower than 100-level courses) OR
 - High school grade-point average of 2.50 (4.0 scale), if no college GPA has been established.
2. ASSET Reading Score of 43 or better OR COMPASS Reading Score of 84 or better.
3. Assessment Test score sufficient to allow placement in ENG 131. This requirement may also be satisfied by successful completion of required developmental courses or completion of ENG 131, with a C or better.
4. MATH proficiency as demonstrated by successful completion of MATH 074 or higher MATH course with a C or higher grade OR sufficient score on ASSET or COMPASS assessment test for placement into MATH 080 or MATH 100.
5. Successful completion of BIO 233-Anatomy and Physiology I, with a C grade or better.
6. Successful completion of AH 100-Medical Terminology, with a C grade or better.

Individuals new to the field of Respiratory Therapy may find it helpful to shadow a Respiratory Therapist. This will give new students the ability to see first hand the wide variety of responsibilities that are part of the profession. Contact your local Respiratory Care department to arrange for this opportunity.

Health Appraisal

Students in the RTH program are expected to meet the same physical and mental health requirements as a respiratory therapist. A representative RTH Job Profile, which lists the specific physical and mental health requirements as well as the environmental conditions of this occupation, is available through the Health Careers Office.

All students enrolled in the RTH program must be in good physical and mental health as determined by a physician and validated on the Health Careers Health Appraisal Form. Each student must have a physical examination before admission to clinical rotations. Additionally students must demonstrate evidence of current immunizations and provide titers to show immunity to illnesses specified on the Health Appraisal form. It is the student's responsibility to have health care coverage (insurance) in place during the entire program.

Criminal Background Check and Drug Screen

Consistent with Section 20173 of the Michigan Public Health Code and the requirements of our clinical affiliates, a Criminal Background Check and Drug Screen is required for all students in the RTH program prior to beginning clinical assignments.

Program Duration Limits/Updates/Changes

The College continuously attempts to improve each program, and as a result courses and/or requirements may be modified. Curriculum, course content, and admission criteria are subject to change by action of the College faculty and administration. Contact the Health Careers Office, 313-845-9877 or visit www.hfcc.edu for any current updates.

All RTH courses taken at HFCC must be successfully completed within three consecutive calendar years.

Each Respiratory Therapist course may be repeated only once. The Computer Literacy General Education Requirement is to be completed no later than Fall I. See the Required Support Course Sequence.

The Program Application Process

Step 1 - Select your career program

- It is recommended that each applicant meet with a Health Careers Advisor 313-845-9877 to discuss program options and then to create an academic plan to qualify for the selected program. It is suggested that you first select and apply to your program of choice before you begin any of the prerequisite course work.

Step 2 - Apply to the program

- First time applicants to HFCC will indicate the program selection on the application to the college. This process automatically applies you to your program of choice.
- Current HFCC students electing to change their program of study to a health career program must complete a specific program application. Program applications are available in the Health Career/Nursing Admissions office located in the Counseling Office, room LRC 117B and in the Health Careers Office in the Health Careers Education Center.

Step 3 - Deliver information and track application

- It is the student's responsibility to make certain that all transcripts, grades and/or necessary records are submitted to the Health Careers/Nursing Admissions office, room LRC 117B.
- Program applicants transferring college credit from another institution must have an official transcript mailed to: Henry Ford Community College, Transfer Evaluation, 5101 Evergreen Road, Dearborn, MI 48128.
- Applicants must also submit a student copy of all of their transcripts to the Health Careers/Nursing Admissions office.
- It is strongly recommended that you personally track your specific program application through the Health Careers/Nursing Admissions office, room LRC 117B, 313-317-6525.
- Students are strongly encouraged to monitor their program admission status via the WebAdvisor Program Evaluation link.
- It is imperative that all student contact information such as phone numbers and addresses is kept current through the Registration office. If we are unable to contact you, we then will move to the next qualified applicant.

Step 4 - Qualifying and admission

- Students are qualified when all of the program's admission criteria have been satisfied.

- Applicants are then admitted on a first-qualified, first-accepted basis for available positions. A student's application date to the program either by indication on the HFCC application or the separate program application may be used to determine placement on the qualified list if necessary, the earlier the better.

Program Deposit

At the time of formal admission to the program, each applicant is required to pay a \$100 fee to secure a position. One month after classes start in the fall, the \$100 fee is refunded to the student if the student is still active in the program.

Registry/Certification/Licensure Exam Information

Successful completion of the program of study qualifies graduates to receive an Associate of Applied Science Degree and to apply to take both the Entry-Level Certification Exam and the Advanced Practitioner Examinations offered by the National Board for Respiratory Care (NBRC). The successful graduate of the program is eligible to take the national exam and to apply for state licensure as a respiratory therapist.

Graduates of the program are eligible to sit for the national accreditation exams for the designation of Registered Respiratory Therapist (RRT).

Accreditation

The Respiratory Therapist program is fully accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon recommendation of the Committee on Accreditation for Respiratory Care (CoARC).

Commission on Accreditation of Allied Health Education Programs (CAAHEP), 35 East Wacker Drive, Suite 1970, Chicago, Illinois 60601-2208, 312-553-9355, www.caahep.org

Committee on Accreditation for Respiratory Care (CoARC) 1248 Harwood Road, Bedford, Texas 76021-4244, 817-283-2835, www.coarc.com

Minimum Number of Credits To Graduate (Including Options/Electives): 65

Courses	
Required Core Courses	Cr. Hours
RTH 100 - Principles of Respiratory Care	3
RTH 125 - Respiratory Care Procedures I	5
RTH 160 - Respiratory Therapy Pharmacology	2
RTH 175 - Respiratory Care Procedures II	5
RTH 180 - RT Clinical Sciences	3
RTH 194 - Clinical Therapeutics	2
RTH 210 - Ventilator Management I	4
RTH 216 - Cardiopulmonary Testing	2
RTH 235 - Neonatal and Pediatric Respiratory Care	3
RTH 245 - Applied Respiratory Care	2
RTH 275 - Therapeutic Management	1
RTH 285 - Advanced Respiratory Concepts	3
RTH 291 - Advanced Clinical Therapeutics	4
RTH 292 - Clinical Practicum	5
RTH 294 - Advanced Clinical Practicum	8
<i>Note:</i>	
Each respiratory therapist course may be repeated only once. If any respiratory therapist course is failed after two attempts, the student will no longer qualify for the HFCC Respiratory Therapy program.	
Required Support Courses	Cr. Hours
BIO 234 - Anatomy and Physiology II	4
<i>Complete one of the following courses:</i>	
BCA 140 - Software Applications	3
CLT 100 - Computer Literacy Test	0
HCS 131 - Computers in Health Care	3

Continued on the next page.

Complete one of the following courses:

POLS 131 - Introduction to American Government and Political Science	3
SSC 131 - A Survey of the Social Sciences	3

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note:

Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Required Course Sequence

Fall I	Winter I	Spring I	Summer I
CLT 100	BIO 234	RTH 210	ENG 132
ENG 131	RTH 160	RTH 291	
POLS 131	RTH 175		
RTH 100	RTH 180		
RTH 125	RTH 194		
Fall II	Winter II		
RTH 216	RTH 275		
RTH 235	RTH 285		
RTH 245	RTH 294		
RTH 292			

Note:

Required support and/or General Education courses not taken prior to program admission must be taken as listed in the course sequence.

Students may take either POLS 131 or SSC 131.

Students may take either ENG 132 or ENG 135.

The Computer Literacy General Education Requirement is to be completed no later than Fall Term II.

Students are responsible for their own transportation to the clinical sites.



Small Business Management & Entrepreneurship

Certificate of Achievement	Business and Economics Division		SMBUSMGMT.CMULT...
Corinne Asher	313-845-9867	cashier@hfcc.edu	Reuther Liberal Arts Building 319B
Elaine Saneske	313-845-9704	esaneske@hfcc.edu	Reuther Liberal Arts Building 328

Description	
Henry Ford Community College's certificate in Small Business Management & Entrepreneurship assists in preparing students who are contemplating starting their own business or who currently own and operate their own business. This certificate focuses on accounting and finance, customer service, marketing, and management. Students will prepare a business plan for a business of their choice. The Small Business Management & Entrepreneurship certificate may be used as a building block towards earning an Associate in Business degree in Management.	<i>Complete one of the following courses:</i>
	BAC 110 - Practical Accounting
	BAC 131 - Principles of Accounting
	<i>Complete one of the following courses:</i>
	BAC 141 - Computerized Accounting-QuickBooks
	BAC 146 - Computerized Accounting-Peachtree

**Minimum Number of Credits To Graduate
(Including Options/Electives): 31**

Courses	
Required Core Courses	Cr. Hours
BBA 131 - Introduction to Business	4
BBA 153 - Customer Service	3
BBA 252 - Principles of Marketing	3
BCA 140 - Software Applications	3
BFN 141 - Personal Finance	3
MGT 230 - Principles of Management	3
MGT 231 - Supervision and Teambuilding	3
MGT 241 - Small Business Management & Entrepreneurship	3

Recommended Course Sequence

Recommended Sequence 1

Term 1	Term 2
BAC 110	BAC 141
BBA 131	BBA 153
BCA 140	BBA 252
MGT 230	BFN 141
MGT 231	MGT 241

Recommended Sequence 2

Term 1	Term 2
BAC 131	BAC 141
BBA 131	BBA 153
BCA 140	BBA 252
MGT 230	BFN 141
MGT 231	MGT 241

Supervision

Certificate of Achievement - Business and Economics Division	BADMSUPERV.CMLT...	
Corinne Asher	313-845-9867	cashier@hfcc.edu
Elaine Saneske	313-845-9704	esaneske@hfcc.edu
		Reuther Liberal Arts Building 319B
		Reuther Liberal Arts Building 328

Description	Courses
Henry Ford Community College's certificate in Supervision assists students in developing or improving managerial/supervisory skills. An understanding of basic supervisory principles is helpful in guiding and directing employees in every type of organization. The Supervision certificate may be used as a building block towards earning an Associate in Business degree in Management.	Required Core Courses
	MGT 230 - Principles of Management
	MGT 231 - Supervision and Teambuilding
	MGT 240 - Creative Problem Solving
	BBA 131 - Introduction to Business
	BBA 133 - Business Behavior and Communication

**Minimum Number of Credits To Graduate
(Including Options/Electives): 16**

Surgical Technologist

Associate in Applied Science - Health Careers Division

Dorothy C. Rothgery, MA, CST/CFA
Ronald Bodurka

313-317-6598
313-845-9877

drothger@hfcc.edu
rbodurka@hfcc.edu

SURTC.AAS...
Health Careers Education Center 132K
Health Careers Education Center 132

Description

The Surgical Technologist is an Associate in Applied Science degree program designed to prepare individuals for employment as entry-level surgical technologists.

In the first year of the program, students complete the basic technical and academic support courses. The second year focuses on advanced technical courses and the clinical component of the program. There are two major clinical courses in the second year of the program. Students will spend approximately 600 hours in a variety of diverse, quality clinical settings. This program meets Standard Program Guidelines for Clinical Case Requirements. Surgical technologists are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings.

The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works under the supervision of a surgeon to ensure that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.

A surgical technologist possesses expertise in the theory and application of sterile and aseptic technique and combines the knowledge of human anatomy, surgical procedures, and implementation tools and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

Career Opportunities

Surgical technologists work in operating and delivery rooms, emergency room facilities, and the ambulatory care areas of hospitals and other medical institutions. They may also work in clinics and physicians' offices. Many surgical technologists are employed directly by surgeons and specialize in fields such as orthopedics, etc.

Demand for surgical technologists should remain strong due to the rising population of older persons, the segment of the population with the greater frequency of health care needs.

Information regarding career placement and job success is available through either the Health Careers Office or the HFCC Placement Office.

A representative job profile for a surgical technologist can be obtained through the Health Careers Office. Students requiring accommodation should directly contact the HFCC Assisted Learning Services.

Helpful qualities for surgical technologists include:

- a strong sense of responsibility
- an ability to work well with others
- emotional stability
- an ability to respond quickly
- an ability to be orderly and work quickly
- an ability to work well under stress

Occupational Exposure/Risk

Applicants considering a career in surgical technology should be aware that during their course of study and in subsequent employment in the field, they are likely to work in situations where exposure to infectious disease is possible. This is an occupational risk for all health care workers. Persons should not become health care workers unless they recognize and accept this risk. Proper education and strict adherence to well established infection-control guidelines can reduce the risk to a minimum. Thorough education in infection control procedures is an important part of the surgical technology program of study.

Those with latex sensitivity or allergies should consult with a physician

prior to entering the program for guidance on the merits of continuing in a health care career.

Admission Requirements/Eligibility

The Surgical Technology (SRG) core program begins in the fall semester. In addition to the HFCC college application, a separate SRG application is required and processed through the Admissions Office. Early application is advised for counseling and admission to the program. Students are accepted into the program on a "first-qualified, first-accepted" basis. Acceptance into the college does not constitute nor guarantee admission to the program. Final approval to enroll in the program comes from the Health Careers Division.

SRG Program Admission Criteria

1. Minimum high school grade-point average of 2.5 (4.0 scale), or if student has taken college courses, a minimum of 12 academic credits, excluding less than 100 level courses, HPE activity, studio and performance classes (if applicable).
2. ASSET Reading Score 43 or better OR COMPASS reading score 84 or better
3. BIO 135 or college equivalent with C or higher
4. Asset or COMPASS Writing Test score sufficient for placement in ENG 131. This requirement may also be fulfilled by successful completion of required developmental English courses.

Students in the SRG program are expected to meet the same physical and mental requirements as a surgical technologist. A representative SRG Job Profile lists the specific physical and mental requirements as well as the environmental conditions of this occupation.

All students enrolled in the SRG program must be in good physical and mental health as determined by a physician and validated on the Health Careers Health Appraisal form. Each student must have a physical examination before admission to clinical classes. Additionally, students must demonstrate evidence of current immunizations and provide titers to show immunity to illnesses specified on the Health Careers Health Appraisal form. Students are required to have basic health insurance coverage during their clinical courses.

Criminal Background Check and Drug Screen

Consistent with Section 20173 of the Michigan Public Health Code and the requirements of our clinical affiliates, a Criminal Background Check and Drug Screen is required for all students in SRG program prior to beginning clinical assignments. The cost for this test is in addition to the basic tuition and fee schedule. For questions regarding this policy, contact the Health Careers Office.

Students who are not cleared for clinical through the Health Appraisal, Criminal Background Check and Drug Screen will not be able to complete the program.

Additional Program Requirements

Required core courses can be taken only after acceptance into the SRG Program through the Health Careers Division.

Required support courses may be taken prior to admission to the program. A minimum grade of C is required in all courses.

The Program Application Process

Step 1 - Select your career program

- It is recommended that each applicant meet with a Health Careers Advisor, 313-845-9877, to discuss program options and then to create an academic plan to qualify for the selected program. It is suggested that you first select and apply to your program of choice before you begin any of the prerequisite course work.

Step 2 - Apply to the program

- First time applicants to HFCC will indicate the program selection on the application to the college. This process automatically applies you to your program of choice.
- Current HFCC students selecting to change their program of study to a health career program must complete a specific program application. Program applications are available in the Health Career/Nursing Admissions office located in the Counseling Office, room LRC 117B, and in the Health Careers Office in the Health Careers Education Center.

Step 3 - Deliver information and track application

- It is the student's responsibility to make certain that all transcripts, grades and/or necessary records are submitted to the Health Careers/Nursing Admissions office, room LRC 117B.
- Program applicants transferring college credit from another institution must have an official transcript mailed to: Henry Ford Community College, Transfer Evaluation, 5101 Evergreen Road, Dearborn, MI 48128.
- Applicants must also submit a student copy of all of their transcripts to the Health Careers/Nursing Admissions office.
- It is strongly recommended that you personally track your specific program application through the Health Careers/Nursing Admissions office, room LRC 117B, 313-317-6525.
- Students are strongly encouraged to monitor their program admission status via the WebAdvisor Program Evaluation link.
- It is imperative that all student contact information such as phone numbers and addresses is kept current through the Registration office. If we are unable to contact you, we then will move to the next qualified applicant.

Step 4 - Qualifying and admission

- Students are qualified when all of the program's admission criteria have been satisfied.
- Applicants are then admitted on a first-qualified, first-accepted basis for available positions. A student's application date to the program either by indication on the HFCC application or the separate program application may be used to determine placement on the qualified list if necessary. The earlier you apply the better.

Program Duration Limits/Updates/Changes

Program is twenty-one months in length. Students must complete all SRG courses within three years of beginning the formal program.

Students are responsible for their own transportation to clinical sites and any expenses incurred.

The College continuously attempts to improve each program and as a result, courses and/or requirements may be modified. Curriculum, course content, and admission criteria are subject to change by action of the College faculty and administration. Contact the Health Careers Office at 313-845-9877 for any current program updates or visit www.hfcc.edu.

Registry/Certification/Licensure Exam Information

Graduates of the program are eligible to sit for the national certification exam offered by the National Board of Surgical Technology and Surgical Assisting for the designation of Certified Surgical Technologist (CST).

Accreditation

The Surgical Technology Program is accredited through the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon recommendation of the Accreditation Review Committee on Education in Surgical Technology 727- 210-2350. CAAHEP can be reached at www.caahep.org.

Minimum Number of Credits To Graduate (Including Options/Electives): 62.5

Courses	
Required Core Courses	Cr. Hours
SRG 101 - Introduction to Surgical Technology	4
SRG 120 - Surgical Procedures I	4
SRG 140 - Surgical Techniques I	2
SRG 150 - Surgical Techniques II	2
SRG 160 - Surgical Pharmacology	3
SRG 209 - Clinical Externship I	5
SRG 220 - Surgical Procedures II	4
SRG 240 - Issues in Surgical Technology	4
SRG 290 - Clinical Externship II	8

Required Support Courses	Cr. Hours
AH 100 - Medical Terminology	4
AH 105 - Basic Life Support for Healthcare Providers	0.5
BIO 233 - Anatomy and Physiology I	4
BIO 234 - Anatomy and Physiology II	4
HCS 103 - Employment Skills for Health Careers	1
HCS 124 - Basic Health Assessment	1
HCS 131 - Computers in Health Care	3
<i>Complete one of the following courses:</i>	
POLS 131 - Intro. to American Gov't and Political Science	3
SOC 131 - Introduction to Sociology	3
SSC 131 - A Survey of the Social Sciences	3
<i>Note:</i>	
Students must follow Course Sequencing.	
HCS 131 is a Surgical Technologist program requirement and also meets the HFCC General Education requirement for Computer Literacy.	

Associate in Applied Science Degree Requirements

Students must also complete the specific degree requirements for the Associate in Applied Science Degree which are listed on page 18. It should be noted that courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Applied Science Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate Degree in Applied Science, may also be used to fulfill General Education requirements when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Recommended Course Sequence

Fall I	Winter I	Spring I	Fall II	Winter II
AH 100	BIO 234	AH 105	ENG 132	POLS 131
BIO 233	ENG 131	HCS 131	SRG 209	SRG 240
HCS 103	SRG 120	SRG 150	SRG 220	SRG 290
HCS 124	SRG 140			
SRG 101	SRG 160			

Note: Please note that in the above course sequencing students may take either ENG 132 or ENG 135 and students may take either SOC 131 or POLS 131 or SSC 131.

AH 105 should be taken between May and August just prior to beginning the second year of the program.

If the student has not already completed the required courses listed upon entering the program, they MUST follow the sequence listed. A minimum grade of C is required in all

Telecommunication

Associate in Arts - Fine Arts and Fitness Division

Jay Korinek 313-845-6477 jkorinek@hfcc.net
 James Nelson 313-845-6316 jnelson@hfcc.edu

TELEC.AA...
 MacKenzie Fine Arts Center 140
 MacKenzie Fine Arts Center 128

Programs of Study

Description

The Associate in Arts degree in Telecommunication is designed for the student interested in the career areas of advertising, public relations, journalism, and program production for radio, television, film, and multimedia. Both classroom academic knowledge and creative skills are combined with real-world assignments and experience so as to provide a solid foundation for the completion of a four-year mass communication degree at a transfer institution.

Career Opportunities

- Management: Producer, Director, or Promotions Coordinator
- Production: Writer, Director, Camera Operator, or Video Editor
- Talent: Announcer, Broadcast Journalist, or Performer

Transfer Options/Requirements

The College has articulation agreements and/or transfer guides to help students who want to transfer to other institutions once they have completed their studies at HFCC. Articulation agreements ensure that graduates from HFCC can transfer to another institution and work towards a bachelor's degree without a loss of coursework completed at HFCC. Transfer guides denote the transferability of HFCC coursework toward specific degree programs at other institutions. It is important that students who intend to transfer to another institution consult the appropriate articulation agreements and/or transfer guides to ensure the transferability of the courses they take to the institution they plan to attend.

Articulation agreements and transfer guides are available in the University Transfer, Advising, and Career Counseling Center (313-845-9612, counseling@hfcc.edu, Learning Resource Center). Some of the institutions students enrolled in this program frequently transfer to include:

- Davenport University
- Lawrence Technological University
- Siena Heights University
- University of Michigan – Dearborn

Minimum Number of Credits To Graduate (Including Options/Electives): 60

Courses

Required Core Courses	Cr. Hours
TCM 131 - Introduction to Telecommunication	3
TCM 132 - Film History and Criticism	3
TCM 151 - Digital Audio Editing	1
TCM 157 - Digital Video Editing	1
TCM 241 - Media Writing	3
TCM 243 - Media Performance	3
TCM 251 - Audio Production	3
TCM 257 - Video Production I	3
TCM 261 - Broadcast Journalism	3

Required Support Courses

Required Support Courses	Cr. Hours
SPC 131 - Fundamentals of Speaking	3
SPC 145 - Interpersonal Communication	3

Complete one of the following courses:
 SPC 131 - Fundamentals of Speaking
 SPC 145 - Interpersonal Communication

Complete 6 credit hours of Business area course requirements from courses with the following course prefixes:
 BAC, BBA, BCA, BCO, BEC, BFN, BLW, BMA, LGA, and/or MGT.

Associate in Arts Degree Requirements

Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.

General Education

Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.

Elective Courses

Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).

These courses are suggestions for electives:

BBA 131 - Introduction to Business	4
BBA 252 - Principles of Marketing	3
BLW 253 - Business Law and the Legal Environment	4

Note:
 Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.

Theatre

Associate in Arts - Fine Arts and Fitness Division

George Popovich
James Nelson

313-845-6478
313-845-6316

popovich@hfcc.edu
jnelson@hfcc.edu

DRTHE.AA...
MacKenzie Fine Arts Center 127
MacKenzie Fine Arts Center 128

Description	Courses																												
<p>The Associate in Arts degree in the Theatrical Arts with an area of concentration in Theatre is available to those students who wish to specialize in the Theatrical Arts. This degree program provides a sound basis for understanding the theory and practice of the theatrical arts and offers opportunities for experience through a curriculum of pre-professional training in theory, performance, and production.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 60</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>STH 131 - Theatre Appreciation</td><td>3</td></tr> <tr><td>STH 132 - Acting I</td><td>3</td></tr> <tr><td>STH 142 - Theatrical Production</td><td>3</td></tr> <tr><td>STH 150 - Stagecraft</td><td>3</td></tr> <tr><td>STH 238 - Theatre History</td><td>3</td></tr> <tr><td>STH 256 - Directing</td><td>3</td></tr> <tr><td>STH 281 - Theatre Capstone</td><td>1</td></tr> <tr><td colspan="2"><i>Complete one of the following courses:</i></td></tr> <tr><td>STH 133 - Technical Theatre</td><td>3</td></tr> <tr><td>STH 140 - One Act Play Production</td><td>3</td></tr> <tr><td>STH 149 - Children's Theatre Production</td><td>3</td></tr> <tr><td>STH 242 - Advanced Theatrical Production</td><td>3</td></tr> <tr><td>STH 259 - Experimental Theatre Production</td><td>3</td></tr> </tbody> </table> <p>Associate in Arts Degree Requirements</p> <p>Students must also complete the specific degree requirements for the Associate in Arts Degree which are listed on page 18. Courses listed in the Required Core Courses and/or Required Support Courses may also be used to fulfill Associate in Arts Degree Requirements when applicable. Developmental courses (developmental courses are those numbered below 100) cannot be used to fulfill these requirements.</p> <p>General Education</p> <p>Students must also complete the General Education requirements of the College which are listed on page 17. Courses listed in the Required Core Courses and/or Required Support Courses for this degree, as well as courses used to fulfill requirements of the Associate in Arts degree, may also be used to fulfill General Education when applicable.</p> <p>Elective Courses</p> <p>Complete as many elective credits as necessary to meet the minimum number of credit hours to receive your associate degree. No more than six (6) credit hours may come from developmental courses (courses numbered below 100).</p> <p>Note: Students considering transferring to a four-year institution are advised to consult current transfer and articulation guides to ensure that appropriate courses are selected.</p>	Required Core Courses	Cr. Hours	STH 131 - Theatre Appreciation	3	STH 132 - Acting I	3	STH 142 - Theatrical Production	3	STH 150 - Stagecraft	3	STH 238 - Theatre History	3	STH 256 - Directing	3	STH 281 - Theatre Capstone	1	<i>Complete one of the following courses:</i>		STH 133 - Technical Theatre	3	STH 140 - One Act Play Production	3	STH 149 - Children's Theatre Production	3	STH 242 - Advanced Theatrical Production	3	STH 259 - Experimental Theatre Production	3
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Web Design

Certificate of Achievement - Fine Arts and Fitness Division

Kirk McLendon 313-845-6487 mclendon@hfcc.edu
 James Nelson 313-845-6316 jnelson@hfcc.edu

ARTSGPHWEB.CMLT...
 MacKenzie Fine Arts Center 149
 MacKenzie Fine Arts Center 128

Description	Courses																										
<p>Web Design is one of five new Certificates of Achievement offered at HFCC. Earn a Web Design Certificate by completing the 37 credit hours of core courses. Students may complete an additional 23 credit hours of General Education and Elective courses to earn an Associate in Arts degree. Classes are offered throughout the year during the day, evening, and weekend.</p> <p>Interactive web design presents new challenges. Designers must understand how users interact with sites in order to create new and effective ways to present and communicate ideas in a non-linear format.</p> <p>Photoshop, Flash, ImageReady, and Dreamweaver are among the programs web designers need to know.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr><td>ART 101 - Two-Dimensional Design</td><td>3</td></tr> <tr><td>ART 102 - Drawing 1</td><td>3</td></tr> <tr><td>ART 107 - Photoshop/ImageReady</td><td>3</td></tr> <tr><td>ART 108 - Flash</td><td>3</td></tr> <tr><td>ART 112 - Drawing II</td><td>3</td></tr> <tr><td>ART 130 - History of Graphic Design</td><td>3</td></tr> <tr><td>ART 165 - Typography</td><td>3</td></tr> <tr><td>ART 172 - Color Theory</td><td>3</td></tr> <tr><td>ART 245 - Interactive Design</td><td>3</td></tr> <tr><td>ART 255 - Animation Basics</td><td>3</td></tr> <tr><td>ART 275 - Advanced Projects</td><td>3</td></tr> <tr><td>CIS 126 - XHTML/HTML/CSS Web Programming</td><td>4</td></tr> </tbody> </table>	Required Core Courses	Cr. Hours	ART 101 - Two-Dimensional Design	3	ART 102 - Drawing 1	3	ART 107 - Photoshop/ImageReady	3	ART 108 - Flash	3	ART 112 - Drawing II	3	ART 130 - History of Graphic Design	3	ART 165 - Typography	3	ART 172 - Color Theory	3	ART 245 - Interactive Design	3	ART 255 - Animation Basics	3	ART 275 - Advanced Projects	3	CIS 126 - XHTML/HTML/CSS Web Programming	4
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**Minimum Number of Credits To Graduate
 (Including Options/Electives): 37**

Programs of Study

Welding Technology — Advanced for Certification

Certificate of Achievement - Skilled Trades and Apprenticeship Division
 Kevin Ridge 313-317-4136 karidge@hfcc.edu
 Skilled Trades and Apprenticeship 313-845-6415

TAEDMJFWLD.CMLT...
 Technology Building 165C
 Technology Building 115

Description	Courses	
<p>The courses in this certificate will aid in developing the necessary skills for people interested in becoming welders qualified in a specific welding area. Such welders are known as Certified Welders. The two primary agencies used by welders for certification are the American Society of Mechanical Engineers (ASME) and the American Welding Society (AWS). Students will perform the qualifying procedures in the college welding lab, and when completed, test pieces will be processed at a local private testing lab.</p> <p>This certificate adds three new courses - TAMJ 125, TAMJ 230, and TAMJ 235 - to the Tool and Die Welding certificate.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 26</p>	Required Core Courses	Cr. Hours
	TADV 100 - Basic Print Reading	2
TAMJ 110 - Materials Joining and Fabrication Fundamentals	3	
TAMJ 115 - Materials Joining and Fabrication: Advanced Techniques	2	
TAMJ 145 - MJ & F: Advanced Gas Torch Techniques	2	
TAMJ 120 - Materials Joining and Fabrication: GTAW/GMAW Techniques	2	
TAFD 150 - Applied Technology	3	
TAMJ 240 - MJ & F: Tool and Die Welding	3	
TAIM 100 - Industrial Materials	3	
TAMJ 125 - MJ & F: ASME Pipe and Pressure Vessel Welding	2	
TAMJ 230 - MJ & F: ASME Pipe and Pressure Vessel Certification	2	
TAMJ 235 - MJ & F: GTAW and GMAW Certification	2	

Welding Technology — Basic

Certificate of Achievement - Skilled Trades and Apprenticeship Division
 Kevin Ridge 313-317-4136 karidge@hfcc.edu
 Skilled Trades and Apprenticeship 313-845-6415

TAEDMJFAB.CSGL...
 Technology Building 165C
 Technology Building 115

Description	Courses	
<p>The manufacturing and service industries use welding as a means to build and repair products. The courses included in this certificate focus on the skills needed in Electric Arc Welding, MIG Welding, and Oxygen Fuel Gas Cutting. Students will learn to weld in all four positions (flat, horizontal, vertical, and overhead) using the latest technology and equipment. Upon successful completion of this certificate, the student will have the skills necessary for an entry job position.</p> <p>With the successful completion of two additional courses, TAMJ 120 and TAFD 150, added onto this Welding Technology—Basic Certificate the student will earn the Welding Technology—GTAW/GMAW Certificate of Achievement.</p> <p style="text-align: center;">Minimum Number of Credits To Graduate (Including Options/Electives): 9</p>	Required Core Courses	Cr. Hours
	TADV 100 - Basic Print Reading	2
TAMJ 110 - Materials Joining and Fabrication Fundamentals	3	
TAMJ 115 - Materials Joining and Fabrication: Advanced Techniques	2	
TAMJ 145 - MJ & F: Advanced Gas Torch Techniques	2	

Welding Technology — GTAW/GMAW

Certificate of Achievement - Skilled Trades and Apprenticeship Division
 Kevin Ridge 313-317-4136 karidge@hfcc.edu
 Skilled Trades and Apprenticeship 313-845-6415

TAEDMJGWLD.CMLT...
 Technology Building 165C
 Technology Building 115

Description	Courses														
<p>The courses in this certificate extend the skills learned in the Welding Technology Basic Certificate of Achievement to include one of the most advanced welding techniques required in the manufacture and repair of products made from materials requiring special fabricating procedures. The skills acquired will enable the student to pursue welding jobs that require advanced knowledge and skills and that offer higher pay.</p> <p>The student will earn this Welding Technology—GTAW/GMAW Certificate of Achievement, with the successful completion of two additional courses, TAMJ 120 and TAFD 150, added onto the Welding Technology—Basic Certificate.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>TADV 100 - Basic Print Reading</td> <td>2</td> </tr> <tr> <td>TAMJ 110 - Materials Joining and Fabrication Fundamentals</td> <td>3</td> </tr> <tr> <td>TAMJ 115 - Materials Joining and Fabrication: Advanced Techniques</td> <td>2</td> </tr> <tr> <td>TAMJ 145 - MJ & F: Advanced Gas Torch Techniques</td> <td>2</td> </tr> <tr> <td>TAMJ 120 - Materials Joining and Fabrication: GTAW/GMAW Techniques</td> <td>2</td> </tr> <tr> <td>TAFD 150 - Applied Technology</td> <td>3</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	TADV 100 - Basic Print Reading	2	TAMJ 110 - Materials Joining and Fabrication Fundamentals	3	TAMJ 115 - Materials Joining and Fabrication: Advanced Techniques	2	TAMJ 145 - MJ & F: Advanced Gas Torch Techniques	2	TAMJ 120 - Materials Joining and Fabrication: GTAW/GMAW Techniques	2	TAFD 150 - Applied Technology	3
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TAMJ 120 - Materials Joining and Fabrication: GTAW/GMAW Techniques	2														
TAFD 150 - Applied Technology	3														

**Minimum Number of Credits To Graduate
 (Including Options/Electives): 14**

Welding Technology — Tool and Die

Certificate of Achievement - Skilled Trades and Apprenticeship Division
 Kevin Ridge 313-317-4136 karidge@hfcc.edu
 Skilled Trades and Apprenticeship 313-845-6415

TAEDMJTWLD.CMLT...
 Technology Building 165C
 Technology Building 115

Description	Courses																		
<p>The courses in this certificate extend the knowledge and skill development acquired in the two previous certificates. The courses cover a highly specialized area in welding concerning alloys, steels, and cast irons that are used in the tool and die industries. All manufacturing and service companies required tooling and dies that perform specific functions. These objects require special materials for their construction and require sophisticated welding procedures to ensure successful production and repair.</p> <p>The students can earn multiple Certificates of Achievements in Welding Technology. The sequential order of certificates includes Welding Technologies—Basic Certificate, Welding Technology—GTAW/GMAW Certificate, the Welding Technology—Tool and Die Certificate.</p> <p>This certificate adds two new courses - TAMJ 240 and TAIM 100 - to the GTAW/GMAW certificate.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td>TADV 100 - Basic Print Reading</td> <td>2</td> </tr> <tr> <td>TAFD 150 - Applied Technology</td> <td>3</td> </tr> <tr> <td>TAIM 100 - Industrial Materials</td> <td>3</td> </tr> <tr> <td>TAMJ 110 - Materials Joining and Fabrication Fundamentals</td> <td>3</td> </tr> <tr> <td>TAMJ 115 - Materials Joining and Fabrication: Advanced Techniques</td> <td>2</td> </tr> <tr> <td>TAMJ 120 - Materials Joining and Fabrication: GTAW/GMAW Techniques</td> <td>2</td> </tr> <tr> <td>TAMJ 145 - MJ & F: Advanced Gas Torch Techniques</td> <td>2</td> </tr> <tr> <td>TAMJ 240 - MJ & F: Tool and Die Welding</td> <td>3</td> </tr> </tbody> </table>	Required Core Courses	Cr. Hours	TADV 100 - Basic Print Reading	2	TAFD 150 - Applied Technology	3	TAIM 100 - Industrial Materials	3	TAMJ 110 - Materials Joining and Fabrication Fundamentals	3	TAMJ 115 - Materials Joining and Fabrication: Advanced Techniques	2	TAMJ 120 - Materials Joining and Fabrication: GTAW/GMAW Techniques	2	TAMJ 145 - MJ & F: Advanced Gas Torch Techniques	2	TAMJ 240 - MJ & F: Tool and Die Welding	3
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**Minimum Number of Credits To Graduate
 (Including Options/Electives): 20**

Programs of Study

Areas of Study

Anthropology

Area of Study - Social Science Division

Nabeel Abraham	313-845-6460	nabraham@hfcc.edu	Reuther Liberal Arts Building 103E
Kim Schopmeyer	313-845-6443	kschop@hfcc.edu	Reuther Liberal Arts Building 108

Description

Anthropology is the study of humankind - its origins, evolution, and diverse cultures. Introduction to ANTH 131-Anthropology serves as the basic introduction to the world of anthropology. Although it is recommended that students take this course before those at a higher level, it is not required. Many students, especially science majors, take

ANTH 152-Peoples and Cultures of the Middle East, fulfilling a foreign culture requirement at many four-year institutions. All anthropology courses are transferable.

Anthropology courses at the 100-level or above fulfill the graduation requirement for Associate in Arts degrees, Social Sciences.

Take a look at our new course, ANTH 153-Introduction to Archaeology, in the course descriptions section.

Astronomy

Area of Study - Science Division

Michael LoPresto	313-845-9722	lopresto@hfcc.edu	Science Building 16
Dr. Charles Jacobs	313-845-9734	cjacobs@hfcc.edu	Science Building 107

Description

HFCC offers three courses in astronomy. ASTR 131-Descriptive Astronomy and ASTR 133-Introductory Astronomy Laboratory are ideal for the student with little or no prior scientific or mathematical experience who wishes to explore astronomy or science in general, as well as for students preparing to be secondary school science teachers. They also provide a good introductory survey for students planning advanced study of astronomy.

ASTR 231-General Astronomy serves as a more in-depth introduction to astronomy. It can be used as a general education alternative to ASTR 131. ASTR 133 can be taken as the lab-component for either ASTR 131 or ASTR 231.

Students interested in majoring in astronomy at a four-year school should take ASTR 231 and ASTR 133, plus PHYS 231 and PSYS 232.

Dance

Area of Study - Fine Arts and Fitness Division

Diane Mancinelli	313-845-6314	dmancin@hfcc.edu	Athletic Memorial Building 9
James Nelson	313-845-6316	jnelson@hfcc.edu	MacKenzie Fine Arts Center 128

Description

HFCC has a vibrant and lively Dance program. Areas of teaching include Tap, Modern Dance, and Jazz. Students benefit from high-quality courses and participation in the Full Circle Dance Company. High-quality courses are taught by HFCC instructors. Many guest dance artists and choreographers have worked at HFCC in a variety of genres including Flamenco, Jazz, Ballet, Modern, Classical Indian,

Ballroom and Folk. The artists teach master classes and compose dances for the Full Circle Dance Company.

The Full Circle Dance Company is open to HFCC students and provides intensive training and performance opportunities. Among these is the American College Dance Festival, which for the past 10 years HFCC students have attended at different host colleges. At the Festival, students have dances adjudicated, take master classes, attend dance concerts, and perform.

Economics, Finance & Investing

Area of Study - Business and Economics Division

Jared Boyd
Elaine Saneske

313-845-9697
313-845-9704

jpboyd@hfcc.edu
esaneske@hfcc.edu

Reuther Liberal Arts Building 304
Reuther Liberal Arts Building 328

Description

Economics is the study of how human beings produce, distribute, trade, and consume the products and services that are desired. Economics is also the study of how societies use scarce resources to satisfy unlimited wants. Many problems that confront society today have important economic aspects. An understanding of economics has a practical value for individuals, as citizens and as business people, in the quality of their decision making.

Many students majoring in business, engineering, science, or liberal arts may be required to take an economics. For specific economic course descriptions, see BEC 133-Basic Economics, BEC 151-Macro Economics, and BEC 152-Micro Economics.

Finance is the study of the methods that individuals, businesses, and organizations use to raise, allocate, and manage monetary resources over time considering the risk and return involved in those decisions.

Investing is the study of maximizing returns on wealth while minimizing risk. Investing includes the study of the markets; types of securities; and consideration of age, income, and risk tolerance of the individual investor.

BFN 130-Beginning Investment and BFN 141-Personal Finance are intended for individuals desiring knowledge of personal investing while BFN 253-Principles of Finance is designed for individuals interested in learning how businesses make financial decisions.

English

Area of Study - English Division

Chris Briggs

313-845-6458

cbriggs@hfcc.edu

Reuther Liberal Arts Building 208

Description

The English Division offers a wide selection of courses for students with varying interests, from improving basic reading, writing, and study skills to appreciating and understanding great works of American and world literature.

The literature classes offer students both introductory surveys and more advanced and specialized studies of the literature of specific genres and historical periods. Students who are seeking an initial acquaintance can take ENG 231-Introduction to Literature: Poetry and Drama and ENG 233-Introduction to the Novel. Those interested in more specialized courses are offered two American literature surveys, Shakespeare, Children's literature, and African American literature among others. ENG 139-Creative Writing is offered in the fall and winter semesters.

ENG 135-Business and Technical Writing and Research trains students to write effectively in the workplace, and it is also available to people already working in local business and industry who desire to improve their professional writing skills. Sections of this course are among those taught in computer-equipped classrooms and online, thus emphasizing computer technology as a critical tool in workplace

communication. Students should contact the University Transfer, Advising, and Career Counseling Center for ENG 135 transferability to other institutions.

ENG 088 and ENG 093 are developmental writing courses and ENG 079 and ENG 081 are developmental reading courses. They are offered every semester to provide students the opportunity to improve their basic skills and ensure their success at Henry Ford Community College. These courses are among those closely tied to the Learning Laboratory, where students can get instruction on an individual basis.

If, based on their placement scores, students do not need to take any of the developmental courses, they should enroll in ENG 131-Introduction to College Writing, a freshman-level course which stresses critical reading, critical thinking, and critical writing. Either ENG 132-College Writing and Research, or ENG 135-Business and Technical Writing and Research follows successful completion of ENG 131.

Some students for whom English has not been the primary language need specialized courses to prepare them for academic success. The English Division offers two developmental writing courses for such students (ENG 091 and ENG 092), and one developmental reading course (ENG 078). Enrollment is restricted in the writing courses in order to ensure that these students receive individual attention.

Geography

Area of Study - Social Science Division

Tarek Joseph	313-845-6402	tjoseph@hfcc.edu	Learning Technology Center 221
Kim Schopmeyer	313-845-6443	Kschop@hfcc.edu	Reuther Liberal Arts Building 108

Description

Geography emphasizes spatial relationships, locations, and distributions. Geographers address the questions of “where” and “why” by examining the location of people and activities across the earth’s surface, and the reasons for their distribution.

Geography courses address topics such as population patterns, the spatial distribution of culture, resource use, pollution, urbanization,

perception of place, the environment, and human alteration of the physical landscape. Discussion of current events from a geographic perspective enhances students’ understanding of complex local, national, and global issues.

Geography courses at the 100-level or above fulfill the graduation requirement for Associate in Arts degrees, Social Sciences.

Geography courses may be taken in any order, fulfill Social Science credits, and are fully transferable to four-year institutions.

Geology

Area of Study - Science Division

Dr. Brian Kirchner	313-317-1527	bkirchner@hfcc.edu	Science Building 8
Dr. Charles Jacobs	313-845-9734	cjacobs@hfcc.edu	Science Building 107

Description

HFCC offers one course in Geology (GEOL 131-Physical Geology). It is ideal for the student with little or no prior scientific or mathematical experience who wishes to explore geology or science in general, as well as for students preparing to be secondary school science teachers.

It also provides a good introductory survey for students planning advanced study of geology.

Students interested in majoring in geology at a four-year school should consult the catalog of the school to which they wish to transfer for assistance in planning a course of study.

History

Area of Study - Social Science Division

Pamela Sayre	313-845-6396	psayre@hfcc.edu	Reuther Liberal Arts Building 103
Kim Schopmeyer	313-845-6443	kschop@hfcc.edu	Reuther Liberal Arts Building 108

Description

History is what happened, what historical writings and people represent to have happened, and the application of this knowledge to us and to our time. In addition to adding zest to life, history courses meet graduation requirements. HIST 151 and HIST 152 fulfill the American Society, Events, Institutions and Cultures

General Education Outcome. History offerings cover the fields of world civilization; American history; and specialized topics such as African-American, Middle Eastern, and military history. In addition, the History Department has recently added several online courses, including the American Revolution, the American Civil War, the Cold War, and the Vietnam War.

Liberal Arts

Area of Study - Other Academic Division

University Transfer Center

313-845-9612

counseling@hfcc.edu

Learning Resources Center 117

Description	Courses																																														
<p>Completion of the Liberal Arts area of study signifies that the student is broadly educated in the major divisions of higher learning: humanities, natural sciences, mathematics, social sciences, and fine arts. The student has acquired methods of study and habits of thought which are demonstrated by an ability to analyze problems, make appropriate value judgments, and express conclusions in cogent style. The student devotes a major portion of study to in-depth concentration of one subject.</p> <p>Students completing the Liberal Arts area of study must satisfy the General Education Requirements for the specific degree requirements for the Associate in Arts degree that are listed earlier in the catalog. Electives should be selected to reflect both the student's interests and the requirements of the intended transfer institution. Students are encouraged to consult the transfer guide sheets located in the University Transfer, Advising, and Career Counseling Center.</p>	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Required Core Courses - Liberal Arts</th> <th style="background-color: #cccccc;">Cr. Hours</th> </tr> </thead> <tbody> <tr> <td colspan="2">First Year</td> </tr> <tr> <td colspan="2">First Semester</td> </tr> <tr> <td>ENG 131 - Introduction to College Writing Science*</td> <td>3</td> </tr> <tr> <td>Social Science**</td> <td>4</td> </tr> <tr> <td>Elective*****</td> <td>3 or 4</td> </tr> <tr> <td>Wellness</td> <td>3 or 4</td> </tr> <tr> <td colspan="2">Second Semester</td> </tr> <tr> <td>ENG 132 - College Writing and Research OR</td> <td>2</td> </tr> <tr> <td>ENG 135 - Business and Technical Writing Science*</td> <td>3</td> </tr> <tr> <td>Social Science**</td> <td>4</td> </tr> <tr> <td>Elective*****</td> <td>3 or 4</td> </tr> <tr> <td>Wellness</td> <td>3 or 4</td> </tr> <tr> <td colspan="2">Second Year</td> </tr> <tr> <td colspan="2">First Semester</td> </tr> <tr> <td>Foreign Language*** OR Elective</td> <td>3 or 4</td> </tr> <tr> <td>Elective****</td> <td>3 or 4</td> </tr> <tr> <td>Humanities**** OR Social Science</td> <td>3 or 4</td> </tr> <tr> <td>Major and/or Electives</td> <td>3 or 4</td> </tr> <tr> <td colspan="2">Second Semester</td> </tr> <tr> <td>Foreign Language*** OR Elective*****</td> <td>3 or 4</td> </tr> <tr> <td>Humanities**** OR Social Science</td> <td>3 or 4</td> </tr> <tr> <td>Major and/or Electives</td> <td>3 or 4</td> </tr> </tbody> </table> <p><i>Additional electives may be needed to reach the minimum 60-62 hours required for graduation.</i></p> <ul style="list-style-type: none"> * Select from Astronomy, Botany, Chemistry, Geology, Introductory Biology, Physical Science, Physics and/or Zoology. ** Select from Anthropology, Geography, History, Political Science, Psychology and/or Sociology. *** Four semesters of French, German, or Spanish may be elected; two semesters of Arabic, Chinese or Italian are offered. **** Humanities classes usually include Art, Music, Literature, Philosophy, Drama, World Religion, and World Civilization. ***** Electives include the above courses plus Math and Business. 	Required Core Courses - Liberal Arts	Cr. Hours	First Year		First Semester		ENG 131 - Introduction to College Writing Science*	3	Social Science**	4	Elective*****	3 or 4	Wellness	3 or 4	Second Semester		ENG 132 - College Writing and Research OR	2	ENG 135 - Business and Technical Writing Science*	3	Social Science**	4	Elective*****	3 or 4	Wellness	3 or 4	Second Year		First Semester		Foreign Language*** OR Elective	3 or 4	Elective****	3 or 4	Humanities**** OR Social Science	3 or 4	Major and/or Electives	3 or 4	Second Semester		Foreign Language*** OR Elective*****	3 or 4	Humanities**** OR Social Science	3 or 4	Major and/or Electives	3 or 4
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Areas of Study

Mathematics

Area of Study - Mathematics Division

Larry Smyrski	313-845-6388	Lmyrski@hfcc.edu	Reuther Liberal Arts Building 244
Lisa Pompa	313-845-9631	lpompa@hfcc.edu	Reuther Liberal Arts Building 246

Description

The Mathematics Division offers a wide range of courses from developmental to advanced that enable students to fulfill program requirements at Henry Ford Community College, to transfer with advanced standing into four-year degree programs, or to complete admission requirements for graduate degrees where the student's undergraduate mathematical background is deficient.

For students who come to Henry Ford without the adequate preparation and skills in high school mathematics, the Mathematics Division has a series of developmental offerings that prepares them for success in more advanced courses. In addition, the Learning Laboratory provides individualized remediation for students who are lacking in specific skills.

If a student's career objective is a technical degree or certificate, there is a structured two-course sequence in Technical Mathematics (MATH 100 and MATH 103) that is designed to meet the mathematical needs of these specific programs. Related problem-solving activities are integrated throughout this sequence. For students who plan eventually to transfer to a four-year program that has a strong mathematics component, the entire range of the traditional first two years of undergraduate mathematics courses is offered. Included is a

three-course calculus sequence (MATH 180, MATH 183, MATH 280), in addition to specialty courses such as MATH 289-Differential Equations, MATH 283-Linear Algebra, and MATH 150-Finite Mathematics.

Future elementary education majors can satisfy their three-course mathematics requirement at most institutions by completing MATH 121, MATH 221, and MATH 225. Students should consult the transfer guides to the four-year institutions of their choice for the appropriate courses.

Students preparing for an undergraduate degree in business or for entry into an MBA program can elect MATH 150-Finite Mathematics, MATH 153-Calculus for Business, Life and Social Sciences, and MATH 141-Introduction to Statistics.

The Mathematics Division emphasizes problem-solving techniques and the appropriate use of technology, both computer and graphing calculator-based, throughout its wide range of course offerings. Whether in science, engineering, statistics, business, health careers, education, or any other field that requires quantitative literacy, the mathematics offerings are designed to prepare students to become creative problem solvers.

Philosophy

Area of Study - Fine Arts and Fitness Division

Thomas Wallenmaier	313-845-6439	twallen@hfcc.edu	MacKenzie Fine Arts Center 142
James Nelson	313-845-6316	jnelson@hfcc.edu	MacKenzie Fine Arts Center 128

Description

Every HFCC student has the opportunity to reach beyond training to achieve a comprehensive quality education. Philosophy is the love of wisdom. Wisdom is based on knowledge and insight, not on preferences or subjective beliefs. HFCC's sequence of courses in philosophy is academically designed to develop critical and creative thinking skills, and to encourage intellectual integrity in the pursuit of objective methods of confirmation or disconfirmation of beliefs. HFCC's philosophy courses challenge serious students to engage in focused inquiry, to expose fallacious reasoning, and to develop sensitive approaches to understanding, evaluating, deciding, or acting in any area of significant human concern. There are no prerequisites for any philosophy course. The intellectual life begins and ends with philosophy.

Courses

Recommended Courses	Cr. Hours
PHIL 131 - Introduction to Logic	3
PHIL 133 - History of Philosophy to the 18th Century	3
PHIL 135 - History of Modern Philosophy	3
PHIL 137 - Topics in Philosophy	3
PHIL 139 - Ethics	3

Physics

Area of Study - Science Division

Michael LoPresto	313-845-9722	lopresto@hfcc.edu	Science Building 16
Dr. Charles Jacobs	313-845-9734	cjacobs@hfcc.edu	Science Building 107

Description

The Physics Department offers a variety of laboratory-based courses for students interested in studying physics, engineering, and other sciences, as well as support courses for students studying health careers, teaching, and other topics.

Students planning to pursue a professional career in physics, chemistry, or engineering will start with PHYS 231-Engineering Physics and PHYS 232-Engineering Physics (Continued). Both of these require calculus as a prerequisite.

Students in other scientific disciplines will typically take the algebra-based courses PHYS 131-Liberal Arts Physics and PHYS 132-Liberal Arts Physics (Continued). Students taking PHYS 120-Technical

Physics and PHYS 121-Technical Physics (Continued) will apply the laws of physics to solve everyday technical problems in the workplace. PHYS 133-Principles of Physics introduces various branches of physics to students who have limited mathematical skills. It is appropriate for students needing to fill a one-semester laboratory science requirement and for those in certain programs in Health Careers and teaching.

Additional Program Requirements

Potential physics majors: Physics is a rigorous academic program that requires strong math and science skills. Students in physics programs at 4-year colleges and universities typically take 16-18 credit hours each semester. The majority of these courses are in physics and mathematics. Students planning to major in physics should take a rigorous high school background including four years of college prep math and science.

Political Science

Area of Study - Social Science Division

Henry Bowers	313-845-9706	hbowers@hfcc.edu	Reuther Liberal Arts Building 307
Kim Schopmeyer	313-845-6443	kschop@hfcc.edu	Reuther Liberal Arts Building 108

Description

Politics is the study of who gets what, when, and how through government or other instruments of power. Power can be exercised by individuals, interest groups, parties, nation-states, or international organizations.

Political Science examines the theory and practice of politics by focusing on political behavior and values. Subfields include American

government, public policy and administration, judicial politics, comparative politics, international relations, and political theory.

POLS 131-Introduction to American Government and Political Science fulfills Henry Ford Community College's General Education Outcome on American Society, Events, Institutions and Cultures.

Political Science courses at the 100-level or above fulfill the graduation requirement for Associate in Arts degrees, in Group III - Social Sciences.

Pre-Professional

Area of Study - Other Academic Division

University Transfer Center	313-845-9612	counseling@hfcc.edu	Learning Resources Center 117
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Description

Students who wish to enter the professional schools of universities may be required to spend some time in a liberal arts college.

Students interested in medicine, dentistry, law, forestry, journalism, agriculture, architecture, home economics, public health, library science, veterinary medicine, and other fields will find it possible to

take the first one or two years of their college work in the community college without loss of time or credit hours when they transfer, provided a high standard of work is maintained.

The community college schedule of classes is constructed with the needs of the professional school in mind, and, in most cases, a full two years of work is possible.

Psychology

Area of Study - Social Science Division

Margaret Thornburg	313-845-9711	mthorn@hfcc.edu	Reuther Liberal Arts Building 306
Kim Schopmeyer	313-845-6443	kschop@hfcc.edu	Reuther Liberal Arts Building 108

Description

Psychology approaches the study of human behavior systematically by using the techniques of science. PSY 152-Child Psychology, and PSY161-Human Sexuality are available for students with interest in the field.

PSY 256-Educational Psychology with PSY 294-Practicum are available for those planning to enter the teaching profession.

Psychology courses at the 100-level or above fulfill the graduation requirement for Associate in Arts degrees, in Group III - Social Sciences.

Science

Area of Study - Science Division

Dean of Science	313-845-9632	science@hfcc.edu	Science Building 107
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Description

Courses in this area are interdisciplinary. SCI 131-Revolutions in Science is a non-lab science course that takes you behind the scenes of great scientific discoveries. SCI 210 and SCI 213 are inquiry-based courses intended for students planning to major in education.

Sociology

Area of Study - Social Science Division

Brian Smith	313-845-9830	bsmith@hfcc.edu	Learning Technology Center 219
Kim Schopmeyer	313-845-6443	kschop@hfcc.edu	Reuther Liberal Arts Building 108

Description

Sociology examines human societies, behavior, and culture. The field focuses on major areas of social life and places an emphasis on the influence of economic class, race/ethnicity, and gender in understanding how people see the world and have different levels of power within a society.

SOC 131-Introduction to Sociology provides an overview of the

field. For students wishing more in-depth exploration of sociology, the College offers SOC 132-Marriage and the Family, SOC 151-Contemporary Social Problems, SOC 152-Women, Men, and Society, SOC 251- Ethnic and Racial Diversity and SOC 254/PSY 254-Social Psychology.

Sociology courses fulfill the graduation requirements for Associate in Arts and Associate in Science degrees, in Group III - Social Sciences. SOC 131-Introduction to Sociology also fulfills the General Education Outcome on American Society, Events, Institutions and Cultures.

World Languages

Area of Study - English Division

Tom Claerr	313-845-6418	tclaerr@hfcc.edu	Reuther Liberal Arts Building 303
Reg Gerlica	313-845-9673	rgerlica@hfcc.edu	Reuther Liberal Arts Building 208

Description

The College offers four-semester sequences in French, German, and Spanish, as well as two-semester sequences in Modern Standard Arabic, Mandarin Chinese and Italian. Beginning classes are designed for students with no previous experience. All courses develop not only the students' abilities with oral and written language but also their understanding of a foreign culture. Textbook-based written assignments and exercises are supplemented by in-class oral practice. Students planning to transfer to a four-year institution that requires a

foreign language for graduation can fulfill that requirement at HFCC before transferring. Employees of companies that do business abroad also take these courses to enhance their professional credentials by improving their knowledge of language and culture.

Single-semester enrichment courses FRE 141-Elementary French I and GER 141-Elementary German I emphasize improved oral facility, increased vocabulary and introduction to the culture.

Students who have taken courses in high school or at another college should interview with an instructor in order to determine proper placement. For further information students should call Tom Claerr at 313-845-6418.

Course Descriptions

ACT 104 Community Construction Applications 4 Credit Hours

This is a basic course in which the student studies the design and construction of residential projects. Projects may include wood decks and patios, sheds, garages, or other community service related projects. Along with functional, aesthetic, climatic, and cost considerations, the influence and structural characteristics of various materials are evaluated. Each student also experiences the actual construction of a typical project at a predetermined residential site.

ACT 110 Introduction to Architecture 3 Credit Hours

This is a basic course using architectural drafting techniques and sketching to explore various topics related to the architecture/construction industry. Topics will include architectural history, building codes, basic urban development, sketching, geometric construction, floor plans, elevations, building sections, details, and blue print reading.

ACT 116 Basic Architectural CAD 4 Credit Hours

A basic course in computer-aided drafting with an emphasis on architectural applications. Topics include drawing setup, draw and edit commands, hatching, dimensioning, creating and editing blocks, model pace, paper space and plotting. The efficient use of CAD in the architectural industry is also covered as it relates to each assignment.

Suggested Prerequisite: Concurrent enrollment in ACT 110 is recommended, but not required.

ACT 124 Construction Systems 1 4 Credit Hours

A basic course in which the student studies residential construction materials and proper installation methods with reference to geographical location, cost and material selection. The focus is on reading and working from blueprints and working with traditional hand and power tools. Students learn building layout procedures using the level and transit, as well as foundation, floor, wall-framing materials and systems. Lab work includes small-scale concrete construction and rough frame construction of a wood frame house in a controlled environment.

ACT 130 Architectural Graphics 3 Credit Hours

A basic course in architectural drawing in which the student studies architectural freehand sketching, elevation rendering techniques, shade and shadow and perspective drawing methods used in architectural renderings. The student also becomes acquainted with the use of various drawing media and color.

ACT 136 Intermediate Architectural CAD 4 Credit Hours

An intermediate level course continuing the study of computer-aided drafting with an emphasis on architectural applications. Topics covered include using external reference drawings, creating, editing and extracting block attributes, model and paper space layout, three-dimensional coordinate systems, three-dimensional viewing, creating and editing 3-D solid and surface models, basic 3-D rendering including cameras, lights and materials.

Prerequisite: ACT 116

ACT 150 Residential Detailing 3 Credit Hours

An intermediate-level course continuing the study and drawing of residential details. Emphasis is on accepted architectural practice and building codes as the e to site plans, stairway details, interior elevations, kitchen and bath layout, door and window details, building sections and other typical residential details.

Prerequisites: ACT 110 and ACT 116

ACT 175 Environmental Building Systems 4 Credit Hours

This is an intermediate-level course designed to introduce students to the layout and design of residential mechanical and electrical systems. Specific areas to be covered include water supply and disposal systems, electrical and lighting systems, heating, ventilation and air conditioning. Given the appropriate design data, the student will be required to prepare typical mechanical, electrical and plumbing drawings. This course also includes a discussion of codes, materials, and fixtures as it relates to each assignment.

Prerequisites: ACT 116

ACT 190 Architecture/Construction Technology Co-op 1 Credit Hour

An advanced-level course offering practical work experience within the Architecture/Construction Technology field through participation in a supervised cooperative education program. This course integrates work experience with classroom instruction.

Prerequisites: ACT 150 and permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings or weekends depending on employer needs.

ACT 205 Advanced Architectural CAD 4 Credit Hours

An advanced-level course utilizing specific architectural programming including third-party software. Emphasis is on using CAD efficiently to complete and present architectural concepts. Topics include creating and editing wall styles, manipulating door and window styles, drawing three-dimensional roof systems, extracting schedule data, generating elevation and section views and three-dimensional presentation techniques.

Prerequisite: ACT 136

ACT 211 Commercial Construction Systems 3 Credit Hours

An intermediate-level course designed to acquaint students with small and large commercial building construction systems, techniques, materials and methods, including soils, foundations, structural systems, wall/cladding assemblies, roofs and interior building systems. The investigation of building uses and the consideration of materials, equipment and services are integral parts of this course.

Prerequisite: ACT 121

ACT 220 Residential Design 3 Credit Hours

An advanced course in which the student develops a residential design for an assigned site and client. Included are site planning, building design and a partial set of construction documents. A presentation drawing of the proposed design is also required.

Prerequisites: ACT 130 and ACT 150

ACT 224 Construction Systems 2 4 Credit Hours

Designed as a continuation of ACT 124, this course focuses on residential construction materials with reference to geographic location, cost, and proper installation techniques. Students will learn to read and evaluate blueprints, and work with traditional hand and power tools. Students learn roof framing techniques, roof shingle selection and installation, proper insulation techniques, selection and installation of interior finishes, and finish carpentry skills. Lab work includes roofing, drywall, insulation, door and window installation and finish flooring.

Prerequisites: ACT 124

ACT 233 Commercial Detailing 3 Credit Hours

An advanced course in which the student becomes acquainted with methods used in developing and drawing details for a commercial building. Details include site, foundation, structural, wall and roof conditions. Also studied are window and door details, commercial stairs and other typical commercial details.

Prerequisite: ACT 150

Suggested Prerequisite: Completion of or concurrent enrollment in ACT 211 is recommended.

ACT 246 Construction Estimating 4 Credit Hours

An advanced course in which the student studies the estimation of residential construction costs using the quantity survey method. Construction documents are used to take off building material and labor costs for accurate construction cost estimating. The preparation of cost estimating forms for material, labor and other costs will be done using current computer spreadsheet applications.

Prerequisite: ACT 110

Suggested Prerequisites: Construction experience or ACT 141 and MATH 100 are recommended.

ACT 258 Architectural Presentation Techniques 4 Credit Hours

This is an advanced course in which the student becomes acquainted with various digital presentation techniques. Multiple software applications will be explored for rendering, animation, and graphic production including: Viz Render, Sketchup, and Photoshop. Topics include 3-D modeling, rendering, animation, use of digital images for presentation display boards, and use of presentation software such as Microsoft PowerPoint. Students will also use these tools to design and assemble a basic portfolio.

Prerequisites: ACT 130

ACT 260 Commercial Design Development 3 Credit Hours

An advanced course in which the student develops a commercial building for an assigned building site and use. Included are site planning, design development and a partial set of construction

documents with plans, elevations, sections and details. Emphasis is placed on the transition from design to construction documents.

Prerequisites: ACT 136, ACT 220, and ACT 233

ACT 290 Architecture/Construction Technology Co-op 4 Credit Hours

An advanced-level course offering practical work experience within the Architecture/Construction Technology field through participation in a supervised cooperative education program. This course integrates work experience with classroom instruction.

Prerequisites: ACT 150 and permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings or weekends depending on employer needs.

AH 100 Medical Terminology 4 Credit Hours

In-depth presentation of medical language, which then will serve as a solid foundation for students interested in health care, medicine, nursing, pharmacy, physical therapy, or related careers. Medical terminology for both health and disease is presented in relation to human structure and function. Builds a framework by introducing the key elements in the formation as well as the modification of medical terms, which then is applied to the specific body systems.

AH 105 Basic Life Support for Healthcare Providers 0.5 Credit Hours

This lecture/lab course is structured to teach the theory and skills of CPR for victims of all ages so that individuals can recognize and respond to basic life threatening emergencies due to cardiac or respiratory arrest. Course features ventilation with a barrier device, a bag-mask device, supplemental oxygen, use of automated external defibrillator (AED), and relief of foreign-body airway obstruction. This course is designed for either individuals working in healthcare or for health career and nursing students preparing for their clinical assignments. Upon successful completion of the course including both written and skills testing, the student will receive a Healthcare Provider Card valid for two years through the American Heart Association. This is a pass/fail course with demonstrated competency in all key skill areas required.

Note: Students must attend the entire course in order to receive credit and the certification. Due to the short duration of this class, attendance is mandatory.

AH 116 Interpreting Medical Lab Reports 3 Credit Hours

This is a general survey course designed to serve the needs of a variety of health careers students who need to recognize normal and abnormal values of the commonly used diagnostic tests. This course presents the values of the commonly used medical laboratory diagnostic tests and relates those tests to the common disorders or diseases noting the significance of the relationships between tests and diagnosis.

Note: AH 116 will be offered on an "as needed" basis.

AH 120 Pharmacology for Allied Health 3 Credit Hours

Designed for students in the health care and nursing programs needing to establish a foundation in the basic principles of

pharmacology. This survey course presents a rationale for understanding current drug therapy involving the common disorders of the major body systems. Administration and dosage calculations are not components of this course.

Suggested Prerequisites: Although not required Prerequisites AH 100, BIO 134 or BIO 233/BIO 234 would be helpful for this course.

AH 135 Fundamental Concepts in Cancer & Cancer Care 3 Credit Hours

This course will present a broad introduction to the basic principles of cancer. It will explore the fundamental concepts of cancer development, diagnosis, treatment and prevention. As a survey course designed for a wide and diverse audience, this course will focus upon general concepts as opposed to specific technical details.

Prerequisites: AH 100-Medical Terminology

Suggested Prerequisites: BIO 131-Introductory Biology, strongly recommended

AH 145 Culture-Sensitive Healthcare 3 Credit Hours

This lecture course assists healthcare providers to understand the needs, expectations, behaviors, and barriers to effective patient care of multicultural patient populations. The course will focus upon health care practices directly related to African-American, Asian, Hispanic, Middle Eastern, and Eastern European patients.

Note: AH 145 will be offered on an “as needed” basis.

AH 150 Pathophysiology 4 Credit Hours

Designed for allied health personnel who have an understanding of human anatomy and physiology and the language of medicine. This course surveys, in depth, several diseases and relates them to causes, signs, symptoms, physiological imbalances, laboratory findings, treatments, and prognoses.

Prerequisites: BIO 134, or BIO 233 and BIO 234

Suggested Prerequisite: AH 100

Note: AH 150 will be offered on an “as needed” basis.

AH 250 Advanced Cardiac Life Support (ACLS) 2 Credit Hours

This lecture/lab course presents a systematic approach to the management of patients experiencing a severe cardiopulmonary emergency or sudden death. Course follows the American Heart Association format providing the knowledge and skills necessary to manage the first minutes of an adult arrest. Providers will manage ten different core ACLS situations. Upon successful completion of this course, the student will receive an ACLS Provider Card through the American Heart Association.

Prerequisites: Course restricted to emergency medical providers such as physicians, nurses, respiratory therapists, paramedics and other health care professionals who respond to cardiovascular emergencies. Nursing, paramedic and respiratory therapy students in their final semester of training are eligible to take this course. This course is an advanced-level course and is not intended for those individuals with no or minimal health care experience.

Note: The credit version of AH 250 is only offered as needed or as requested through the Health Careers Division. The CEU version of this ACLS course is offered through HFCC’s Center for Lifelong Learning.

ANTH 131 Introduction to Anthropology 3 Credit Hours

An introduction to physical and cultural anthropology, archeology, and linguistics. Human origins and evolution are discussed in detail. Issues like cannibalism, hunger, race, and human intelligence are also explored. Various customs, myths, and beliefs, especially pertaining to women, are examined cross-culturally.

ANTH 151 Cultures of North America 3 Credit Hours

Traces present-day American culture from the arrival of Christopher Columbus in the New World and the devastating impact that event had on the native peoples of the hemisphere. Several cultures from various regions of North America will be studied in-depth using ethnographies, biographies, fiction, and film.

ANTH 152 Middle Eastern Peoples and Cultures 3 Credit Hours

An introduction to the richness and variety of Middle Eastern cultures, with an emphasis on Arab culture and the role of Islam in shaping the history and culture of the region. Arabs in the United States and in Dearborn are also examined, as well as American cultural perceptions of the Arabs, Islam, and the Middle East.

ANTH 153 Introduction to Archaeology 3 Credit Hours

This course provides an introductory look at the field of archaeology answering the question: what do archaeologists do? Students will explore the methods of excavation, dating sites, artifact analysis, and cultural interpretation. Students will also explore some of the major archaeological sites from around the world.

ANTH 154 Food, Culture, and Economy 3 Credit Hours

All people have to eat to live, but food is a cultural celebration that embraces much more than human survival. This course explores the rich cross-cultural variety of food traditions and the ways that food in all cultures creates group identity; marks class status and ethnicity; and involves religion, gender, economics, politics, power, and more. Students are introduced to the structure of global food systems in order to better understand the social, cultural, and political implications of US food traditions in relation to those of other cultures.

ARA 131 Elementary Modern Standard Arabic I 4 Credit Hours

Introduces the sounds, pronunciation, and writing system of modern literary Arabic, as well as the basic vocabularies and fundamental grammatical structures necessary in reading, writing, listening, and speaking in the formal oral style. Includes regular classroom practice of Arabic through drills, text, audio and video recordings, and other supplementary material and activities. Also presents topics on Arab culture.

ARA 132 Elementary Modern Standard Arabic II 4 Credit Hours

Develops skills of reading, writing, listening, and speaking of modern literary Arabic at the elementary level, as well as fundamental vocabulary and grammatical structures necessary for reading and listening comprehension. Includes regular classroom practice of

Arabic through drills, texts, and audio and video recordings, and other supplementary materials and activities. Presents topics on Arab culture.

Prerequisite: ARA 131

ARA 231 Second Year Arabic 4 Credit Hours

ARA 231 is the first of two intermediate-level courses in Modern Standard Arabic focusing on communication skills in a cultural context. The course develops both oral and written skills, but special emphasis is given to speaking and discussion. Grammar is presented in context. Written texts are complemented with audio and video components. Although the course emphasizes effective communication in the Arabic language (including Colloquial Egyptian Arabic), students are also exposed to many aspects of Arabic culture through authentic materials.

Prerequisites: ARA 132 or permission of the program director

ART 101 Two-Dimensional Design 3 Credit Hours

A studio course that explores the fundamentals of design and the principles of composition utilizing a variety of media and applications. Computers may be utilized in designated sections that are listed in the class schedule.

ART 102 Drawing 1 3 Credit Hours

This is an introductory course in drawing. The focus is on the fundamental concepts and skills involved in drawing a range of subject matter from direct observation. Line, value, and linear perspective studies in a variety of drawing media are explored. This is a foundation course which is a prerequisite for other art courses.

ART 105 Three-Dimensional Design 3 Credit Hours

This class explores design fundamentals and the principles of organization as they apply to three-dimensional forms. Assigned projects introduce the student to materials and techniques used in three-dimensional art.

ART 107 Photoshop 3 Credit Hours

An in-depth study of digital imaging and preparing web graphics with Photoshop.

ART 108 Flash 3 Credit Hours

Students learn how to setup the timeline and layers for animation and interactive sites; how to work with the drawing tools, symbols, sounds, library and actions. In addition, students learn how to save and use flash projects for the web.

Suggested Prerequisite: ART 107

ART 109 QuarkXpress 3 Credit Hours

Students learn to create print documents using QuarkXpress. Tools, typesetting features, Master Pages and Style sheets are covered. Design considerations specific to print are covered.

Suggested Prerequisites: ART 101 and ART 107

ART 110 InDesign 3 Credit Hours

Students learn to create print documents using *InDesign*. Tools, typesetting features, Master Pages and Style Sheets are covered.

Design considerations specific to print are covered.

Suggested Prerequisites: ART 101 and ART 107

ART 112 Drawing II 3 Credit Hours

A continuation of ART 102 (Drawing I). Drawing fundamentals are stressed through working with a variety of subject matter observed first hand. A variety of drawing media are covered.

Suggested Prerequisite: ART 102 with a C grade or better

ART 113 Life Drawing I 3 Credit Hours

An introductory course in drawing the human figure. Studies develop a basic understanding of proportion and anatomy through direct observation. A variety of media is explored.

Suggested Prerequisite: ART 102 with a C grade or better or permission of the instructor

ART 115 Intermediate Perspective 3 Credit Hours

Emphasizes the application of the theories of linear perspective touched upon in the prerequisite course, Drawing I. Expands the student's understanding of the theories used to create three dimensional illusion through the use of the system of linear perspective.

Prerequisite: ART 102 with a C grade or better

ART 116 Painting I 3 Credit Hours

An introduction to painting. A broad range of traditional and contemporary approaches to painting are explored.

Prerequisites: ART 101 and ART 102 with a C grade or better or permission of the instructor

ART 119 Art Education for the Elementary Teacher 3 Credit Hours

A course for classroom teachers. Emphasis is placed on the integration of art into the general classroom procedures to enhance learning. This course develops understanding of the child's mental and creative growth through art and an awareness of art in its various contemporary and cultural contexts.

ART 121 Art History Survey I 3 Credit Hours

A survey of the development of the visual arts from prehistoric to the medieval period.

ART 122 Art History Survey II 3 Credit Hours

A continuation of Art 121—Art History Survey from the Renaissance through modern times.

ART 123 History of Modern Art 3 Credit Hours

A survey of the major movements and personalities of nineteenth, twentieth and twenty-first century sculpture, painting and architecture.

ART 130 History of Graphic Design 3 Credit Hours

A study of history and evolution of letterforms, type, illustration and graphic design to the present. Students learn about important type designers, illustrators and graphic designers, as well as about relationships between the graphic arts and fine arts through history.

Suggested Prerequisite: ENG 131

ART 135 Art Appreciation 3 Credit Hours
 A lecture course open to all students interested in developing a broader understanding of the visual arts. One field trip may be required.

ART 138 Jewelry I 3 Credit Hours
 An introduction to all aspects of the metalsmithing process in nonferrous materials. The student will be required to deal with contemporary design concepts and production methods will be provided.

ART 141 Ceramics I 3 Credit Hours
 A beginning course in understanding ceramic materials and form. Various hand-building techniques are explored, and wheel throwing is introduced. Basic glazing and kiln firing are covered.

ART 142 Ceramics II 3 Credit Hours
 This course emphasizes functional pots and the wheel as the primary technique of construction. The student is given an introduction to the history of functional ceramics as an idea source for his or her functional designs. Instruction in kiln stacking and firing is included.
Prerequisite: ART 141 or permission of the instructor

ART 151 Introduction to Printmaking 3 Credit Hours
 A course designed to give technical and procedural understanding necessary to accomplish some of the basic printmaking processes.
Prerequisites: ART 101 and ART 102

ART 161 Photography 3 Credit Hours
 Designed to teach the use of an adjustable 35 mm camera, development of black & white negatives and the making of black and white prints in the darkroom for the beginning student. If the student has not purchased a camera prior to taking this class, he/she may wait until the first class meeting to do so. Creativity is emphasized. Weekly lectures and lab time are included.

ART 163 Color Photography 3 Credit Hours
 This course is intended to introduce students to basic concerns related to using still photographic images, both digital and film based, with current electronic imaging processes. Students explore the potentials of computers and software in developing their imagery and ideas. Areas of concern include: stop action, depth of field, color, collage, image manipulation, and drawing, as well as the technical skills necessary for using the computers and software. Weekly lectures and lab times are included.

ART 165 Typography 3 Credit Hours
 An introduction to typography, typesetting, and layout design. Students learn about type: its history, anatomy, typesetting, and use in design. Adobe Illustrator is taught and used in this class.
Prerequisite: ART 101 and ART 102

ART 166 Desktop Publishing 1 3 Credit Hours
 A continuation of ART 165-Graphic Design I. This class continues the study of type and layout design as students learn to design for print using QuarkXPress.
Prerequisite: ART 165

For course availability, refer to Schedule of Classes or www.hfcc.edu/courses

ART 172 Color Theory 3 Credit Hours
 Students learn how to work with color in both paint and digital media. Various models for representing color are covered as well as design considerations for working with color. Subtractive and primary color systems are covered.
Suggested Prerequisites: ART 101 and ART 107

ART 180 Design and User Needs 3 Credit Hours
 Introduction to human factors as they affect the design of interior environment to include the physiological, sociological, and psychological needs of users. Emphasis on the human factors of ergonomics, anthropometric, and special populations related to design standards, functionality, and accessible design. An overview of social-psychological factors also included.

ART 181 Interior Design - Studio 3 Credit Hours
 Introduction to the basic concepts of interior design and the development of the fundamental components needed in the practice of interior design. Emphasis is on functional space planning as it relates to human factors in residential settings, analysis of user needs, and interior standards and codes. Basic two and three-dimensional graphic communication and presentation skills for interior design will be introduced and developed.
Prerequisite: Completion of or concurrent enrollment in ART 180 or permission of the program director

ART 182 Interior Design Materials and Construction Components 3 Credit Hours
 An investigation of traditional and contemporary materials, components, and construction methods as specified by the interior designer. Emphasis is on performance and uses of materials and finishes, workroom practices, and source resource development.
Prerequisite: ART 181 or permission of the program director

ART 183 Interior Design Studio II 3 Credit Hours
 Introduction to interior design process, design philosophy, and exploration of design problem solving. Expansion of graphic communication skills, rendering, and presentation skills. Emphasis on programming, design concept, analysis and development creativity, space planning, and communication skills for residential and non-residential projects.
Prerequisites: ART 181 and completion of or concurrent enrollment of ART 182, or permission of the program director

ART 184 Textiles for Interiors 3 Credit Hours
 A study of the properties of fibers and their fabrications with an emphasis on textile performance and applications for interior environments. An overview of the history of textiles, study of aesthetic qualities of textiles, and hands-on design exploration will also be included. Field trips included.
Prerequisite: ART 183 or permission of the program director

ART 208 Lightwave 3 Credit Hours
 Students learn the basics of 3D modeling and animation with Lightwave. Modeling, surfacing and animation are covered. Lightwave and Maya will be offered in alternate semesters.
Suggested Prerequisite: ART 102 and ART 107

ART 209 Maya 3 Credit Hours

An in-depth study of 3D graphics using Maya. Modeling, surfacing, dynamics, animation and rendering will be covered.

Prerequisites: ART 106 or ART 107

ART 211 Director 3 Credit Hours

Students learn to work with drawing tools, timeline and layers. Students also learn how to work with sound, video clips and animation. Scripting with Lingo is covered.

Prerequisites: ART 107 and TCM 151

ART 213 Life Drawing II 3 Credit Hours

A continuation of ART 113 Life Drawing 1 in drawing the human figure. Studies develop a basic understanding of proportion and anatomy through direct observation. A variety of media is explored.

Prerequisites: ART 102 and ART 113

ART 216 Painting 2 3 Credit Hours

A continuation of Art 116 Painting 1 in painting. A broad range of traditional and contemporary approaches to painting is explored.

Prerequisite: ART 116

ART 224 Art of Islam 3 Credit Hours

A comprehensive study of the history and development of Islamic Art from its birth in the seventh century to the present time. The course is designed to explain basic characteristics of Islamic Art through major architectural monuments, painting, calligraphy and other forms of art. Emphasis will be placed on the relationship between the theology of Islam as a faith and its arts.

ART 234 Topics in Art 3 Credit Hours

This course provides special study in the area of art, organized by discipline or other criteria. The course may be taken twice for credit, six hours maximum. Specific topics and any Prerequisites are listed in the current semester's class schedule or may be obtained through the departmental office.

Prerequisite: Permission of instructor

ART 238 Jewelry 2 3 Credit Hours

Designed to allow the student to become more deeply involved in refinement of basic skills, and development of the final finished product. Most studio tools and some materials will be provided.

Prerequisite: ART 138

ART 242 Ceramics III 3 Credit Hours

This course is an advanced-level course stressing refinement of ceramic construction techniques and design. Individual projects in the study of ceramic glaze and surface possibilities are explored by each student, according to their own stylistic interests. Instruction in kiln stacking and firing is continued.

Prerequisites: ART 142 or permission of the instructor

ART 245 Interactive Design 3 Credit Hours

Students learn to design and construct interactive web sites using Dreamweaver, Flash, Photoshop and ImageReady. Dreamweaver

is taught in this class. Students are expected to know the other programs before enrolling in this class. Design considerations important to interactive design are covered.

Prerequisites: ART 107, ART 108 and ART 165

ART 255 Animation Basics 3 Credit Hours

Students learn drawing techniques for 2D animation. Students learn to plan animations by drawing storyboards. Students work with After Affects or Final Cut Pro or Flash to compile animations.

Prerequisites: ART 102, ART 107 and ART 108

ART 261 Black and White Photography 2 3 Credit Hours

Designed as an extension of the student's basic foundation from ART 161. Emphasis is placed on refining darkroom technique and expanding the student's knowledge of aesthetics of the creative photographic experience.

Prerequisite: ART 161

ART 265 Illustration 3 Credit Hours

Students learn to create illustrations for photographic references and from imagination using traditional and digital media. Adobe Illustrator is covered in this class.

Suggested Prerequisites: ART 107 and ART 112

ART 275 Advanced Projects 3 Credit Hours

Students are assigned advanced projects related to their concentration. Emphasis is placed on developing projects for the student's portfolio.

Prerequisite: Permission from the instructor. Students must complete specific courses and a minimum of 27 credit hours of core courses.

Note: Request permission by sending an email to graphicdesign@hfcc.edu and provide your student ID number.

This course meets the graduation requirement for General Education Outcome 2: Computer Literacy.

ART 280 History of Styles: Architecture, Interiors, and Furnishings 3 Credit Hours

Surveys the history of architecture, furniture, and interiors from the Egyptian period to the present. Emphasis is on styles and trends in the North America as they are related to past and present cultures and societies. The course presents and overview of styles with an interior design perspective.

Prerequisite: ART 183 or permission of the program director

ART 281 Interior Design Studio III 3 Credit Hours

Explores how interior design theories affect design planning and problem solving. This course continues the development of design problem solving, space planning, conceptual skills, and graphic communication and rendering skills. Emphasis is on ADA, behavioral design theory, and integrating functionality and creativity into design solutions for multiple use and special population environments.

Prerequisites: ART 183, permission of the program director

Suggested Prerequisite: ART 280

ART 282 Interior Design Environmental Systems 3 Credit Hours

Exploration of building codes and support systems as they affect the practice of interior design and the design problem solving process. Emphasis is on developing basic understanding of the principles of these systems, to include acoustics and noise control, understanding the environmental impact of these systems, and exploring current and future alternatives to traditional systems particularly as they affect environmental and economic issues.

Prerequisite: ART 281 or permission of the program director

ART 283 Lighting for Interior Design – Studio IV 3 Credit Hours

Introduction to lighting fundamentals and lighting design for interior environments. Emphasis is on the various means and types of lighting, application and integration of lighting knowledge into design projects and the design process, and the physiological and psychological effects on human perception of task and space. Field trips required.

Prerequisite: ART 281 or permission of the program director

ART 285 Professional Practice for Interior Design - Studio V 3 Credit Hours

Introduction to the professional issues related to the practice of interior design in contemporary times. Course will focus on the business, workroom, and legal concerns of the practice. Emphasis is on developing skills and knowledge which designers need in order to offer design services, operate design studios, and/or provide design related activities.

Prerequisite: ART 283 or permission of the program director

ART 287 Interior Design Synthesis – Studio VI 3 Credit Hours

A synthesis studio course with a focus on the use of the design process to solve design problems in residential and non-residential settings. Solutions that are both creative and functional and meet the physical, social, and psychological interior environmental needs of user will be explored. Emphasis is on design problem solving, synthesis, design development, creativity, and presentation. Field trips, portfolio review, student show participation, and comprehensive program exam required.

Prerequisite: ART 283 or permission of the program director

Suggested Prerequisite: ART 285

ART 291 Graphic Design Internship 3 Credit Hours

Work Experience in the field of Graphic Design.

Prerequisites: ART 267, completion of 27 credit hours within one of the five areas of concentration AND permission of the instructor.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs. Call the Co-op Office at 313-845-6359.

ART 2901 Directed Study – Art History 1 Credit Hour

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional

directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2902 Directed Study – Art History 2 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2903 Directed Study – Art History 3 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2931 Directed Study – Drawing 1 Credit Hour

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2932 Directed Study – Drawing 2 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2933 Directed Study – Drawing 3 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2951 Directed Study – Ceramics 1 Credit Hour

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2952 Directed Study - Ceramics 2 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2953 Directed Study – Ceramics 3 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2971 Directed Study – B & W Photography 1 Credit Hour

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2972 Directed Study – B & W Photography 2 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2973 Directed Study – B & W Photograph 3 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2991 Directed Study - Interior Design Special Projects 3 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ART 2993 Directed Study - Interior Design Special Projects 3 Credit Hours

A course allowing additional advanced study under direction in any of the media offered by the department. It is assumed that the student requesting directed study will have completed the sequence of courses offered in a given medium before requesting additional directed study in that medium.

Prerequisites: All courses in the required sequence for the area chosen, and permission of the instructor.

ASTR 131 Descriptive Astronomy 3 Credit Hours

Designed for general education students, this course consists of a non-mathematical introduction to elements of the astronomical universe by means of lectures and planetarium demonstrations. Organized to interest the individual who is without scientific background but who desires to understand the major units of the universe and their interrelation. Three hours of lecture per week.

ASTR 133 Introductory Astronomy Laboratory 1 Credit Hour

Emphasizes experimental work with the scientific concepts important in astronomy, including planetarium observation and computer simulations of astronomical events. This course combined with ASTR 131 provides the student with a four-hour laboratory science credit. Two hours of laboratory per week.

Co-requisite: ASTR 131

ASTR 231 General Astronomy 3 Credit Hours

Offered as an alternative to and not a continuation of ASTR 131, this course is for students who would like a more in-depth look at astronomical concepts. Light, motions in the sky, gravity, the solar system, stars, galaxies and cosmology will all be covered.

Suggested Prerequisite: 1 year high school algebra

ATMS 131 Weather and Climate 3 Credit Hours

A non-mathematical introduction to the behavior of the atmosphere and its causes. Topics include atmospheric structure, earth-sun relationships, heat, humidity, clouds, wind, storms, forecasting, pollution, and climate. This course is organized to interest students without scientific background who wish to understand the atmosphere and weather that surround them. Three hours of lecture per week.

Note: Offered approximately once every two years.

AUSV 135 Shop Mathematics 2 Credit Hours

Review of basic arithmetic including fractions, decimals, percentages, ratio, and proportions as applied to vehicle repair in the automotive service field.

Note: AUSV 135 will only be offered Fall 2008.

AUT 130 Automotive Ignition Systems 2 Credit Hours

A basic course in which the student studies the operating principles, construction, troubleshooting and maintenance of units of the automotive ignition system, including: distributors, coils, electronic controls, and advance mechanisms. Ignition timing, wiring and ignition malfunctions are studied. Electronic ignition systems are included and ignition-related emission controls are presented.

Note: Department recommends that student take AUTO 110 as soon as possible after completing this course.

AUT 170 Related Technical Automotive 4 Credit Hours

A survey course for all students designed to provide basic knowledge of the major automotive systems that are covered in detail in the automotive technology classes. Course provides degree credit and is the ONLY course allowed for TECH PREP transfer credit (4 hours) from approved high school programs.

AUT 180 Technical Automotive Welding 4 Credit Hours

A basic welding course that provides instruction and practice with gas and electric welding processes. Gas cutting, MIG welding, TIG welding techniques are taught with required welding projects that are tested and graded.

AUTO 100 Internal Combustion Engines 3 Credit Hours

A beginning automotive course designed to acquaint the student with four-stroke engines. Principles of operation, compression ratio, piston displacement, operating tolerances, valve timing, horsepower and torque development along with adjustments, inspection, and trouble shooting procedures will be studied. A substantial portion of the class is devoted to laboratory exercises on laboratory engines.

AUTO 108 Basic Automotive Electricity 3 Credit Hours

A study of basic automotive electricity theory and principles. Voltage, amperage and Ohm's law will be covered as well as series and parallel circuits. An introduction to the various meters that are used in the service of automobiles will also be discussed. Circuit diagnosis and troubleshooting will be an integral part of this course. Accessories and lighting will also be covered.

Note: AUTO 108 will only be offered in the Winter semester in even numbered years.

AUTO 110 Automotive Electrical Systems 3 Credit Hours

A basic automotive electricity and electronics course, including the study of the fundamentals of and operation and service required for batteries, cranking motors, alternators, regulators, and certain accessories used on current-production automobiles. A combination of classroom and laboratory experiences provides the student with competence leading to A.S.E. certification as well as a State of Michigan license in automotive electrical systems.

AUTO 120 Automotive Fuel Management Systems 2 Credit Hours

A course designed to acquaint the student with the types of fuels and air/fuel ratio requirements of the various fuels used in current automotive engines, along with the construction and operation of fuel delivery systems. This course will include instruction on fuel pumps, fuel lines, fuel filters and storage tanks. Fuel system types will include returnable electronic fuel injection, returnless electronic fuel injection and gasoline direct fuel injection. Elements of automotive emissions and their control will also be discussed. Use of scan tools, PVT, 5-gas analyzer, DSO and ASE performance tests are utilized to enhance the understanding of on board diagnostics.

Prerequisites: AUTO 100 and AUTO 110 or permission of the instructor

AUTO 131 Automotive Ignition Systems 2 Credit Hours

An intermediate-level course covering the operating principles, construction, trouble shooting, and maintenance of units of the automotive ignition system, including distributors, coils, electronic controls, and advance mechanisms. Ignition timing, wiring, and ignition malfunctions are studied, as well as electronic ignition systems and ignition-related emission controls.

Note: AUTO 131 will only be offered Winter 2009.

AUTO 132 Computer Ignition Systems 2 Credit Hours

An intermediate-level course for the automotive student designed to provide information and laboratory experiences on computer-controlled ignition systems. Systems in use as well as newer systems becoming available are studied.

Prerequisites: AUTO 131

Note: AUTO 132 will only be offered Summer 2009.

AUTO 140 Automotive Transmissions Systems 3 Credit Hours

Designed to acquaint the student with both automatic and manually shifted transmissions and transaxles. Emphasis is on the operating principles, construction, adjustments, trouble shooting, and maintenance of both types of transmissions. A study of clutches, drive lines, rear axles, and differential units is also included.

AUTO 142 Electronically Controlled – Transmissions/Transaxles 2 Credit Hours

This course is designed to expand on the skills developed by the student in AUTO 140-Automotive Transmissions with additional experiences in the service and repair operations related to the current electronically controlled transaxle units. The emphasis of this course will be on the electronic control systems.

Prerequisite: AUTO 140

AUTO 145 Manual Transmissions and Transaxles 4 Credit Hours

This course includes the theory of operation, construction, diagnosis, maintenance and service of automobile manual transmissions, transaxles, and clutches. Various transmissions will be disassembled, inspected, and measured. Knowledge gained from this experience will help the technician become familiar with operation, construction, diagnosis and service of auto manual transmissions and transaxles.

Note: AUTO 145 will only be offered in the Winter semester in even numbered years.

AUTO 150 Automotive Diagnosis and Engine Evaluation 2 Credit Hours

An advanced course in which the student studies the application of the principles of diagnosing, locating, and correcting trouble encountered in automotive service, using various types of testing equipment. Engine diagnosis will include variable cam timing and variable displacement engine systems. Electrical diagnosis will include computer-controlled charging systems, battery and starting systems, including one-touch and remote-start systems. Fuel system diagnosis will include pressure and injector tests using active

commands and relative flow analysis. Problems that occur in the servicing of the modern automobile are presented throughout this course.

Prerequisites: AUTO 100, AUTO 110, AUTO 120 or permission of the instructor

AUTO 160 Automotive Chassis Units 2 Credit Hours

A study of the construction, operation, and maintenance of the various chassis units. Steering, suspension systems, and alignment are included as well as disc and drum braking systems.

AUTO 162 ABS Brakes 3 Credit Hours

Covers the theory and operation of ABS brake and traction control systems. The design construction and types of ABS braking systems will be included. Diagnostic Techniques, troubleshooting, and repair of ABS systems, along with service techniques and hands-on experiences will be an integral component of this class.

Note: AUTO 162 will only be offered Winter 2009.

AUTO 165 Electronic Steering and Suspension 4 Credit Hours

This course covers the theory and operation of electronic steering and electronic or active suspension systems. Theory and operation of steering and suspension multiplexing will also be included in this course. Diagnosis and repair procedures along with alignment concepts and hands-on experiences will be an integral component of this course.

Note: AUTO 165 will only be offered Fall semester in odd numbered years.

AUTO 167 Brake Clinic 2 Credit Hours

Provides a review of braking systems, including an introduction to anti-lock braking systems, as well as diagnosis and trouble-shooting experiences.

AUTO 187 Automotive Engine Tune-Up 2 Credit Hours

Provides instruction needed for performing engine tune-up and maintenance. Ignition system operation is explained along with an introduction to basic computer engine control. Time in the laboratory is devoted to actual on-car procedures using appropriate test equipment.

AUTO 190 Automotive Technology Co-op 1 Credit Hour

Designed to offer practical work experience within the Automotive Technology and Service field through participation in a supervised cooperative education program. This course integrates work experience with classroom and lab instruction.

Prerequisite: Requires instructor permission

AUTO 191 Automotive Service Co-op 2 Credit Hours

Designed to offer practical work experience within the Automotive Technology and Service field through participation in a supervised cooperative education program. This course integrates work experience with classroom and Lab instruction.

Prerequisite: Requires instructor permission

AUTO 192 Automotive Service Co-op 2 Credit Hours

Designed to offer practical work experience within the Automotive Technology and Service field through participation in a supervised cooperative education program. This course integrates work experience with classroom and Lab instruction.

Prerequisite: Requires instructor permission

AUTO 210 Automotive Engine Dynamometer 2 Credit Hours

An advanced course designed to acquaint the automotive student with the purpose, construction, and operation of the engine dynamometer. Tests are made in the engine dynamometer lab.

Prerequisites: AUTO 100, AUTO 120, and AUT 130

AUTO 217 Automobile Alignment Clinic 2 Credit Hours

Designed to cover the types of front and rear suspension systems used on today's vehicles. In addition, there is in-depth coverage of alignment factors. The majority of the class is devoted to inspection, repair, and alignment of a variety of suspension systems.

AUTO 220 Automotive Air Conditioning 2 Credit Hours

A beginning course covering basic refrigeration and automotive heating, ventilation, and air conditioning systems.

AUTO 224 Automotive Air Conditioning 2 Credit Hours

This course is a study of automotive air conditioning systems using a laboratory and practical presentation technique.

Note: AUTO 224 will only be offered Summer semester in the odd numbered years.

AUTO 227 Automotive Air Conditioning 2 Credit Hours

A study of automotive air conditioning systems using a laboratory and practical presentation technique. Covers more controls and AUTO TEMP than AUTO 220.

AUTO 230 Automotive Diesel Principles 2 Credit Hours

An explanation of the operating principles of the four-stroke diesel engine used in the automobile, including the construction, service, and diagnosis of various engine systems. Laboratory experiences are provided to enhance classroom activities.

Prerequisites: AUTO 100 or permission of the instructor for past experience

AUTO 231 Diesel Engine Performance and Diagnosis 4 Credit Hours

A comprehensive overview of the operating principles of the diesel engine, including the construction, service and diagnosis of the various engine systems and sub-systems. The latest technological advancements in electronic fuel delivery systems, their diagnosis and service will be covered along with the most recent advances in diesel fuel and Bio-diesel technology. Extensive laboratory experiences are provided to enhance classroom activities.

AUTO 237 Computerized Engine/Vehicle Emission Control Systems 2 Credit Hours

Explains the operating principles, diagnosis, and laboratory testing of computer controlled fuel management systems. Topics include sensor, actuator, and computer functions in maintaining catalyst

stoichiometry. Diagnosis and testing with hand-held scanners and on-board digital fault systems are emphasized. State test procedures and four-gas analysis as related to computer control are covered in the laboratory sessions.

AUTO 247 Automotive Emission Control 2 Credit Hours

Explains the operating principles, diagnosis, and laboratory testing of traditional emission control systems. Topics include positive crankcase ventilation, timing control systems, exhaust gas recirculation, air injection, and two- and three-way catalysts. Tune-up, four-gas analysis, and oscilloscope diagnosis are covered on appropriate vehicle systems.

AUTO 260 Alternative Automotive Propulsion Systems 3 Credit Hours

This course is designed to provide the student with intermediate-level instruction on alternative automotive propulsion systems that are presently being developed for the automobile transportation industry. Course content will include instruction on theory of operation and service of alternative propulsion systems, with emphasis on safety issues and concerns regarding the servicing of these systems. Topics to be covered will include Hybrid systems, (both series and parallel) plug-in Hybrids, EV-Electric Vehicles including battery types, FCV-Fuel Cell Vehicles, Hydrogen-ICE Vehicles, Alternative Fuels and Flex Fuel Vehicles and Supplemental Assist Vehicle (capacitive, hydraulic, and inertial units).

AUTO 267 Small Engines 1 Credit Hour

Provides a basic understanding of the four-stroke and two-stroke cycle engine. In addition, necessary maintenance, diagnosing, testing, and repair of a small engine's ignition, fuel, governor, and mechanical systems are covered.

Note: Only offered once every two years

AUTO 287 Advanced Automotive Tune-Up 1 Credit Hour

Covers operating principles of electronic ignition systems. Topics include high energy systems, control modules, waste spark ignition, and all related ignition components. Diagnosis and testing utilize oscilloscope patterns and hand-held scanners. Performance tuning, special problems, and low-emission tune-ups are covered in the laboratory sessions.

AUTO 290 Automotive Technology Co-op 2 Credit Hours

Designed to offer practical work experience within the Automotive Technology and Service field through participation in a supervised cooperative education program. This course integrates work experience with classroom and Lab instruction.

Prerequisite: Requires instructor permission

AUTO 291 Automotive Service Co-op 2 Credit Hours

Designed to offer practical work experience within the Automotive Technology and Service field through participation in a supervised cooperative education program. This course integrates work experience with classroom and Lab instruction.

Prerequisite: Requires instructor permission

AUTO 292 Automotive Service Co-op 2 Credit Hours

Designed to offer practical work experience within the Automotive Technology and Service field through participation in a supervised cooperative education program. This course integrates work experience with classroom and Lab instruction.

Prerequisite: Requires instructor permission

BAC 110 Practical Accounting 4 Credit Hours

This course offers practical knowledge of bookkeeping principles for students who plan to take BAC 131 or who desire to familiarize themselves with small-business accounting. Students are introduced to the accounting cycle, the specialized journals employed by a merchandising firm, and payroll accounting.

BAC 112 Bookkeeping 4 Credit Hours

This course provides training in basic accounting and financial record keeping with an emphasis on small businesses. Topics covered include adjusting entries, correcting entries, payroll, depreciation, and inventory. An emphasis of the course will be to prepare students for the Certified Bookkeeper exams offered by the American Institute of Professional Bookkeepers (AIPB). Materials developed by the AIPB will be used in the course. To receive certification from the AIPB, candidates must complete five preparatory learning modules and pass three examinations during the semester. The examinations are prepared by the AIPB and are currently administered by Prometric Test Centers.

Prerequisite: BAC 110 or BAC 131

BAC 131 Principles of Accounting 4 Credit Hours

This course introduces basic financial accounting principles, including the accounting cycle, merchandise accounting, income, and asset and liability measurement.

BAC 132 Principles of Accounting 4 Credit Hours

This course is a continuation of BAC 131 covering corporate and manufacturing accounting. This course emphasizes the liability and equity sections of corporations. The student is introduced to cash flow and financial statement analyses.

Prerequisite: BAC 131

BAC 141 Computerized Accounting - Quick Books 2 Credit Hours

This course introduces students to the QuickBooks computerized-accounting software package. Students will learn to design a company's accounting system for financial recordkeeping and to enter data for the general journal, special journals, accounts receivables, accounts payable, payroll, and inventory. Students will also prepare financial statements using QuickBooks software.

Prerequisites: BAC 110 or BAC 131

BAC 146 Computerized Accounting - Peachtree 3 Credit Hours

This course introduces students to the Peachtree computerized-accounting software package. Students will learn to design a company's accounting system for financial recordkeeping and to enter data for the general journal, special journals, accounts

receivables, accounts payable, payroll, and inventory. Students will also prepare financial statements using Peachtree software.

Prerequisites: BAC 131

BAC 231 Asset Accounting 4 Credit Hours

This course is a detailed study of specialized phases of accounting such as the treatment of cash and temporary investments, receivables, inventories, investments, plant and equipment, intangibles, deferred charges, liabilities, and financial statements. The emphasis is on theory.

Prerequisite: BAC 132

BAC 234 Equity Accounting 4 Credit Hours

Equity Accounting is the second intermediate accounting course in a two-course sequence focusing on financial accounting and reporting in accordance with generally accepted accounting principles. This course is a detailed study of specialized phases of equity accounting such as the treatment, disclosure, and analysis of debts, income-tax deferrals, treasury stock, revenues, pensions, earnings, dividends, leases, investments, and changes in financial position. Emphasis is on theory.

Prerequisite: BAC 231

BAC 235 Tax Accounting 3 Credit Hours

This course acquaints the student with the basic application and rationale of the federal income tax. This course provides training through specific problem assignments in a variety of situations.

BAC 262 Cost Accounting 3 Credit Hours

This course introduces cost accounting principles followed by manufacturing firms and the planning, decision making, and cost procedures of managerial accounting.

Prerequisite: BAC 132

BBA 110 Business Language Skills 3 Credit Hours

This course trains students in the knowledge of language arts and business grammar, proofreading and word processing skills, and the ability to make decisions and to use proper judgment in preparing documents. This course is designed to strengthen students' knowledge of communication skills, to reinforce students' proofreading skills, and to compel students to make decisions while preparing realistic business documents.

Prerequisite: Basic keyboarding skills and basic knowledge of word processing

BBA 131 Introduction to Business 4 Credit Hours

This survey course presents an overall integrated picture of American business and its operations. Included are such topics as forms of business ownership, management, internal organization, production, marketing, short-term and long-term finance, insurance, accounting principles, business law, and the relationship of government to business.

BBA 133 Business Behavior and Communication 3 Credit Hours

Introduces students to the basics of appropriate behavior and communication in a business environment. Personal, interpersonal,

and group behaviors are discussed, including etiquette, culture and gender issues, and problem solving. Interacting with superiors, peers, subordinates, and clients in person, on the phone, and in presentations is examined. Students will engage in role-playing to learn to deal with situations that can arise on the job.

BBA 153 Customer Service 3 Credit Hours

This course helps students understand the principal functions of a customer service representative, the skills needed to succeed in the workplace, and the knowledge to advance into a leadership role within the service industry. Special areas of emphasis include effective communication skills, positive attitudes, problem solving, strategies for coping with challenging and dissatisfied customers, retention of customers, methods of measuring customer satisfaction, and motivational techniques. Upon successful completion of this course, students will qualify to test for a Professional Certification in Customer Service from the National Retail Federation Foundation.

BBA 157 Call Center/Help Desk Practicum 1 Credit Hour

This course trains students to work as a Customer Service Representative (CSR) in a call center or help desk environment. Proper telephone procedures such as greeting customers, effective listening, appropriate responses to inquiries and issues, handling difficult customers, and closing calls while using a personal computer are discussed and practiced. Simulated calls will be used as a learning tool. An on-site tour of a call center will be part of the course so that students may understand the environment of the call center.

Prerequisites: BCA 101, BCA 106, and BBA 155

BBA 161 Introduction to Industrial Distribution 1 Credit Hour

A survey course introducing students to the Industrial Distribution industry. The course will explore the role of distribution as one of the functions of marketing. Topics will include the channels of distribution, supply chain management, role of wholesalers and distributors in the supply chain, logistics, inventory control and management, and the importance of proper pricing and markup. Various models of distribution will be discussed.

BBA 231 Business Office Communications 3 Credit Hours

Introduces the basic principles and practices underlying business communication. This course is designed to improve business writing skills by helping students prepare effective business documents that are clear, concise, coherent, complete, courteous, and correct. Some of the documents are created in the classroom using personal computers.

Prerequisite: BBA 110

BBA 235 Office Administration Practicum 4 Credit Hours

Designed to provide practical, hands-on study and training for the administrative business office professional. Emphasis is based on developing expertise in the responsibilities required for the management and control of information processing functions.

Prerequisites: BCA 143, BCA 145, and BCA 147

Co-requisite: BBA 231

BBA 250 International Business 3 Credit Hours

This course focuses on the dimensions of conducting business in the international arena and examines the political, economic, and legal systems of diverse countries. Trade patterns; foreign investment methods; economic growth rates; ethics; international trade theories; government intervention; exporting, importing, and countertrading; human resources management; and marketing and competition in the global marketplace are examined.

Prerequisite: BBA 131

BBA 252 Principles of Marketing 3 Credit Hours

A basic survey focusing on marketing functions and institutions, the policies of marketing agencies, and fundamental reasons for current marketing channels. This course also covers the retailing and wholesaling of consumer goods and raw materials. Attention is given to pricing policies and practices, unfair methods of competition, and recent governmental activities affecting marketing.

Prerequisite: BBA 131

BBA 254 Logistics and Supply Chain Management 3 Credit Hours

This course introduces students to supply-chain management and the impact of globalization, technological change, and demanding customers on the supply chain. Included in this course are the role of logistics, materials management, and physical distribution; alternative supply-chain management strategies; flow of information; and political and economic issues involved in the supply-chain design.

Prerequisite: BBA 131

BCA 101 Computer Keyboarding 3 Credit Hours

Designed to teach students keyboarding skills on the personal computer. Terminology, basic formatting, the alpha keyboard, symbols, and the ten-key numeric pad are introduced. As the semester progresses, accuracy and speed building are emphasized.

BCA 106 Introduction to Windows 2 Credit Hours

An eight-week course that introduces students to the Windows operating system on a personal computer. Topics include the Windows environment, file management, customizing the system, Windows accessory programs, and the sharing and exchanging of data between programs.

BCA 125 Introduction to the Internet & Web Pages 3 Credit Hours

This course introduces students to the Internet and the creation and design of web pages. A variety of browsers and search engines are utilized to find information on the World Wide Web. Popular Internet tools such as e-mail, file downloads, file compression, streaming audio and video, and image scans are utilized. Web page software is used to design and create web pages. The maintenance of web pages is examined.

BCA 140 Software Applications 3 Credit Hours

This course covers the fundamentals of computer literacy with an emphasis on software usage literacy. Hands-on training in software application programs includes word processing, spreadsheets,

and data base. Assignments include problem-solving and critical-thinking development components. A version of MS Office is used.

Prerequisite: Ability to keyboard 25 words per minute

Note: This course meets the graduation requirement for General Education HFCC Computer Literacy requirement.

BCA 143 Word Processing 3 Credit Hours

Instructs students in the use of word processing software. Students learn to input, file, format, print, retrieve, and revise documents. As the semester progresses, more advanced functions are taught including tables, columns, graphics, merging, and sorting. A version of MS Word will be utilized.

Prerequisite: BCA 140

BCA 145 Spreadsheet 3 Credit Hours

Presents both spreadsheet design concepts and hands-on experience in the use of spreadsheet software. Includes use of a worksheet with graphics and a database management program. Students are required to integrate user-interface concepts, commands, worksheet mechanics, and applications in a problem-solving environment. MS Excel will be utilized.

Prerequisite: BCA 140

BCA 147 Data Base Applications 3 Credit Hours

Explains a data base management system and data base design strategies. Students use hands-on case studies to learn data base principles and then apply those principles to create data base tables, forms, queries, and reports. Each student designs and develops a customized data base. A version of Microsoft Access will be utilized.

Prerequisite: BCA 140

BCA 152 Presentation Software 2 Credit Hours

This course introduces a presentation graphics software that enables students to create effective presentations. Students create overhead transparencies, color slide shows, and print materials. Presentations include clipart, scanned photographs, data from CD's, presentation sounds, video clips, and documents from other software applications. MS PowerPoint will be utilized.

BCA 153 Desktop Publishing 3 Credit Hours

Students will create page layouts while emphasizing publication design, the basics of type (fonts, size, style), and placement of text, photographs, clip art using scanners, CDs, and laser printers. Projects include resumes, transparencies, technical manuals, flyers, brochures, newsletters, and publications.

BCO 190 Business Cooperative Education 1 Credit Hour

Designed to provide practical, on-the-job work experience related to a particular area of business study. From one to four credit hours may be applied toward a degree program in the Division. Students interested in co-op must have the approval of the appropriate Cooperative Education Specialist prior to registration.

Prerequisites: Permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

BCO 191 Business Cooperative Education 1 Credit Hour

Designed to provide practical, on-the-job work experience related to a particular area of business study. From one to four credit hours may be applied toward a degree program in the Division. Students interested in co-op must have the approval of the appropriate Cooperative Education Specialist prior to registration.

Prerequisites: Permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters. (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

BCO 192 Business Cooperative Education 1 Credit Hour

Designed to provide practical, on-the-job work experience related to a particular area of business study. From one to four credit hours may be applied toward a degree program in the Division. Students interested in co-op must have the approval of the appropriate Cooperative Education Specialist prior to registration.

Prerequisites: Permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings or weekends depending on employer needs.

BCO 193 Business Cooperative Education 1 Credit Hour

Designed to provide practical, on-the-job work experience related to a particular area of business study. From one to four credit hours may be applied toward a degree program in the Division. Students interested in co-op must have the approval of the appropriate Cooperative Education Specialist prior to registration.

Prerequisite: Permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

BCO 194 Business Cooperative Education 1 Credit Hour

Designed to provide practical, on-the-job work experience related to a particular area of business study. From one to four credit hours may be applied toward a degree program in the Division. Students interested in co-op must have the approval of the appropriate Cooperative Education Specialist prior to registration.

Prerequisite: Permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

BCO 290 Business Cooperative Education 2 Credit Hours

Designed to provide practical, on-the-job work experience related to a particular area of business study. From one to four credit hours may be applied toward a degree program in the Division. Students interested in co-op must have the approval of the appropriate Cooperative Education Specialist prior to registration.

Prerequisite: Permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

BCO 292 Business Cooperative Education 2 Credit Hours

Designed to provide practical, on-the-job work experience related to a particular area of business study. From one to four credit hours may be applied toward a degree program in the Division. Students interested in co-op must have the approval of the appropriate Cooperative Education Specialist prior to registration.

Prerequisites: Permission of the Cooperative Education Specialist.

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

BEC 133 Basic Economics 3 Credit Hours

This course provides an overview of the topics covered in BEC-151 Macro Economics and BEC-152 Micro Economics, including the influence on total output, particularly monetary and fiscal policy; detailed analysis of firm decision-making in both product and resource markets; and the principles of international trade. This course serves those students needing only one economics course or those students who want to learn more about the free enterprise system.

BEC 151 Principles of Macro Economics 3 Credit Hours

This course examines the theoretical foundations of aggregate economic policies. Areas of study include the elements of a free market system, the measurement of macroeconomic performance, the creation and control of money, alternative models of government intervention to impact business cycles and economic growth, and international trade and the balance-of-payments accounts.

BEC 152 Principles of Micro Economics 3 Credit Hours

This course examines the foundation of price theory. Areas of study include elements of a free market system, utility theory, cost-and-production theory, market structure, resource allocation, market imperfections, government intervention, and international economics.

BFN 130 Beginning Investment 3 Credit Hours

Designed to appeal to all students regardless of program major. Introduces students to basic investing principles by examining the security selection process. A careful examination of risk-free, debt, equity, and real estate asset classes leads to students selecting securities and mutual funds to build an investment portfolio. The mechanics of setting up accounts, the buying and selling of securities, and the tax aspects of various accounts are also discussed.

BFN 141 Personal Finance 3 Credit Hours

This course is designed to appeal to all students regardless of program major. Everyday financial concerns are examined including obtaining and managing credit, buying insurance, and financing the purchase of a car or home. Longer-term goals such as saving for college tuition and retirement are also explored. The use of stocks, bonds, and mutual funds to reach these objectives is also examined. The tax implications of financial decisions are also examined.

BFN 253 Principles of Finance 3 Credit Hours

This course introduces students to the financing of the modern business enterprise. Topics include financial statement analysis,

working capital management, capital accumulation and budgeting, the valuation of securities, and global financial principles.

Prerequisites: BAC 131 and BBA 131

BIO 130 Evolution and Behavior 4 Credit Hours

Introduces principles of evolution and animal behavior (including human). Considers genetic, physiological, and evolutionary explanations of behaviors. Topics include evolution and natural selection, genetic inheritance, DNA structure and function, basic cell structure and function, innate behaviors, learning, motivation, communication, aggression, sexual behavior, territoriality, play, vestigial behaviors, selfishness, and altruism. This course is for students in all fields of study who wish to learn about the revolutionary contributions of behavioral and evolutionary biology. Four hours of lecture per week; no laboratory.

BIO 131 Introductory Biology 4 Credit Hours

A study of living organisms including: cell biology, genetics, plant structure and function (emphasizing flowering plants), ecology, and animal structure and function (emphasizing human digestion, respiration, circulation, excretion, and reproduction). Lectures and laboratory work are coordinated. Three hours of lecture and three hours of lab per week.

Suggested Prerequisite: A score of 43 or above on ASSET Reading Test or 84 or above on COMPASS Test or satisfactory completion of ENG 081.

BIO 134 Essentials of Anatomy and Physiology 5 Credit Hours

BIO 134 is a comprehensive study of all body systems in the time-frame of a one-semester course. Emphasis is on how chemistry, cell biology, and specific anatomy permit the specific functioning of organs and systems. While this course is designed to meet the requirements of several Allied Health curricula, it does not substitute for the BIO 233/234 required by the Nursing, Respiratory Therapist, Surgical Technologist, Radiographer and Physical Therapist programs at HFCC. Four hours of lecture and two hours of lab per week.

BIO 135 Microbiology for Allied Health Sciences 4 Credit Hours

A general microbiology course specifically designed to meet the needs of health service personnel who don't need the extensive laboratory experience involved in BIO 251 (including Surgical Technology and Nursing students). Emphasis is on the biology of microbes, epidemiology and disease transmission, sterile techniques, basics of immunity, the microbiology of wounds, and current regulations regarding blood-borne pathogens and biohazardous wastes. Three hours of lecture and two hours of lab per week.

Prerequisite: Admission to the Surgical Technologist Program, or a B in high school biology, or permission of the instructor.

BIO 138 Environmental Science 3 Credit Hours

Environmental Science is an interdisciplinary study, combining ideas and information from the natural sciences (such as biology, chemistry, and geology) and the social sciences (such as economics, politics, and ethics) to present a general idea of how nature works and how everything in nature is interconnected. Current environmental

concerns are discussed. Human modification of natural systems and strategies for promoting environmental health are emphasized. Three hours of lecture per week.

BIO 139 Environmental Science Laboratory 2 Credit Hours

Current environmental concerns are investigated. Included are field trips to local sites during the lab period. Particular focus will be given to the Rouge River watershed. This course meets for three hours of lab work per week.

Suggested Co-requisite: BIO 138

BIO 141 Botany 4 Credit Hours

Introduces all fields of plant biology and the diversity of plant life inhabiting the biosphere. Included are field trips to local natural areas to study plant ecology and laboratory experiments in plant genetics and plant physiology. Topics of current environmental concern relating to botany are covered. Three hours of lecture and four hours of lab per week.

Prerequisite: BIO 131 or BIO 150 or BIO 152 or equivalent (with a grade of C or better)

Note: Offered occasionally depending on student demand.

BIO 143 Zoology 4 Credit Hours

Examines the structure and function of various animals. Emphasis is on the taxonomic relationships, evolution, embryology, and natural history of the major animal groups, from the single-cell protozoa to the higher animals. Lecture and laboratory work are coordinated. Three hours of lecture and four hours of lab per week.

Prerequisite: BIO 131 or BIO 150 or BIO 152 or equivalent (with a grade of C or better)

Note: Offered occasionally depending on student demand.

BIO 150 Biology: Organisms, Genes, and Ecology 4 Credit Hours

An introductory biology course designed to meet the needs of students interested in transferring to a four-year institution with a major in biological science and for other students with a background and an interest in biology including pre-pharmacy, pre-medical, and pre-dental programs. Lectures focus on diversity and unity of patterns found in living organisms from the perspectives of physiology, inheritance, ecology, and evolution. Laboratory experiments and investigations enhance student learning of cognitive and laboratory skills. Three hours of lecture and three hours of lab per week.

Prerequisite: College preparatory-level high school biology with a B or better or BIO 131 or BIO 152 with a C or better or permission of instructor.

BIO 152 Biology: Cells and Molecular Biology 4 Credit Hours

One semester of a two-semester sequence in introductory biology, designed to meet the needs of students interested in transferring to a four-year institution with a major or minor in biology, including pre-pharmacy, pre-medical, and pre-dental programs. Lectures focus on the diversity and unity of patterns of living organisms from the perspectives of molecular and cell biology. Laboratory experiments and investigations enhance student learning of cognitive and laboratory skills. Three hours of lecture and three hours of lab per week.

Prerequisite: College preparatory biology with a grade of B or better, or BIO 131 or BIO 150 with a C or better, or permission of the instructor.

Suggested Prerequisites: Completion of or concurrent enrollment in CHEM 131 (CHEM 141 recommended for biology majors)

BIO 233 Anatomy and Physiology I 4 Credit Hours

Lectures cover the principles and underlying concepts of chemistry, cell biology, histology, articulations, bones, muscles, and the nervous system. Labs reinforce these lecture units. BIO 233 and BIO 234 are a two-semester sequence designed for the student who plans to pursue a career in a health field. Three hours of lecture and two hours of lab per week.

Prerequisite: BIO 131 or BIO 150 or BIO 152 or the equivalent (with a C grade or better)

BIO 234 Anatomy and Physiology II 4 Credit Hours

Covers special senses, endocrine, circulatory, lymphatic, immunity, respiratory, digestive, urinary and reproductive systems. Labs are sequenced with and reinforce lecture content. Three hours of lecture and two hours of lab per week.

Prerequisite: BIO 233 at HFCC with a grade of C or better, or permission of the instructor

BIO 251 Microbiology 5 Credit Hours

Introduction to microbes and their activities. Covers a wide range of material in lecture and laboratory exercises, including structure and function of diverse microbes, nutrition, growth, metabolism, microbial genetics, and the role of microbes in disease, immunity, and other selected applied areas. Emphasis is on studying the biology of microbes and their interaction with humans and the environment, and in learning the techniques used to safely work with bacteria, viruses, and fungi. Recommended for students anticipating further study in biological or biomedical sciences. Three hours of lecture and five hours of lab per week.

Prerequisite: BIO 131, or BIO 150 and 152, or the equivalent with a grade of C or better; CHEM 131 (CHEM 141 is recommended).

BLW 253 Business Law and the Legal Environment 4 Credit Hours

This course introduces the business student to common law and statutory and agency processes. This course surveys the following business law topics: contracts, product liability, corporations, partnerships, agency and federal regulation of consumer product safety, securities, unfair trade practices, and legal research.

Co-requisite: ENG 131

BMA 110 Business Mathematics 3 Credit Hours

This course presents basic math problems from a business person's point of view. Included is a short review of addition, subtraction, multiplication, and division. Decimals, percentages, and fractions and the relationships among them are also discussed. Emphasis is on story problems. Other topics that may be included are payroll, interest, bank notes, insurance, annuities, weights, measures, commissions, inventory, and taxes.

Prerequisite: A grade of C or better in MATH 074 or a satisfactory grade on the math placement test

CHD 201 Child Development: Introduction to Creative Child Care 3 Credit Hours

This course is the first in a 2-course sequence designed to help candidates acquire skills and knowledge for the Child Development Associate (CDA) credential. The CDA is a national performance-based credential awarded to caregivers that work with children from birth to age five. Topics include children's developmental stages, planning developmentally appropriate activities for young children, developing curriculum for young children, behavior management, and introduction to CDA credentialing process.

Prerequisites: PSY 131 and PSY 152

CHD 202 Child Development: CDA Portfolio/ Assessment Preparation 3 Credit Hours

This course is the second in a 2-course sequence designed to help candidates acquire skills, knowledge and documentation for the Child Development Associate (CDA) credential. The CDA is a national performance-based credential awarded to caregivers that work with children from birth to age five. Topics include the CDA credentialing process, knowledge and skills in working with parents, families, and communities, knowledge of the 6 Competency Goals of the 13 functional areas of the CDA process, and preparation of necessary material for the CDA credential.

Prerequisites: CHD 201

CHD 205 Infant/Toddler Care and Development 3 Credit Hours

This course explores the physical, social, cognitive and emotional environments necessary for quality care of infants and toddlers. CDA functional areas taught in this course are as follows: Safe, Healthy, Learning Environment, Infant Development, and Observing children's behavior as they pertain to infants and toddlers. This course addresses the intellectual development of children when their basic needs are met and when they are educated and cared for in settings that support their emotional well-being.

CHD 221 Child Development: School-Age Competencies 3 Credit Hours

This course is the first course in a series of three preparatory courses to enable the candidate to acquire the skills, knowledge, and documentation needed to be ready for the assessment process for the Michigan School-Age Credential.

CHD 222 Child Development: School-Age Portfolio Preparation 3 Credit Hours

This course is the second course in a series of three preparatory courses to enable the candidate to acquire the skills, knowledge, and documentation needed to be ready for the assessment process for the Michigan School-Age Credential.

Prerequisite: CHD 221

CHD 241 Developmentally-Appropriate Practices in Child Care Center Administration 3 Credit Hours

This course examines the role of the child care administrator in directing successful early childhood centers, following

developmentally-appropriate practices. Topics will include: policy development, accreditation standards, personnel management, ethical decision-making, safety, childcare licensing regulations, communications skills, professionalism, health, safety, and appropriate business practices. CDA functional areas taught in this course are as follows: Safe, Healthy, Learning Environment, Professionalism, and Program Management.

CHEM 091 Preparatory Chemistry **2 Credit Hours**

A basic introduction to chemistry that includes the study of chemical terminology, the periodic table, chemical nomenclature, equation writing, the pH scale, and chemical problem solving. This course is designed for students with no high school chemistry, satisfies the high school chemistry admission requirement for some Nursing and Health Career programs.

Prerequisite: MATH 070 or the equivalent

CHEM 095 Chemical Skills **3 Credit Hours**

Includes the study of atomic structure; stoichiometry; molarity, enthalpy, chemical periodicity; bonding and structure; reactions and equations; and properties of gases. This course is for students majoring in science, engineering, mathematics, pharmacy, or other pre-professional programs. Three hours of lecture demonstration per week.

Prerequisite: 1 year of high school algebra or the college equivalent

CHEM 131 Principles of Chemistry **4 Credit Hours**

An introduction to general inorganic chemistry. Major topics include measurements, atomic structure, bonding, chemical periodicity, stoichiometry, gas laws, solution chemistry, oxidation/reduction, acid/base chemistry and equilibrium. The course is designed to meet requirements in Nursing and Health Careers Programs and is a prerequisite for admission to the HFCC Nursing Program. The class is also popular among the Liberal Arts students who wish to take a science laboratory class. Three hours of lecture and two hours of laboratory per week.

Prerequisite: 1 year of high school algebra or equivalent

Note: Students with no previous chemistry background should take CHEM 091

CHEM 132 Principles of Organic and Biological Chemistry **4 Credit Hours**

This is the second course in a two-semester sequence. Course work is divided into two parts. The first part is an introduction to organic chemistry, with special emphasis on nomenclature and functional group reactivity. The second part addresses the topics of biochemistry and metabolism at an introductory level. There are three hours of lecture and three hours of laboratory each week.

Prerequisite: CHEM 131 or CHEM 141 or the equivalent

CHEM 141 Principles of General and Inorganic Chemistry I **5 Credit Hours**

Includes the study of atomic structure, stoichiometry, molarity,

enthalpy, chemical periodicity, bonding and structure, reactions and equations, and properties of gases. This course is for students majoring in science, engineering, mathematics, pharmacy, or other pre-professional programs. Three hours of lecture and four hours of laboratory per week.

Prerequisites: One year of high school algebra or the college equivalent. Also required as a prerequisite is a passing grade on the chemistry pretest or CHEM 095 with C or better; or CHEM 131 with a grade of C or better.

CHEM 142 Principles of General and Inorganic Chemistry II **5 Credit Hours**

A continuation of CHEM 141 with special emphasis on properties of liquids and solutions, reaction rates, chemical equilibria, thermodynamics, electrochemistry, acid/base chemistry, nuclear chemistry, and descriptive chemistry of the more common elements (as time allows). Three hours of lecture and four hours of laboratory per week.

Prerequisite: CHEM 141 with a grade of C or better

Suggested Prerequisite: MATH 175

CHEM 220 Introduction to Quantitative Analysis **2 Credit Hours**

An introduction to quantitative analysis. This course is primarily designed to complement the two-semester sequence in general chemistry by providing an introduction to quantitative analysis (analytical chemistry) that is included in the general sequence at some transfer institutions. Four hours of integrated lecture and laboratory per week.

Prerequisite: Completion of CHEM 141 (with a grade of C or better) or concurrent enrollment in CHEM 142.

CHEM 241 Organic Chemistry I **4 Credit Hours**

An introduction emphasizing structural theory, stereochemistry, physical properties, reaction mechanisms, and functional group chemistry. This course covers the first semester of a full year course. CHEM 241 is a lecture course designed to meet the requirements for science majors, pre-professional biology, pre-professional chemistry, as well as premedical, pre-dental, pre-pharmacy, pre-veterinary, and chemical engineering students. Students should check requirements for organic chemistry at their intended transfer institution. Four hours of lecture per week without lab.

Prerequisite: At least one semester of college chemistry with a grade of C or better

CHEM 242 Organic Chemistry II **4 Credit Hours**

A continuation of Chemistry 241 with emphasis on acid-base chemistry, spectroscopy, and retrosynthetic analysis. Reaction mechanisms and physical properties of the following functional groups will be explored: carbonyl chemistry (aldehydes, ketones, and carboxylic acid derivatives); carboxylic acids; amines; carbohydrates; lipids; amino acids, proteins; and nucleotides. This course is designed to meet the requirements for science majors, pre-professional biology, pre-professional chemistry, as well as premedical, pre-dental, pre-pharmacy, veterinary, and chemical engineering students. Four hours of lecture per week without lab.

Prerequisite: CHEM 241 with a grade of C or better

CHEM 243 Organic Chemistry Laboratory I 2 Credit Hours

Microscale glassware and analytical techniques are used to study fundamental organic reactions and the synthesis of organic compounds. Techniques include distillation (simple, fractional, and steam), crystallization, and extraction. Analysis of compounds includes melting points, boiling points, refractive indices, infrared spectroscopy, and chromatography (gas, thin layer, column). Approximately one hour of lecture and three hours of laboratory per week. This meets the Organic Laboratory requirement necessary to enter into Pharmacy, Medical, Dental, and Veterinary schools. Science major transfers will also need to take CHEM 244. Approximately one hour of lecture and three hours of lab per week.

Prerequisite: CHEM 141 or the equivalent and CHEM 241 (CHEM 241 can be a co-requisite with instructor's permission).

CHEM 244 Organic Chemistry Laboratory II 2 Credit Hours

Microscale glassware and analytical techniques are used in this follow-up course to CHEM 243. The primary focus of this course is multi-step organic syntheses and proper research techniques. Practical techniques from the previous course will be applied towards the synthesis of a novel polyaromatic exaphenylbenzene, an antibacterial drug sulfanilamide, the flavoring agent cinnamic acid, and the fragrance 2'-bromostyrene. Products will be analyzed (melting point/boiling point, infrared analysis, chromatographic properties (TLC, GC), solubility, refractive index) and compared to literature values to verify their veracity. Research will involve a critical analysis of competitive synthetic methods.

The sequence CHEM 241, 242 (Lecture I and II) and CHEM 243, 244 (Laboratory I and II) will transfer to all Michigan universities to meet their Organic Chemistry requirements for Science Majors. Approximately one hour of lecture and three hours of lab per week.

Prerequisite: CHEM 243 and CHEM 242 (CHEM 242 can be a co-requisite with instructor's permission).

Note: Offered occasionally based on student demand.

CHN 131 Elementary Mandarin Chinese I 4 Credit Hours

This is a beginning level course in Mandarin Chinese, emphasizing the basic knowledge of language (such as the Mandarin sound system, standard sentence patterns and formal grammar), and the basic communication skills (such as correct pronunciation, the ability to carry on simple conversations, and the ability to write Chinese characters in simplified form). Students will develop the basic skills of listening, speaking, reading and writing in Chinese.

CIS 100 Introduction to Information Technology 3 Credit Hours

This course will survey the field of computer technology and information management. Topics emphasized in this course include: computer hardware, networking and telecommunications, the use of the Internet for communication, e-commerce, information retrieval, the social impact of technology, computer security, and industry-related careers and programming techniques. Computer laboratory sessions will briefly introduce students to a variety of software packages that will include the Windows operating system, Internet

browsers, e-mail, word processing, spreadsheets, presentation graphics, and database management systems.

Note: This course meets the graduation requirement for General Education Outcome 2: Computer Literacy.

CIS 105 Desktop Operating System Concepts 4 Credit Hours

A beginning course focusing on client side desktop operating systems, including installing, using and maintaining the system. The class will familiarize the student with customizing the system, file management, using help, working with applications, Internet connections, file system security, account set-up for multiple users and for various types of users. An introduction to system configuration, troubleshooting and system maintenance also will be included.

Prerequisites: CIS 100

CIS 107 PC Hardware/Software Installation 2 Credit Hours

An intermediate course that will teach the student advanced techniques in PC operations (including hardware/software installation and system upgrading/maintenance), system management and PC performance optimization. Actual hardware and software will be installed by the students.

Prerequisite: CIS 100

CIS 111 SQL for Database Development 3 Credit Hours

An intermediate course familiarizing the student with the SQL language to retrieve and modify tables within a SQL Server database management system. The queries will include outer joins, summary queries and subqueries. Students will use normalization techniques to design and create a database structure. Views and stored procedures also will be discussed. Front-end forms will be created to interface with the back-end table structures.

Prerequisite: One semester of any programming language or work-related experience

CIS 112 Introduction to Networking 3 Credit Hours

An introductory course covering the basics of Local and Wide Area Networking. Topics will include discussion of the OSI model, network protocols, media architecture and hardware. It will also cover WANs, remote connectivity, TCP/IP, and the Internet as well as the troubleshooting of common network problems.

Prerequisite: CIS 100

CIS 113 Wireless LANs 2 Credit Hours

An intermediate course covering Wireless Networking. Topics will include the coverage of the IEEE 802.11 standards and relationship to the OSI model. The class will also cover the planning, installation, configuration and troubleshooting of Wireless Networking products.

Prerequisite: CIS 112

CIS 114 Introduction to Novell NetWare Administration 3 Credit Hours

An introduction covering the basics of Novell NetWare Administration. Topics will include file system setup, user

administration, security configuration, connecting client workstations, eDirectory Services management, system monitoring and maintenance as well as the configuration of network printing.

Prerequisite: CIS 112

CIS 121 Introduction to the Internet 2 Credit Hours

The Internet is used by millions of people throughout the world to share information and ideas and to search for information on all kinds of topics electronically. This course introduces the student to the Internet, how it was developed, and how it works. The student will become familiar with the services and tools available, such as e-mail, Telnet, FTP, Gopher and the World Wide Web. The student will access information through popular online services and will learn about some of the major sources of information.

CIS 122 Web/Internet Technologies 3 Credit Hours

A beginning course familiarizing the student with website usability, web page authoring, the Internet, networking, and security fundamentals. Skills obtained will include introduction to web programming and development in HTML, ASP and Fireworks.

CIS 123 Web Pages 2 Credit Hours

A beginning course that teaches students current web page development techniques and methodologies. Topics to be discussed will include: graphical web development tools, formatting, layout, navigation, database integration, accessibility, and browser compatibility. Significant hands-on lab time will be dedicated to developing and publishing a professional Web site.

CIS 124 Introduction to Windows Server Administration 3 Credit Hours

An introductory course covering the basics of Microsoft Windows Server Administration. Topics will include installation and configuration of the server operating system, connecting client workstations, domain and server management, system monitoring and maintenance as well as the configuration of network printing.

Prerequisite: CIS 112

CIS 125 Principles of Programming Logic 4 Credit Hours

A beginning course thoroughly acquainting the student with programming logic techniques. Structured methods of business programming are stressed. Topics include business reports, arrays, file maintenance, data validation, character fields, functions and modules. The student uses the microcomputer lab for compilation and testing.

Prerequisite: Completion of or concurrent enrollment in CIS 100

CIS 126 XHTML/HTML/CSS Web Programming 4 Credit Hours

This course will provide students with a comprehensive mastery of HyperText Markup Language (HTML) coding practices. Additional topics include an understanding and use of XHTML, Cascading Style Sheets (CSS), and Validation according to the guidelines of the World Wide Web Consortium (W3C). Students will create an entire Web site using HTML and CSS.

CIS 129 Introduction to UNIX with Shell Scripting 4 Credit Hours

An intermediate-level course that will teach students the fundamentals of the UNIX Operation System. This will include the file system, e-mail, editor and standard UNIX utilities. Advanced forms of utilities, regular expressions, and shell scripts will be covered. There will be emphasis on understanding how the UNIX shell operates.

Prerequisite: CIS 125

CIS 130 Visual Basic .NET Programming 3 Credit Hours

An intermediate programming course using Visual Basic .NET for Windows application development. Coding and debugging techniques are covered for an object oriented environment. Also covered is the common Windows form controls used in a graphical user interface application.

Prerequisite: CIS 125 or work-related experience

CIS 132 Active Server Pages .NET Programming 3 Credit Hours

An intermediate course that will teach the students advanced technologies of a scripting language used for Web programming. Topics include state management, the proper use of code-behind files, ADO.NET skills for handling database data, web services, web server validation, user and custom server controls.

Prerequisite: CIS 130

CIS 157 A+ Hardware 4 Credit Hours

This course is intended to cover the hardware section of the A+ Certification Exam. All types of hardware components will be studied in detail. Installation, configuration, troubleshooting of hardware will be performed. The student will experience hands-on interactive labs with actual hardware components.

Prerequisite: CIS 100 or approval of the department

CIS 158 A+ Operating Systems 4 Credit Hours

This course is intended to cover the software section of the A+ Certification Exam. Various operating systems will be covered from a PC repair technician perspective: how the operating system interacts with the PC's hardware, the boot process, troubleshooting and interaction with application software. The student will experience hands-on interactive labs with various actual operating systems and application installations.

Prerequisite: CIS 100

CIS 160 COBOL Programming 3 Credit Hours

An intermediate level course that introduces the student to the COBOL programming language and the mainframe-programming environment. Students will develop programs and modify existing programs to meet specifications.

Prerequisite: CIS 125

CIS 162 Perl Programming 4 Credit Hours

An intermediate-level course that will teach the student the benefits of a powerful scripting language. Topics include basic Perl program structure, flow control fundamentals used under different platforms, search and replace techniques, shortcuts, associative

arrays, normalizing, sorting lists using multiple sort orders and file manipulation. It will also include data types, pattern matching and subroutines. Lastly, an introduction to CGI (Common Gateway Interface) programming will be presented.

Prerequisite: CIS 125 and CIS 129

CIS 170 "C" Programming 3 Credit Hours

An intermediate course familiarizing the student with an interactive text editor and the "C" programming language. These features are taught through detailed lectures and coding laboratory assignments. Students design, code, test, and debug programs using the "C" language.

Prerequisite: CIS 125 or MATH 180

CIS 171 Java Programming 3 Credit Hours

An intermediate-level course familiarizing the student with the Java programming language and its various components using detailed lectures and coding laboratory assignments. Students design, code, test, and debug programs using the Java language.

Prerequisite: CIS 170

CIS 172 JavaScript Programming 3 Credit Hours

An intermediate-level course in which the student becomes familiar with the JavaScript programming language and its various components. These features are taught through detailed lectures and coding laboratory assignments. Students design, code, test, and debug programs using the JavaScript language, a computer language developed by Netscape for advanced internet development.

Prerequisite: CIS 121 and CIS 170

CIS 186 Game Programming 4 Credit Hours

An intermediate course that will familiarize students with the process, concepts, and techniques of game programming. Topics will include game engines, game scripting and programming languages, game authoring systems, game physics, rendering, level, model and terrain editors, interactivity, special effects and networking.

Prerequisite: CIS 125

CIS 210 Web Server Administration 2 Credit Hours

The course introduces students to the installation, configuration, and management of web server software. Students gain hands-on experience installing and administering the two dominant web server software platforms: Apache web server and Microsoft Internet Information Server (IIS). Topics include web server security, performance monitoring and tuning, virtual hosting, proxy servers, and supporting database and dynamic content. This is an excellent course for anyone interested in pursuing or working in the network, server, or web administration; web development; or computer information systems fields.

Prerequisite: CIS 100

CIS 211 Web Server Administration 2 Credit Hours

The course introduces students to the installation, configuration, and management of web server software. Students gain hands-on experience installing and administering the two dominant web server software platforms: Apache web server and Microsoft Internet Information Server (IIS). Topics include: web server security,

performance monitoring and tuning, virtual hosting, proxy servers, and supporting database and dynamic content. This is an excellent course for anyone interested in pursuing or working in the network, server, or web administration; web development; or computer information systems fields.

Prerequisites: CIS 100

CIS 212 Networking II 3 Credit Hours

The course is intended to cover additional Local and Wide Area Networking topics that will aid the student in preparing for the Comp-Tia Network + Certification test. Topics will include: Network Operating System basics (Netware, UNIX, and Windows 2000 Server); maintaining and upgrading networks; ensuring integrity and availability; network security; network design and implementation; advanced troubleshooting techniques; review and practice of all topics for the Certification Exam.

Prerequisite: CIS 112

CIS 215 Advanced Visual Basic .NET Database Programming 3 Credit Hours

This is an advanced programming course that focuses on writing Windows application forms that interface with a database management system using the VB.NET language. The topics covered are class development; inheritance and polymorphism; input validation; error handling; exception handling; relational databases and SQL; accessing data with ADO.NET; ASP.NET introduction; arrays; collections and multi-threading.

Prerequisite: CIS 111 (or CIS 270) and CIS 130

CIS 220 System Analysis and Design 3 Credit Hours

An advanced course involving the study of techniques used by the systems analyst to design and implement computerized business information systems. Each student participates in a systems project designed to reinforce course material. Written and oral communication skills necessary for the information technology professional are emphasized.

Prerequisites: CIS 111, CIS 125 and one more CIS course

CIS 221 Instructional Technology for Elementary Teachers 3 Credit Hours

This computer course introduces elementary education majors to the implementation, application and issues of microcomputers in education. Topics include computer literacy, classroom use of hardware and software for student learning and computer resources to stay current with multi-media technology.

Prerequisite: Enrollment in Pre-Education program

Note: This course meets the graduation requirement for General Education Outcome 2: Computer Literacy.

CIS 222 Web Database Development With PHP 4 Credit Hours

Students will develop a database-backed e-commerce site that includes a product catalog, search functionality, login capabilities, order processing, and site administration. PHP will be used extensively to interact with the database. Additional topics include

database design, MySQL, security, alternative scripting and platform options, in-house and hosted storefront options, and e-commerce business and marketing concepts.

Prerequisite: CIS 122

CIS 223 Instructional Technology for Secondary Teachers 3 Credit Hours

This computer course introduces secondary education majors to the implementation, application and issue of microcomputers in education. Topics include computer literacy, classroom use of hardware and software for student learning, and computer resources to stay current with multi-media technology.

Prerequisite: Enrollment in Pre-Education program

Note: This course meets the graduation requirement for General Education Outcome 2: Computer Literacy.

CIS 227 Dreamweaver Web Authoring 4 Credit Hours

A web authoring course focused on the theory and design of web construction. Topics will include: information architecture concepts, web project management, scenario development and performance evaluations. This course will also introduce and evaluate the most widely used web authoring tools in industry, such as Macromedia Dreamweaver.

Prerequisites: CIS 126 and ART 107

CIS 229 UNIX System Administration 4 Credit Hours

Covers the effective administration of a UNIX system. Discussion is provided on the internals of the UNIX Operating System. Laboratory exercises include system start-up and shutdown, file system management, adding and configuring backups and restorations, device management, system security, and system accounting. Each student is required to complete successfully a series of comprehensive exercises to demonstrate proficiency in system administration.

Prerequisite: CIS 125 and CIS 129

CIS 230 C++ Programming 3 Credit Hours

An advanced course for students who have a basic understanding of arrays, pointers, structures, and file I/O. It includes theory and application in developing expanded skills in areas such as data and structures and migrating from "C" to "C++".

Prerequisite: CIS 170

CIS 232 C# Programming 4 Credit Hours

An advanced course for students who have a basic understanding of arrays, pointers, structures and object oriented programming. The goal of this course is to provide students with the knowledge and skills they need to develop C# applications for the Microsoft .NET Platform. The course focuses on C# program structure, language syntax, and implementation details.

Prerequisite: CIS 170, CIS 171 or CIS 230

CIS 234 Advanced Flash 4 Credit Hours

This course provides instruction and hands-on laboratory experience on advanced Flash development necessary for careers in web multimedia design and development. Topics include complex

animations; ActionScript programming; interactivity; ActionScript controlled motion; preloaders; forms processing; XML integration; external content; and movie, video, and audio clip management.

Prerequisite: ART 108

CIS 270 Database Management Systems 3 Credit Hours

An advanced course familiarizing the student with the organization and utilization of a client/server database. Detailed instruction covers database terminology, data structure design, data retrieval and manipulation (including the use of SQL), and application program development oriented to the ORACLE database. The first half of the course concentrates on the use of SQL and the second half explores the use of forms and reports.

Prerequisite: CIS 111

CIS 272 Project Management 4 Credit Hours

An advanced course involving the study of project management techniques used by the information technology profession, including Microsoft Project software, project context, integration, scope, time, cost, quality, human resources, communications, risk, and procurement management. The course provides a foundation for the CompTIA IT Project+ certification.

Prerequisite: Completion or concurrent enrollment in CIS 220 or permission of instructor

CIS 280 Information Assurance and Security 4 Credit Hours

This course will provide a comprehensive understanding of Information Assurance and Security as defined in the "National Training Standard for Information Systems Security Professionals." It will build on material learned in other courses, and introduce information assurance skills that must be demonstrated at a high level of performance to address government and industry security needs.

Prerequisite: CIS 112

CIS 295 Network Design and Implementation 3 Credit Hours

This is the final course in the Network Administration degree program. This capstone course provides learning experiences in the design, implementation and support of a Local Area Network. This course covers basic LAN design methods and tools, NetWork Operating Systems, LAN implementation considerations, LAN hardware, and network troubleshooting techniques. Students will design and implement an actual LAN in the lab complete with file servers, workstations, hubs, switches, and routers.

Prerequisites: Approval of the department contact Brent Fulton 313-845-6426.

CLT 100 Computer Literacy Test 0 Credit Hours

CNT 110 CCNA: Networking Fundamentals 4 Credit Hours

This course is the first of four courses preparing students for the CCNA (Cisco Certified Network Associate) certification. This course will introduce students to fundamental networking concepts and technologies. Course topics include: the OSI and TCP/IP network models; networking devices and components; network addressing schemes; types of network media; building simple networks; and

basic router and switch configuration.

Note: CNT 110 is offered the first 8 weeks of both the Fall and Winter semesters

CNT 115 Network Infrastructure Essentials 4 Credit Hours

A basic course designed for students interested in the physical aspects of voice and data network cabling and installation. This hands-on, lab-oriented course focuses on cabling issues related to data and voice connections and provides an understanding of the industry and its worldwide standards, types of media and cabling, physical and logical networks, as well as signal transmission.

Prerequisites: CNT 110 or CIS 112 or permission of instructor

CNT 120 CCNA: Routing Protocols and Concepts 4 Credit Hours

This course is one of four courses preparing students for the CCNA (Cisco Certified Network Associate) certification. Students will develop an understanding of how a router learns about remote networks and determines the best path to those networks. Topics include: static and dynamic routing; routing protocol configuration; and implementing, verifying, and troubleshooting routing operations.

Prerequisites: CNT 110

Note: CNT 120 is offered the second 8 weeks of both the Fall and Winter semesters.

CNT 210 CCNA: LAN Switching and Wireless 4 Credit Hours

This course is one of four courses preparing students for the CCNA (Cisco Certified Network Associate) certification. Topics include: switching concepts and switch operations; switch configuration; Virtual Local Area Networks (VLANs); Inter-VLAN routing; VLAN Trunking Protocol; wireless network components and standards; and basic wireless configuration.

Prerequisites: CNT 110

Note: CNT 210 is offered the first 8 weeks of both the Fall and Winter semesters, and in the Spring.

CNT 220 CCNA: WAN Technologies 4 Credit Hours

This course is one of four courses designed to prepare students for the CCNA (Cisco Certified Network Associate) certification. Topics include: implementing basic switch security measures; configuring and implementing Access Control Lists (ACLs); implementing various WAN technologies including Frame Relay and Point-to-Point Protocol; and troubleshooting WANs.

Prerequisites: CNT 110 and CNT 120

Note: CNT 220 is offered during the second 8 weeks of both the Fall and Winter semesters, and during the Summer.

CNT 260 Network Security: Security + Prep 4 Credit Hours

This course is an introduction to network security concepts, communication security, infrastructure security, organizational security and basic cryptography. The course helps prepare students for the CompTIA Server+ certification exam.

Prerequisites: CNT 120 or permission of the instructor

CNT 281 CCSP 1: Securing Networks with Cisco Routers and Switches (SNRS) 4 Credit Hours

This course will provide network specialists with the knowledge and skills needed to secure Cisco IOS router and switch networks. Successful graduates will be able to secure the network environment using existing Cisco IOS and Catalyst Operating System (CatOS) security features, configure the three primary components of the Cisco IOS Firewall Feature set (context-based access control (CBAC), intrusion prevention, and authentication proxy), implement secure tunnels with virtual private network (VPNs) using IP security (IPSec) technology, and implement basic access switch security.

Prerequisites: CNT 220 or Cisco CCNA Certification Certificate and experience in configuring Cisco Internetwork Operating System (IOS) software basic knowledge of the Windows operating system - familiarity with the networking and security terms and concepts

CNT 282 CCSP 2: Securing Hosts Using Cisco Security Agent (HIPS) 4 Credit Hours

Securing Hosts Using Cisco Security Agent (HIPS) is a course on using the Cisco Security Agent 5.0 product to protect host systems from intrusions, as compared to simply detecting attempted intrusions. The course takes a task-oriented approach to teaching the skills to deploy and configure and administer the Cisco Security Agent to protect server and workstation hosts.

Prerequisites: CNT 220 or Cisco CCNA Certification Certificate and experience in configuring Cisco Internetwork Operating System (IOS) software basic knowledge of the Windows operating system - familiarity with the networking and security terms and concepts

CNT 291 CCNP: Building Scalable Internetworks 4 Credit Hours

This course is one of four courses designed to prepare students for the Cisco Certified Networking Professional (CCNP) certification. This course teaches advanced skills required to implement and support enterprise-class IP routing networks. Topics include scalable network design, EIGRP routing, multi-area OSPF routing, Integrated IS-IS routing, route optimization, BGP, IP multicasting, and IPv6 addressing.

Prerequisites: CNT 220 or Cisco CCNA Certification or permission of instructor.

CNT 293 CCNP: Building Multilayer Switched Networks 4 Credit Hours

This course is one of four courses designed to prepare students for the Cisco Certified Networking Professional (CCNP) certification. This course teaches advanced skills required for building enterprise-class switched networks with integrated voice and wireless applications. Topics include campus networks, VLAN implementation, Spanning Tree Protocol, inter-VLAN routing, network redundancy, wireless LANs, VoIP, and switch security issues.

Prerequisites: CNT 220 or Cisco CCNA Certification or permission of instructor.

CNT 295 CCNP: Implementing Secure Converged WANs 4 Credit Hours

This course is one of four courses designed to prepare students for the CCNP (Cisco Certified Network Professional) certification. Topics

include: teleworker configuration and access; Frame-mode MPLS; site-to-site IPsec VPN; security strategies; Cisco device hardening; and Cisco IOS Firewall features.

Prerequisite: CNT 220 or Cisco CCNA Certification or permission of the instructor

CNT 297 CCNP: Optimizing Converged Networks 4 Credit Hours

This course is one of four courses designed to prepare students for the CCNP (Cisco Certified Network Professional) certification. Topics include: VoIP implementation; QoS implementation; Auto QoS implementation; wireless security; and basic wireless management.

Prerequisites: CNT 220 or Cisco CCNA Certification or permission of the instructor

COLL 101 College Success 3 Credit Hours

This course is designed to help students achieve academic success. Students will become aware of techniques in note taking, time management, and stress management. The course will also promote the development of a basic vocabulary for a beginning student, as well as the ability to understand oneself and others. Students will also learn to navigate the college environment and to understand and appreciate the importance of diversity.

COUN 110 Human Potential Seminar 2 Credit Hours

Uses the group process, which enables each individual to discover and use strengths, talents, and abilities more efficiently. Through goal setting and value clarification, one learns to think positively about oneself and become a more self-directing person.

COUN 111 Advanced Human Potential Seminar 2 Credit Hours

Uses the group process and the tools developed in COUN 110 to develop life skills that enable each individual to discover his or her potential and to deal more effectively and efficiently with conflicts, blocks, failures, and life-style problems.

Prerequisite: COUN 110 or permission of the instructor

COUN 114 Stress Management – A Personal Approach 2 Credit Hour

Provides a supportive group setting for students to examine their own personal sources of stress, how these stress factors are affecting them, and what they can do to develop more effective coping strategies.

COUN 115 Assertiveness Training 1 Credit Hour

An experiential course designed to improve communication and behavior. Students learn to differentiate between assertiveness, passiveness and aggressiveness. Through lectures, discussion, and role-playing, a person begins to become more assertive.

COUN 116 Assertiveness in Daily Living 1 Credit Hour

An advanced course in assertiveness focusing on communication problems with parents, siblings, friends, relatives, and strangers, including specific assertive strategies for successful communication with difficult people. Emphasis is on role-playing situations such as refusing a request, asking a favor, responding to criticism, and anger management.

COUN 118 Assertiveness at Work 1 Credit Hour

An advanced course in assertiveness that discusses how to get the most out of one's work environment. One learns how to apply for a job, assertively prepare a boss for a raise, and negotiate salary. In addition, assertive strategy is offered for successfully handling both criticism from peers and a performance review from the boss.

COUN 119 Issues in Personal Growth 2 Credit Hours

This course is designed to give participants an opportunity to learn about and discuss the specific blocks present in their lives. Students will become aware of how they hinder their ability to do academic work and find friendship, love, and happiness. Small group interaction will be a part of this course.

COUN 120 Career Exploration 1 Credit Hour

Designed to assist students in exploring and assessing their interests, needs, and values in relation to possible occupations and careers. Both readings and small group discussion are utilized.

COUN 125 Life Work Planning 3 Credit Hours

Discussion, testing, and computer research enable participants to examine their own resources, strengths, and constraints to determine what is realistic for future change. Decision-making tools are taught so that effective planning results in harmony between one's life and work. Potential trouble areas are examined through problem-solving techniques.

COUN 127 Job Interview Counseling 1 Credit Hour

Offers successful strategies to fight the anxiety that comes with a job interview. Students learn creative methods to secure an interview, what to wear at the interview, how to field questions, what to ask the interviewer, and post-interview follow-up. Each student must have a resume in order to benefit from this class.

COUN 128 Active Parenting 2 Credit Hours

Provides classroom discussions, video examples, and a supportive group setting for students to learn the basic principles of active parenting of both children and teens. Students are encouraged to apply these principles to their own situations.

COUN 129 Personality Type and Success 2 Credit Hours

Through the use of the Myers-Briggs Type Indicator, participants will develop a greater understanding and appreciation of self and others. Understanding type differences will promote better interpersonal relationships in the home, work, and other areas of one's life. Differences in problem-solving and decision-making techniques will also be explored.

CRJ 131 Introduction to Law Enforcement and Criminal Justice 3 Credit Hours

An overview of the criminal justice system in the U.S. Topics surveyed are the history of law enforcement; the political, sociological, and philosophic background of police functions; and the criminal courts. Constitutional problems as they relate to the police function are surveyed, and the use of recent technology in criminal justice is discussed.

Note: This course meets the graduation requirement for General Education Outcome 1: American Society, Events, Institutions and Cultures.

CRJ 132 Police Administration Staff and Line Operations 3 Credit Hours

Focuses on uniformed police operations, both patrol and traffic, as well as principles of organization, management, planning, and crime prevention.

CRJ 134 Criminal Investigation 3 Credit Hours

An introduction to criminal investigation and the techniques of forensic science. Topics include information accumulation, specific crimes, and preparation for purposes of prosecution.

Prerequisite: CRJ 131

CRJ 135 Juvenile Justice 3 Credit Hours

Studies the legal and philosophical basis of the juvenile justice process along with a review of the juvenile court procedures in Michigan. Problems related to delinquency and its control are discussed.

CRJ 136 Corrections I Introduction to Corrections 3 Credit Hours

A study of the history and philosophy of corrections. An investigation is made of probation and parole and the impact of prisoner rights law on the system as a whole.

CRJ 138 Probation and Parole 3 Credit Hours

Covers treatment of convicted law violators by correctional field services before and after prison, analysis of the role of probation and parole officers, and evaluation of community resources applied to the correctional task.

CRJ 140 Identity Theft: Prevention & Awareness 3 Credit Hours

This course will provide students with an overview of the identity theft problem in America. It will include current statistics from around the nation, profiles of specific cases, various prevention techniques and steps to take if you become a victim.

CRJ 141 Corrections Clients - Human Growth and Development 3 Credit Hours

Investigates human development and its relationship to criminal patterns, stressing the role of environment and family as influences on behavior. Specific problems such as substance abuse and mental pathologies are reviewed, and intervention strategies and treatment alternatives are discussed.

CRJ 234 Criminalistics: Criminal Investigation Laboratory Techniques 3 Credit Hours

Offers laboratory experience in the fundamentals of investigation, including fingerprinting techniques and the examination of hair, fiber, glass, and firearms and tool marks.

CRJ 251 Criminal Law 4 Credit Hours

A study of the basic elements of criminal law with particular emphasis on definitions of Michigan crimes.

CRJ 252 Criminal Procedure 4 Credit Hours

A continuation of CRJ 251, emphasizing criminal procedure, including the laws of arrest and search and seizure, the rights of the accused, and the roles of the prosecutor, judge, jury, and

defense counsel in the judicial process. Both Michigan and federal constitutional issues are discussed.

Prerequisite: CRJ 251

CRJ 253 Legal Issues in Corrections/ Probation and Parole 4 Credit Hours

An introduction to constitutional issues relating to corrections. Study is made of court processes, with particular emphasis on major cases affecting corrections, including probation and parole.

CRJ 285 Topics in Criminal Justice/Law Enforcement 3 Credit Hours

An exit course covering a series of critical issues facing law enforcement personnel. The primary goals are to help the student understand the diverse roles of the public police and prepare for entry into the job market.

Prerequisites: ENG 131 and CRJ 131 (plus 3 additional credit hours of Criminal Justice courses)

CRJ 286 Topics in Corrections/ Probation and Parole 3 Credit Hours

An exit course covering a series of critical issues facing corrections, probation, and parole personnel. The primary goals are to help the student understand the diverse roles of corrections, probation, and parole personnel and prepare for the job environment.

Prerequisites: ENG 131 and CRJ 136 (plus 3 additional credit hours of Criminal Justice courses)

CRJ 291 Criminal Justice Internship 3 Credit Hours

An internship program that provides the student field experience with municipal, county, state, and federal criminal justice agencies and related agencies in the private sector.

Prerequisites: A grade point average of at least 2.8, completion of 12 credit hours of criminal justice courses, and written consent of the Criminal Justice Director before registration.

CRJ 292 Criminal Justice Internship II 3 Credit Hours

A continuation of CRJ 291, designed to enhance the opportunity of selected students to prepare for specific employment.

Prerequisites: Successful completion of CRJ 291. A grade point average of at least 2.8, completion of 12 hours of criminal justice, and written consent of the Criminal Justice Director before registration.

DNC 121 Beginning Tap 2 Credit Hours

A dance form derived from a combination of syncopated African rhythms, Irish clogging, and folk dance. Basic rhythms and steps are explored at a level appropriate for the class. Shoes are discussed during the first class meeting.

DNC 141 Beginning Ballet 2 Credit Hours

A dance form originating in the court of Louis XIV. The movement vocabulary, therefore, is in French. This course connects movement with the French term, permitting the student to properly execute the movement and build on a basic movement vocabulary at the barre, at centre, and through the dance space. A universal movement system, classical dance can be understood throughout the world.

DNC 151 Beginning Modern Dance 2 Credit Hours

Beginning Modern Dance is a beginning level course that provides an exploratory look at dance as a limitless way to express oneself in human movement. Primary emphasis is on developing a basic Modern Dance vocabulary from which to build fresh movement material as well as improving health and fitness of the body, the instrument of dance.

DNC 152 Intermediate Modern Dance 2 Credit Hours

Intermediate Modern Dance looks at this genre as an art form that has a limitless way to express oneself in human movement. Primary emphasis is on building from basic Modern vocabulary, developing ways to find original movement material, and on improving health and fitness of the body, the instrument of dance.

Prerequisite: DNC 151 or permission of the instructor

DNC 161 Beginning Jazz Dance 2 Credit Hours

Beginning Jazz Dance is a course in which students learn this big, bold percussive movement with many styles. Primary emphasis is on developing knowledge of and experience in basic Jazz vocabulary accompanied by jazz rhythms and syncopation.

DNC 162 Intermediate Jazz Dance 2 Credit Hours

A continuation of DNC 161, exploring further the characteristic jazz movements with the use of more intricate footwork and movement phrases or combinations.

Prerequisites: DNC 161 or permission of the instructor

DNC 230 Beginning Choreography 3 Credit Hours

The course provides opportunities to use individual creativity through the composition of dance phrases and studies. With the emphasis on “learning by doing,” a student can discover how to manipulate the dance elements of time, space and energy and create thematic material from which to build an entire dance. Movement will mainly be composed for solo rather than group works.

Prerequisites: Any level of Ballet, Modern, or Jazz class, or concurrent enrollment in such a class, or permission of the instructor

DNCA 221 College Dance Company I 3 Credit Hours

Provides advanced dance students the experience of performing in a variety of genres and settings.

Prerequisite: Admission by audition each term

Co-requisite: Any level Ballet, Modern or Jazz

DNCA 222 College Dance Company II 3 Credit Hours

Provides advanced dance students the experience of performing in a variety of genres and settings.

Prerequisite: Admission by audition each term

Co-requisite: Any level Ballet, Modern or Jazz

DNCA 223 College Dance Company III 3 Credit Hours

Provides advanced dance students the experience of performing in a variety of genres and settings.

Prerequisites: Admission by audition each term.

Co-requisite: Any level Ballet, Modern or Jazz

DNCA 224 College Dance Company IV 3 Credit Hours

Provides advanced dance students the experience of performing in a variety of genres and settings.

Prerequisites: Admission by audition each term.

Co-requisite: Any level Ballet, Modern or Jazz

DRAF 110 Introduction to Industrial Drafting 3 Credit Hours

A drafting course for the student who plans to pursue the program in Industrial Drafting and CAD Technology or needs instruction in the basics of drafting. Units of instruction include the use of drafting instruments, lettering techniques, geometric construction, orthographic projection, pictorial drawing, basic dimensioning, section and auxiliary views, introduction to assembly drawings, and interpretation of drawings.

Suggested Prerequisite: Recommended concurrent with DRAF 120

DRAF 120 Introduction to CAD 4 Credit Hours

A basic computer-aided drafting class for the student planning to pursue the program in Industrial Drafting and CAD Technology. Topics considered are general computer operations, geometric construction, construction of orthographic drawings, auxiliaries, sectioning, and dimensioning.

Prerequisite: Completion of or concurrent enrollment in DRAF 110

DRAF 123 Introduction to CATIA V5 2 Credit Hours

An introductory course in which the student will learn the basics of CATIA V5 and its functionality. The student will use Part Design, Sketcher, Drafting, and Assembly Design Workbenches to make models that are properly constructed and constrained. CATIA’s tools and toolbars will be demonstrated and used in these Workbenches.

Prerequisite: DRAF 120, equivalent CAD class, CAD work experience, or permission of instructor.

DRAF 125 CATIA V5 Level II 2 Credit Hours

This course will extend the skills and knowledge of CATIA V5 that were learned in the previous class (DRAF 123). Some Workbenches will be expanded upon from the previous class, and others will be introduced. Topics will include advanced part design, advanced assemblies, kinematics simulations, the use of the specification tree, creating design tables, and using component catalogs.

Prerequisite: DRAF 123

DRAF 127 CATIA V5 Level III 2 Credit Hours

This operations course is in the use of the Drafting and Generative Shape Design (GSD surfacing) Workbenches. The application of dimensions, tolerances, and the creation of advanced views will be learned in the Drafting environment. Instruction in surfacing will include extruding and the creation of simple and complex surfaces in the Generative Shape Design Workbench.

Prerequisites: DRAF 123

DRAF 130 Technical Descriptive Geometry 3 Credit Hours

An intermediate-level drafting course in advanced projection techniques. Auxiliary views are used to manipulate geometry to define

the relationship between points, lines, planes, and solids. The course also includes topics on revolution, intersections, and developments.

Prerequisite: DRAF 110

DRAF 142 Industrial Detailing 4 Credit Hours

An intermediate-level class in the making of working drawings using proper dimensioning techniques. Showing necessary views, placement of dimensions, use of different dimensioning styles, and calculation of tolerances are the basis of instruction. The function and relationship of mating parts in an assembly are considered when dimensioning to insure proper fit and function. Threads, fasteners, and common manufacturing operations are applied and dimensioned. Standard and commercial parts are selected from catalogs. Set up and application of CAD dimensioning styles and tolerances are utilized.

Prerequisites: DRAF 110 and DRAF 120

DRAF 210 Die Design 3 Credit Hours

An advanced drawing- and process-oriented course in the layout and design of production press work dies. Typical dies examined are blank, cam pierce, form, cutoff, draw, and progressive. Press computations and accessories are put in perspective as they relate to design problems. Drawing assignments are done extensively on CAD.

Prerequisites: DRAF 130, DRAF 142 and MATH 100 or above

DRAF 220 Machine Element Drafting 2 Credit Hours

An advanced course providing an insight into the study of mechanisms, their motions, and related skeletal construction. Calculations are made to determine size and capacity requirements of machine elements. Industrial techniques are applied to detail drawing of various machine parts. Drawing assignments are done extensively on CAD.

Prerequisites: DRAF 130, DRAF 142 and MATH 100 or above

DRAF 230 Jigs, Fixtures, Tools 3 Credit Hours

An advanced process-oriented drafting course in design, layout, and detail of production tooling. Consideration is given to locating, clamping, and tolerancing jigs and fixtures for the manufacture of an industrial part. Standard parts catalogs and library reference material provide guidance in solving design problems. Drawing assignments are done extensively on CAD.

Prerequisites: DRAF 130, DRAF 142 and MATH 100 or above

DRAF 240 Product Drawing 2 Credit Hours

An advanced drawing course that examines the demands of product drafting. The design process is applied in the development of a product with consideration given to its function, material, ergonomics, and its ability to be economically manufactured. Drawing assignments are done extensively on CAD.

Prerequisites: DRAF 130, DRAF 142 and MATH 100 or above

DRAF 255 CAD Advanced Techniques 4 Credit Hours

A CAD course to develop skill in the advanced operations of making three-dimensional drawings. Solids analysis and the manipulation of geometry using auxiliary views are practiced. Concepts of descriptive

geometry and detailing are reviewed and expanded as they relate to CAD model geometry.

Prerequisites: DRAFT 110 and DRAF 120. Completion of or concurrent enrollment in DRAF 130 and DRAF 142.

DRAF 260 Advanced CAD Applications Solid Modeling 4 Credit Hours

A course in three-dimensional, feature-based parametric solid CAD. This course has the student create complex three-dimensional parametric models and then generate two-dimensional views from those CAD models. Single parts and assemblies are developed, constrained, and manipulated in the modeling process.

Prerequisites: DRAFT 110 and DRAF 120. Completion of or concurrent enrollment in DRAF 130 and DRAF 142.

ELEC 103 Basic Electricity 4 Credit Hours

A beginning course covering the fundamentals of electricity as applied to the electrical field. Topics include electron theory, Ohm's Law, circuits, magnetism, inductance, capacitance, and alternating current circuits. Students will use both computer simulation and construct circuits, voltmeters, ammeters, power supplies, signal generators, and oscilloscopes during lab.

Co-requisites: ELEC 100 is recommended but not required

ELEC 106 Basic Electronics 3 Credit Hours

Introduces the fundamentals of solid-state components found in electronic circuits. Topics include solid state diodes, field effect transistors, and bipolar transistors. Students learn the characteristics of these components and some basic circuits in which they are commonly used. A software program is used to simulate various electronic circuits.

Suggested Prerequisites: Completion of or concurrent enrollment in ELEC 103 is recommended

ELEC 115 Digital Circuits I 3 Credit Hours

An introductory course for electronics majors that covers: digital concepts; binary, hexadecimal, and BCD number systems; TTL and CMOS integrated circuit logic gate technology; Boolean algebra; logic tables; combinational logic; monostable and biostable multivibrators; storage registers; asynchronous counters; and the use of digital electronic simulation software. About half of class time is devoted to hands-on laboratory experiments.

ELEC 120 Basic Hydraulics 3 Credit Hours

An introductory course designed to familiarize the student with basic hydraulic principles, laws, components, and symbols. Students are introduced to safety, the use of tools, and procedures in the design, building, testing, troubleshooting, and repair of industrial hydraulic systems. This course includes lectures, demonstrations,

ELEC 145 AC/DC Rotating Machines 3 Credit Hours

An intermediate-level course concentrating on the theory and application of DC motors and generators, AC alternators, and single-phase and three-phase induction motors. Single-phase and three-phase transformers are also covered. This course includes both lectures and laboratory activities with verification of several circuit principles.

ELEC 155 Analog Electronics 1 **3 Credit Hours**

An intermediate-level course covering fundamental circuits and their characteristics, designed to provide a sound understanding of rectifier circuits and amplifier systems. Laboratory work consists of experiments in rectification, filtering, amplification, and coupling.

Prerequisites: ELEC 103

ELEC 185 Pneumatics **3 Credit Hours**

Explores the principles of fluid power pneumatics as they apply to industrial systems. Various pneumatic components are studied with respect to their functions within pneumatic power and control systems. This course will consist of both lecture and laboratory work.

ELEC 190 Electronics Technology Co-op **1 Credit Hour**

An advanced course offering practical work experience in the Electronics Robotics Technology field through participation in a supervised cooperative education program. This course integrates work and classroom experience.

Prerequisites: 16 ELEC credit hours and permission of the instructor

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

ELEC 195 AC/DC Circuit Analysis **3 Credit Hours**

A laboratory-oriented intermediate-level course for electronics majors including the study of DC single- and multi-source circuitry with the application of Loop, Node, and Thevenin's theorems. Also included are AC reactive circuits using both phasors and complex numbers for determining reactance, impedance, and power factor.

Prerequisites: ELEC 103

ELEC 200 Ladder Diagrams and Motor Controls **3 Credit Hours**

Covers the fundamentals of electrical ladder diagrams and motor control circuits. Ladder logic, as well as labels, documentation, and symbology of electrical drawings, is presented with the use of ladder diagrams for troubleshooting. The student designs and draws control circuits for three-phase induction motors and wires these circuits in the motor control lab. Several single phase control circuits are included in laboratory exercises. Also included in the lab exercises are sequencing electro-pneumatic devices. This course is equivalent to TAE 200, which is currently a required course for electrical apprentices. This course will introduce students to the variable frequency drive to control three-phase motor speed.

Prerequisites: ELEC 103

ELEC 205 Analog Electronics II **3 Credit Hours**

An intermediate-level course including discussion of differential amplifiers; operational amplifiers; power amplifiers; oscillators; rf and modulation circuits; voltage-controlled oscillators; phase-locked loops; linear and switching voltage regulators; triggered semiconductor devices such as the SCR, diacs, and triacs; and LASER applications.

Prerequisite: ELEC 155

ELEC 215 Digital Circuits II **3 Credit Hours**

An advanced digital course for electronics majors. Topics include synchronous counters, decoders, storage registers, shift registers, clock and timing circuits, serial and parallel adder circuits, Liquid Crystal Displays and drivers, digital-to-analog and analog-to-digital converters, multiplexers and demultiplexers, memory technology, and the use of digital electronic simulation software. About half of class time is devoted to hands-on laboratory experiments.

Prerequisite: ELEC 115

ELEC 245 Programmable Controllers **3 Credit Hours**

Begins with a thorough discussion of the Allen Bradley PLC-5/25 programmable controller system characteristics, followed by a detailed presentation on using the programmable controller to solve the automated control problem. The ultimate objective is to prepare the student to be able to adapt to any PLC system, regardless of manufacturer, in a minimum of time. The course includes approximately 28 hours of lecture followed by 32 hours of laboratory work. This course is equivalent to TAE 245, which is currently a required course for electrical apprentices.

ELEC 255 Instrumentation Systems **3 Credit Hours**

An intermediate-level hands-on course providing the student with an understanding of, and experience with, instrumentation systems. Transducers studied include LVDTs, strain gages, accelerometers, load cells, magnetic pickups, and temperature detectors. Computer-based data acquisition is used extensively, including use of LabVIEW Graphical programming language.

Prerequisites: ELEC 155

ELEC 260 Automation Controls and Robotics **3 Credit Hours**

A course intended for advanced students with a basic understanding of the programmable controller. Control specifications written by the student for laboratory automation machines and industrial robots are used to implement controls for non-synchronous and synchronous operation of the machine. Specific topics include techniques, terminology, and documentation currently used in automated manufacturing.

Prerequisites: ELEC 245 with a grade of C or better

ELEC 295 Microprocessor Systems **3 Credit Hours**

An advanced-level hands-on course based on the study of the Motorola MC68HC11 microcontroller. Specific topics covered are accumulator instructions, arithmetic and logic instructions, loops and timing instructions, indexed addressing, use of a cross assembler, interfacing with external devices, interrupts, analog-to-digital conversion, timer systems, input capture, EPROM Programming, and serial data exchange.

Prerequisites: ELEC 215

ELI 001 Beginning ESL I **6 Credit Hours**

Using a vocabulary of about 1,000 words, students will be able to communicate in English in speech, reading, and writing according to the situation, purpose, and roles of participants in circumstances centered on the following themes and using the following grammatical

forms. This course is designed to prepare students for ELI 002.

Prerequisites: Students must have writing skills scores of 10-35 and reading skills scores of 10-37 on the ESL COMPASS Test.

ELI 002 Beginning ESL II 6 Credit Hours

This course is designed for non-native speakers of English who need to improve speaking, writing or listening skills. The focus of this course will be on vocabulary, sentence structure and conversational English. There is special emphasis on the use of computer software and the web. Students will role-play and use microphones to improve their pronunciation via software video, and true-to-life activities. This course is designed to prepare students for ELI 003.

Prerequisites: Students must have writing skills scores of 36-41 and readingskills scores of 38-45 on the ESL COMPASS Test.

ELI 003 Intermediate ESL I 6 Credit Hours

This course is designed to introduce students to the parts of speech, sentence variety, paragraph reading, communication in social situations, and cross-cultural differences. Students will have the opportunity to share their views and discussions that revolve around transference and language acquisition. There is special emphasis on the use of computer software and the web. Students will role-play and use microphones to improve their pronunciation via software, video, and true-to-life activities. This course is designed to prepare students for ELI 004.

Prerequisites: Students must have writing skills scores of 42-47 and reading skills scores of 46-56 on the ESL COMPASS Test.

ELI 004 Intermediate ESL II 6 Credit Hours

Using a vocabulary of about 3,600 words, students will be able to communicate in English in speech, reading, and writing according to the situation, purpose, and roles of participants in circumstances centered on the following themes and using the following grammatical forms. This course is designed to prepare students for ELI 005.

Prerequisites: Students must have writing skills scores of 48-54 and reading skills scores of 57-69 on the ESL COMPASS Test.

ELI 005 Advanced ESL College Preparatory Reading and Writing I 6 Credit Hours

This course emphasizes ESL intermediate-level college preparatory reading and writing skills. Students practice study systems, memory strategies, test preparation skills, and organizational skills while improving vocabulary, dictionary skills, understanding of idioms, and spelling. Students practice comprehension skills such as distinguishing general and specific terms, recognizing main ideas, and drawing conclusions. With frequent writing assignments, this course stresses grammatical accuracy, oral and written sentence patterns, and the basic principles and types of paragraph writing. There is special emphasis on the use of computer software and the web and the use of near-native speech. It substitutes for ENG 078 and ENG 091 and, if passed, qualifies the student for ENG 081 and ENG 092 and ELI 006.

Prerequisites: Students must have writing skills scores of 55-70 and reading skills scores of 70-81 on the ESL COMPASS Test.

ELI 006 Advanced ESL College Preparatory Reading and Writing II 6 Credit Hours

This course is designed to provide college preparatory reading and writing instruction at an advanced level. Students learn note taking and test preparation skills and practice specialized reading in social science, literature, and mathematics. Reading also focuses on making inferences, retaining concepts, organizing facts, and making judgments. A major objective of the course is to prepare students to write college-level expository essays free from major sentence structure errors, faulty agreement problems, and inappropriate diction. Students continue their study of troublesome structures such as noun clauses, infinitive phrases, and conditional expressions. Students speak and understand at a near-fluency level. It substitutes for ENG 081 and ENG 092 or ENG 093 and if passed, qualifies the student for ENG 131.

Prerequisites: Students must have writing skills scores of 71-85 and reading skills scores of 82-87 on the ESL COMPASS Test or have passed ELI 005 or both English 078 and ENG 091.

ELI 008 Computer-Assisted Individualized Learning 1 Credit Hour

A lab course designed to assist all college students for whom English is a second language. This course is specifically developed for students who, although admitted to college, realize that their limited English prevents them from achieving the success they desire. Students work with computer software designed for second-language learners first to assess individual needs and then to meet them accordingly. Computer-assisted instruction is offered in pronunciation, reading, writing, grammar, and vocabulary skills. Students receive individual instructor attention. Evaluation is based on successful completion of assigned work, improvement, and attendance. This course does not substitute for any other English course at HFCC. Students may enroll up to the fourth week of classes.

ELI 009 Pronunciation and Conversation for the Non-native Speaker 3 Credit Hours

A developmental course to improve pronunciation and conversational skills of non-native speakers who already have at least intermediate level fluency in English. This course is especially designed for professionals and those students who have learned English primarily from textbooks and who have had little opportunity for oral practice.

Prerequisites: Students must have at least an intermediate-level of fluency in English.

ELI 010 Pharmacy College Admissions Test Preparation -Verbal, Reading, and Writing Sections 2 Credit Hours

This course is designed to prepare students for three sections of the PCAT (Pharmacy College Admissions Test): verbal, reading comprehension and writing. The verbal section measures general, non-scientific word knowledge and usage using analogies and sentence completion. The reading comprehension section measures the ability to comprehend, analyze, and evaluate reading passages on science-related topics and the writing section introduces sample topics along with brief descriptions of the writing subtest and explanations on how the essays are scored. The course contains

diagnostic pretests to determine specific areas of weakness and specific test-taking strategies and tactics to help enhance students' knowledge in the convention of language. The "critical thinking" essay is the focal point of the writing component.

Prerequisite: Students must be enrolled in the Pre-pharmacy Program.

ELI 014 Advanced Reading and Vocabulary 3 Credit Hours

This course is designed to provide ESL college preparatory reading and grammatical review geared to meet the needs of the high-intermediate and advanced students prior to taking ENG 131. The course will enable students to review and reinforce their vocabulary skills, and understanding of idioms and expressions. The course will encourage students to read and appreciate essays, short stories, and novels written by a variety of American authors.

Prerequisites: Students must have writing skills scores of 71 or higher and reading skills scores of 82 or higher on the ESL COMPASS Test. Any English as a second language learner who is currently enrolled in the college and who has successfully completed ENG 078 and ENG 091 is eligible.

ELI 015 Advanced Grammar and Spelling 3 Credit Hours

This course is designed to provide ESL college preparatory grammar and spelling instruction at an advanced level. Students learn basic and complex rules of spelling English words. Instruction also focuses on grammatical structures that are particularly troublesome for second language learners of English.

Prerequisites: Students must have writing skills scores of 55 or higher and reading skills scores of 70 or higher on the ESL COMPASS Test. Any English as a second language learner currently enrolled in the college is eligible.

EMS 100 EMT - Basic Fundamentals 9 Credit Hours

This lecture course presents the technical knowledge and skills necessary for certification as a Basic Emergency Medical Technician (EMT-B). This course focuses on Basic Life Support (CPR), airway management, poisoning emergencies, splinting, disaster management, bleeding, shock, emergency child birth, and psychological emergencies, as well as extrications. This course meets the recommendations of the National Department of Transportation for EMT- Basics. Note that successful completion of this course is required for individuals wishing to take the National Registry Certifying Exam for EMT-Basics.

Prerequisites: Concurrent enrollment in EMS 106 and EMS 109.

Suggested Prerequisites: AH 105 and AH 100

It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All EMS 100 students must have a current CPR card for the Healthcare Provider, American Heart Association, prior to the 8th week of the EMS 100 level courses. (This can be met by completing AH 105.)

EMS 106 EMT - Basic Procedures 2.5 Credit Hours

This laboratory course is designed to develop overall patient management skills required for Basic EMT. This covers equipment, assessment, evaluation, treatment, documentation, communication and more. Subject matter complements the required co-requisite lecture course in EMS 100 (EMT- Basic Fundamentals). This lab focuses on all essential skills required for the successful completion of the National Registry standard practical examination. This

course meets the recommendations of the National Department of Transportation for EMT- Basics.

Prerequisites: Concurrent enrollment in EMS 100 and EMS 109.

Suggested Prerequisites: AH 100 and AH 105

It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All EMS 100 students must have a current CPR card for the Healthcare Provider, American Heart Association, prior to the 8th week of the EMS 100 level courses. (This can be met by completing AH 105.)

EMS 109 EMT - Basic Clinical Externship 2 Credit Hours

This course provides a structured clinical experience in the hospital and in the prehospital emergency medical service environment. The purpose of this course is to provide the students an opportunity to demonstrate learned assessment skills, under supervision, in real-life situations. This course meets the recommendations of the National Department of Transportation for EMT-Basics. Note that successful completion of this course is required for individuals wishing to take the National Registry Certifying Exam for EMT-Basics. Due to the nature of this course, all students must have completed the Health Careers Medical packet and provide proof of health insurance prior to attending clinical.

This course is field-based and is self-scheduled with our Clinical Coordinator after the Mid-Term exams for EMS 100 and EMS 106. Students must successfully pass their Mid-Term Exams, turn in complete Health Packets, proof of health insurance, and have purchased the required uniform pants & shoes prior to being allowed to go to the EMS 109 Clinical. Students will receive information from the Clinical Coordinator during the first week of courses. The Clinical Coordinator will come to see students during the EMS 100 class time since EMS 109 does not formally meet on campus.

Prerequisites: Health forms and hepatitis information (See the Health Careers Division). These packets will also be available to EMS students during the first week of school and will be handed out during the EMS 100 course.

Concurrent enrollment in EMS 100 and EMS 106 is required.

Suggested Prerequisites: AH 100 and AH 105

It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All EMS 100 students must have a current CPR card for the Healthcare Provider, American Heart Association, prior to the 8th week of the EMS 100 level courses. (This can be met by completing AH 105.)

EMS 200 Paramedic I 3 Credit Hours

This lecture course begins with an overview of EMS systems, injury preventions, medical, legal, and ethical issues as well as general patient assessment. The course progresses the student through advanced assessments in the areas of respiratory and neurologic conditions. The course ends with a focus in pathophysiology as it relates to body functions in the presence of disease or injury.

Prerequisites: Acceptance into the Paramedic Program. This is done via a waiting list and is managed through the EMS Program Manager in Health Careers.

Students must have a current NREMT certificate or a current EMT-B MI state license, and have passed the following courses with a C or better: AH 100, AH 120, BIO 233 and BIO 234.

Concurrent enrollment in EMS 205, EMS 210 and EMS 290 is required.

Suggested Prerequisite: It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 205 Paramedic Lab I 3 Credit Hours

This laboratory course is designed to develop overall patient management skills. This covers equipment, assessment, evaluation, treatment, documentation, communication and more. Subject matter is complementary to the student's corresponding lecture courses in EMS 200 and EMS 210. This particular lab focuses on team building techniques, IV and medication administration, and the management of respiratory and cardiac patients.

Prerequisites: Acceptance into the Paramedic Program. This is done via a waiting list and is managed through the EMS Program Manager in Health Careers.

Students must have a current NREMT certificate or a current EMT-B MI state license, and have passed the following courses with a C or better: AH 100, AH 120, BIO 233 and BIO 234.

Concurrent enrollment in EMS 200, EMS 210 and EMS 290 is required.

Suggested Prerequisites: ENG 131 and ENG 132. It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 210 Paramedic II 3 Credit Hours

This lecture course begins with an overview of basic pharmacology and then introduces students to advanced pharmacological concepts. Intravenous access with fluid and medication administration is the main focus leading into full patient assessment and management. The emphasis is placed upon ventilation, airway, and cardiovascular patients. The course builds to the clinical assessment and management of cardiac dysrhythmias and other cardiovascular conditions.

Prerequisites: Acceptance into the Paramedic Program. This is done via a waiting list and is managed through the EMS Program Manager in Health Careers.

Students must have a current NREMT cert. or a current EMT-B MI state license, and have passed the following courses with a C or better: AH 100, AH 120, BIO 233 and BIO 234.

Concurrent enrollment in EMS 200, EMS 205 and EMS 290 is required.

Suggested Prerequisites: ENG 131 and ENG 132. It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 215 Paramedic Lab II 4 Credit Hours

This laboratory course is designed to develop overall patient management skills. This covers equipment, assessment, evaluation, treatment, documentation, communication and more. Subject matter is complementary to the student's corresponding lecture courses in EMS 220 and EMS 230. This particular lab focuses on the management of the cardiac patient, mega-code scenarios, spinal immobilization, traumatic injuries and traumatic resuscitation.

Prerequisites: EMS 200 EMS 205, EMS 210, and EMS 290

These courses must be successfully completed within the immediately

preceding fall semester. All program entry prerequisites, without exception, must be completed by this time.

Concurrent enrollment in EMS 215: EMS 220, EMS 230 and EMS 295 is required.

Suggested Prerequisites: ENG 131 and ENG 32. It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 220 Paramedic III 4 Credit Hours

This lecture course helps students to understand the pathophysiology of respiratory disease and neurological emergencies, then integrates this knowledge with assessment findings to develop a field impression and deliver appropriate treatments. This course dedicates an exceptional amount of time detailing the anatomy, physiology, and pathophysiology of various types of trauma. The emphasis is on treating the "whole patient," avoiding treatment distractions of any singular injury.

This course is field-based and is self-scheduled with our Clinical Coordinator after the Mid-Term exams for EMS 100 and EMS 106. Students must successfully pass their Mid-Term Exams, turn in complete Health Packets, proof of health insurance, and have purchased the required uniform pants & shoes prior to being allowed to go to the EMS 109 Clinical. Students will receive information from the Clinical Coordinator during the first week of courses. The Clinical Coordinator will come to see students during the EMS 100 class time since EMS 109 does not formally meet on campus.

Prerequisites: EMS 200, EMS 205, EMS 210, and EMS 290
These courses must be successfully completed within the immediately preceding fall semester. All program entry prerequisites, without exception, must be completed by this time.

The following courses must be taken concurrently with EMS 220: EMS 230, EMS 215 and EMS 295.

Suggested Prerequisites: ENG 131 and ENG 132. It is recommended that all students place into ENG 131 prior to attending any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 225 Paramedic Lab III 2 Credit Hours

This laboratory course is designed to develop overall patient management skills. This covers equipment, assessment, evaluation, treatment, documentation, communication and more. Subject matter is complementary to the student's corresponding lecture course in EMS 240. This particular lab focuses on pediatric, gynecological and obstetric patients. A large focus is dedicated to patient management that incorporates the use of all ALS skills presented in the program.

Prerequisites: EMS 220, EMS 215, EMS 230, and EMS 295. These courses must be successfully completed within the immediately preceding winter semester.

The following courses must be taken concurrently with EMS 225: EMS 240, EMS 225 and EMS 299.

Suggested Prerequisites: ENG 131 and ENG 132

It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 230 Paramedic IV 4 Credit Hours

This lecture course helps students to understand the pathophysiology of cardiovascular disease and to recognize and treat the associated dysrhythmias. Students will develop a broad understanding of the anatomy and physiology (review), general pathophysiology, assessment and management of emergencies in the areas of hematology, gastroenterology, toxicology and substance abuse, urology and nephrology, behavioral and psychiatric disorders, and environmental emergencies. This course completes with a special section on geriatric considerations.

Prerequisites: EMS 200, EMS 205, EMS 210, and EMS 290. These courses must be successfully completed within the immediately preceding fall semester. All program entry prerequisites, without exception, must be completed by this time.

The following courses must be taken concurrently with EMS 230: EMS 220, EMS 215, and EMS 295.

Suggested Prerequisites: ENG 131 and ENG 132
It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 240 Paramedic V 3 Credit Hours

This lecture course covers specialty topics such as OB/GYN, newborn resuscitation, and pediatrics. 12-Lead ECG is also covered. This includes 12-Lead ECG application and interpretation.

Prerequisites: EMS 220, EMS 215, EMS 230, and EMS 295. These courses must be successfully completed within the immediately preceding winter semester.

The following courses must be taken concurrently with EMS 240: EMS 225 and EMS 299.

Suggested Prerequisites: ENG 131 and ENG 132

It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All-advanced level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 290 Advanced Clinical I 4 Credit Hours

This competency-based course provides the paramedic student with a structured clinical experience in hospital and field environments. Students must complete designated tasks in specific topic areas. This set of clinical rotations emphasizes intravenous access and global patient management for patients in the operating room and the emergency department. Students are also exposed to a variety of cardiac diseases and dysrhythmias.

Prerequisites: Acceptance into the Paramedic Program. This is done via a waiting list and is managed through the EMS Program Manager in Health Careers.

Note: Minimally, students must have a current NREMT certificate or a current EMT-MI state license, and have passed the following courses with a C or better: AH 100, AH 120, BIO 233 and BIO 234.

The following courses must be taken concurrently with EMS 290: EMS 200, EMS 205 and EMS 210.

Suggested Prerequisites: ENG 131 and ENG 132. It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 295 Advanced Clinical II 4 Credit Hours

This competency-based course provides the paramedic student with a structured clinical experience in the hospital and field environments. Students must complete designated tasks in specific topic areas. This set of clinical rotations emphasizes airway management skills in the operating room and in the field, global cardiac patient management in the intensive care unit, neurologic assessments and trauma patient management in a variety of clinical settings.

Prerequisites: EMS 200, EMS 205, EMS 210, and EMS 290. These courses must be successfully completed within the immediately preceding fall semester. All program entry prerequisites, without exception, must be completed by this time.

The following courses must be taken concurrently with EMS 295: EMS 220, EMS 230, and EMS 115.

Suggested Prerequisites: ENG 131 and ENG 132. It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

EMS 299 Advanced Clinical III 4 Credit Hours

This competency-based course provides the paramedic student with a structured clinical experience in the hospital and field environments. Students must complete designated tasks in specific topic areas.

This set of clinical rotations emphasizes a multitude of situations experienced in an urgent care facility. Students focus on pediatric and obstetrical/gynecological patients. Students who need extended rotations to complete tasks from earlier in the year (who received permission to continue on) can do so after the requisite skills for this rotation have been met. Students who do not need extended rotations may (depending on contracts and availability) choose a “global” rotation at a specialty site. This may include any one of the following (based on contracts and availability): flight team, intubation animal lab, burn unit, advanced morgue, human cadaver lab, geriatric facility, dialysis lab, cancer center, or psychiatric center.

Prerequisites: EMS 220, EMS 215, EMS 230, and EMS 295. These courses must be successfully completed within the immediately preceding winter semester.

The following courses must be taken concurrently with EMS 299: EMS 225 and EMS 240.

Suggested Prerequisites: ENG 131 and ENG 132

It is recommended that students place into ENG 131 prior to attempting any EMS course.

Note: All advanced-level EMS students must maintain a current CPR card for the Healthcare Provider, American Heart Association.

ENG 078 Developmental Reading for the Speaker 3 Credit Hours

A developmental course to prepare non-native speakers to read at an acceptable reading level for ENG 081. This course is required for all non-native speakers whose scores on the ESL COMPASS Reading Test fall between 70-81. These students must take ENG 078 prior to or concurrently with ENG 091 or ENG 092. Laboratory work is required.

ENG 079 Basic Reading 3 Credit Hours

A developmental course to prepare native speakers to read at an acceptable level for ENG 081. Students who are placed into ENG 079 by

their ASSET/COMPASS test scores must take it before or concurrently with their first developmental writing course. Laboratory work is required.

ENG 081 Developmental College Reading 3 Credit Hours

A developmental course designed to prepare students to read at an acceptable level in ENG 131 and 132 or 135. This course is required of students who must enroll in ENG 093 and whose score on the ASSET Reading Test or the COMPASS test is below the cut-off established by the English Division. Students required to take this course must pass.

ENG 083 College Reading Laboratory 1 Credit Hour

A course designed to improve reading proficiency at all levels with the aid of laboratory instructors, computer software, handouts, and other Lab materials. Any student may enroll in these laboratory courses where individualized attention is given based upon diagnostic test results. Students will spend a minimum of 17 hours a semester in the laboratory for ENG 083.

ENG 084 College Reading Laboratory 2 Credit Hours

A course designed to improve reading proficiency at all levels with the aid of laboratory instructors, computer software, handouts, and other Lab materials. Any student may enroll in these laboratory courses where individualized attention is given based upon diagnostic test results. Students will spend a minimum of 32 hours a semester in the laboratory for ENG 084.

ENG 086 College Writing Laboratory 1 Credit Hour

This Learning Lab course can be elected autonomously to improve writing skills or can be taken to supplement HFCC composition courses such as ENG 131. This independent study course, which accommodates the students' skill levels, is designed to improve writing proficiency. Students will receive individual attention in once-a-week conferences with the instructor and will work with computer-assisted materials, audiovisual programs, and teacher-prepared handouts to overcome rhetorical, stylistic, and grammatical problems with writing. Evaluation is based on successful completion of assigned work, improvement, and attendance. This course does not substitute for any other English courses at HFCC.

ENG 088 Basic Writing: Sentences to Paragraphs 3 Credit Hours

ENG 088 is a developmental writing course required of students whose scores on the ASSET or COMPASS Writing Test indicate that skills need to be learned before they enroll in ENG 093. Students will learn several sentence patterns, some grammatical and mechanical skills, and various methods for developing and organizing paragraphs. Writing a short essay, supplemental laboratory work and conferences will be required. Students must earn a grade of S (Satisfactory) before enrolling in ENG 093.

Prerequisite: COMPASS writing score at or below 22 or ASSET writing score at or below 31

ENG 091 Basic Writing for the Non-Native Speaker: Sentences to Paragraphs 3 Credit Hours

ENG 091 is a three-credit hour, generally nontransferable developmental writing course. It is designed to prepare non-native speakers for ENG 092 or ENG 093. Students will learn several sentence patterns, grammatical and mechanical skills, and various methods for developing and organizing paragraphs. Supplemental laboratory assignments and conferences will be required. A grade of S (Satisfactory) is required for entry into ENG 092 or ENG 093.

Prerequisites: Students must receive ESL COMPASS Writing Test scores that fall between 55 and 70.

Co-requisites: Depending on their placement test scores, students may be required to take a reading course in conjunction with ENG 091

ENG 092 Basic Writing for the Non-Native Speaker 3 Credit Hours

A developmental course for students who speak English as a second language. It is designed to prepare students to write compositions meeting ENG 131 and ENG 132 objectives. In addition to reviewing the types of skills taught in ENG 091, students will learn more advanced grammatical and mechanical skills and sentence patterns. These skills will be demonstrated in several types of short essays and other assignments. Supplemental laboratory work and conferences will be required. Students must earn a grade of S (Satisfactory) before enrolling in ENG 131.

ENG 093 Basic Writing: Paragraphs to Essays 3 Credit Hours

This course is intended for students whose placement scores indicate the need for instruction or review in order for them to write acceptable college compositions in ENG 131. Various methods such as lectures, group discussions, textbook exercises, peer review, conferences, and lab work will be used to help students improve their expository writing and study skills. To facilitate mastery of writing, students will receive study skills instruction. This course does not substitute for ENG 131, ENG 132 or ENG 135. Students must earn a grade of S (Satisfactory) before enrolling in ENG 131.

Prerequisite: Students must have writing skills scores of 32-43 on the ASSET Test or 23-77 on the Compass Test.

Co-requisite: Students who have not scored at least 43 on the ASSET Reading Test or at least 84 on the COMPASS Reading Test must be concurrently enrolled in ENG 081 or they must have passed that course.

ENG 121 Assisting with Elementary Reading 3 Credit Hours

This course is designed for individuals who are either working in elementary classrooms as paraprofessionals or who desire to be employed in that capacity. It introduces students to various methodologies used to teach and assess elementary reading and acquaints them with basal series, content texts, trade books, and teacher-made materials. Various tutorial methods, techniques to aid English as Second Language learners, and methods to assist teachers will be studied.

Prerequisite: A satisfactory score on the English placement test or a grade of S (Satisfactory) in ENG 093 and a grade of S (Satisfactory) in ENG 081 is required.

Note: ENG 121 fulfills HFCC General Education Outcomes for Critical Thinking and Problem Solving.

ENG 131 Introduction to College Writing 3 Credit Hours

ENG 131 is the first college-level composition course in a two-semester sequence, emphasizing critical reading, critical thinking, and critical writing skills. Through readings students will explore various topics and various types of writing. Through essays, written in and out of class, students will demonstrate the development of a clear main idea through well-organized supporting material, written in correct, effective English. To meet the above goals, a writing assignment integrating analysis and summary of an article and a persuasive paper synthesizing multiple sources will be included.

Prerequisites: A satisfactory score on the English placement test or a grade of S (Satisfactory) in ENG 092 or ENG 093, and a grade of S (Satisfactory) in ENG 081 if required.

Note: This course meets the graduation requirement for General Education Outcome 4 and 5: Information Literacy and Written Communication.

ENG 131 Honors: Introduction to College Writing 3 Credit Hours

ENG 131 (Honors) is the first college-level composition course in a two-semester sequence, emphasizing critical reading, critical thinking, and critical writing skills. Through readings students will explore various topics and various types of writing. Through essays, written in and out of class, students will demonstrate the development of a clear main idea through well-organized supporting material, written in correct, effective English. To meet the above goals, a writing assignment integrating analysis and summary of an article and a persuasive paper synthesizing multiple sources will be included. This assignment will focus on a theme related to the Honors Colloquium topic.

Prerequisites: A satisfactory score on the English placement test or a grade of S (Satisfactory) in ENG 092 or ENG 093, and a grade of S (Satisfactory) in ENG 081, if required.

ENG 132 College Writing and Research 3 Credit Hours

ENG 132 is the second course in the two-semester college-level reading and writing sequence that begins with ENG 131. The course further instructs students in the reading, writing, and critical thinking skills required at four-year colleges and universities and in the workforce. Students will learn how to select, evaluate, analyze, synthesize, reference, and document source material, including a variety of literary works that explore diverse themes and cultural perspectives. Students will then use the source materials to complete a college-level research paper.

Prerequisites: A grade of C- or better in ENG 131

Note: This course meets the graduation requirement for General Education Outcome 4 and 5: Information Literacy and Written Communication.

ENG 132 Honors: College Writing and Research 3 Credit Hours

ENG 132 (Honors) is the second course in a two-semester college-level reading and writing sequence that begins with ENG 131. The course further instructs students in the reading, writing, and critical thinking skills required at four-year colleges and universities and in the workforce. Students will learn how to select, evaluate, analyze, synthesize, reference, and document source material, including a variety of literary works

that explore diverse themes and cultural perspectives relating to the Honors Colloquium topic. Students will then use the source material to complete a college-level research paper.

Prerequisites: A grade of C- or better in ENG 131

ENG 135 Business and Technical Writing and Research 3 Credit Hours

Designed for students interested in developing professional workplace communication skills, ENG 135 satisfies the Information Literacy and Written Communication General Education graduation requirements for many HFCC degree programs. Students design documents such as resumes, letters, memos, instructions, proposals, and an extensive, research-based documented report for the kinds of readers they will address as professionals. This course should be especially valuable for students pursuing careers in business, computer science, automotive technology, allied health, and other technical fields. It transfers to many four-year institutions.

Prerequisite: ENG 131 with a grade of C- or better

Note: This course meets the graduation requirement for General Education Outcome 4 and 5: Information Literacy and Written Communication.

ENG 139 Creative Writing 3 Credit Hours

An elective writing course that provides students at any level of experience a firm grasp of the fundamentals of imaginative self-expression. The assignments are diverse, ranging from traditional to contemporary forms of poetry, fiction, drama, and imaginative non-fiction, in order to offer students a broad range of new opportunities for development of their own chosen subjects, and new ways to polish their own personal style.

Prerequisites: A satisfactory score on the English placement test or a grade of S (Satisfactory) in ENG 093 and a grade of S (Satisfactory) in ENG 081, if required.

ENG 231 Introduction to Literature: Poetry and Drama 3 Credit Hours

Focuses on reading, discussion, and written analysis of poems and plays in order to develop an understanding and enjoyment of various authors and works. The poems are mostly British and American, but may, as well, be drawn from other literary traditions; the plays range from ancient Greek tragedy to Shakespeare and modern drama. Video and audio recordings may supplement readings and lectures.

Prerequisite: A grade of C or better in ENG 131.

ENG 232 Introduction to the Short Story 3 Credit Hours

Focuses on reading, discussion, and written analysis of short stories in order to develop an understanding and enjoyment of various authors and works. Stories are drawn from various literary traditions, although emphasis may be placed on the American tradition, which has been especially productive and influential. Emphasis may also be placed on the historical development of the short story as a distinct literary genre.

Prerequisites: A grade of C or better in ENG 131.

ENG 233 Introduction to the Novel 3 Credit Hours

Examines how novels both reflect and contribute to the development of the novel as a genre. Students will read major novelists primarily

from the nineteenth and twentieth centuries. The titles chosen exemplify important developments and themes in prose fiction, each discussed as a statement of a particular author, a reflection of the times in which the work was written, and an enduring expression of human experience.

Prerequisite: A grade of C or better in ENG 131.

ENG 234 Topics in Literature 3 Credit Hours

A course in literature organized around a specific theme, genre, or field of inquiry. The student may take the course twice for credit, six hours maximum, but only if the topic is different.

Prerequisite: A grade of C or better in ENG 131.

ENG 235 American Literature Before 1900 3 Credit Hours

Through discussion and written analysis, ENG 235 encourages the reading of literary works in their entirety in an attempt to understand the meaning of the texts and their relation to the development of American thought and tradition. Authors include Emerson, Thoreau, Hawthorne, Melville, Dickinson, Whitman, Twain, and Crane. Biographical and critical information is obtained through lectures and reference reading.

Prerequisite: A grade of C or better in ENG 131.

Note: This course meets the graduation requirement for General Education Outcome 1: American Society, Events, Institutions and Cultures.

ENG 236 American Autobiography 3 Credit Hours

This course will introduce students to published essays, narratives, autobiographies, memoirs, journals, diaries and essays by Americans who have significantly influenced the social, cultural, and political composition of America. This course will also examine issues such as gender inequality and religious institutions that compose American society.

Prerequisite: A grade of C or better in ENG 131.

Note: This course meets the graduation requirement for General Education Outcome 1: American Society, Events, Institutions and Cultures.

ENG 237 American Literature Since 1900 3 Credit Hours

Through discussion and written analysis, ENG 237 encourages the habit of reading literary works in their entirety in an attempt to understand the meaning of the texts and their relation to the development of American thought and tradition. Themes include alienation, materialism, race relations, identity, conformity/rebellion, technology, environment, and war. Biographical and critical information is obtained through lectures and reference reading.

Prerequisite: A grade of C or better in ENG 131.

ENG 239 Reading in Modern American Poetry 3 Credit Hours

A survey of modern American poetry emphasizing the period since World War II and including such poets as Robert Frost, Wallace Stevens, William Carlos Williams, Frank O'Hara, Elizabeth Bishop, Anne Sexton, Imamu Amiri Baraka, Gary Snyder, and Allen Ginsberg. Students will learn the techniques and strategies American poets developed to write powerfully of the vast social and cultural changes affecting modern Americans' lives.

Prerequisites: A grade of C or better in ENG 131.

ENG 241 Shakespeare 3 Credit Hours

An introduction to the works of William Shakespeare, this course includes reading, discussion, and written analysis of six to eight of Shakespeare's comedies, histories, and tragedies. Readings can also include Shakespeare's non-dramatic poetry. Students also have the opportunity to observe, analyze, and evaluate his works in performance, either live or on film. Secondary readings, such as literary criticism and historical context, may also be introduced.

Prerequisite: A grade of C or better in ENG 131.

ENG 243 Women's Lives in Literature 3 Credit Hours

Women's Lives in Literature is a course emphasizing the reading and analysis of writing by (or perhaps about) women from the Middle Ages to the present. The materials include drama, poetry, novels, short stories, diaries, memoirs, letters, fantasy, and others. Students will have the opportunity to explore the interaction of dominant and marginal cultures as reflected in literature and the relationship of their individual experiences to women's lives as portrayed in literature.

Prerequisite: ENG 131.

ENG 245 The Bible as Literature 3 Credit Hours

Reading, discussion, and written analysis of major literary selections from the Old and New testaments. The Bible will be studied not as a religious document but as a source of ideas and style reflected in various works of world literature.

Prerequisite: A grade of C or better in ENG 131.

ENG 246 Introduction to Children's Literature 3 Credit Hours

Introduces the forms, themes, history, and uses of literature written for children ages three to twelve. Students learn to evaluate and select literature critically and understand its use in preschool, elementary, and middle school classrooms. Genres to be studied include traditional fiction/folktales, contemporary realistic fiction, picture books, fantasy/science fiction, historical fiction, biography, nonfiction, and poetry/verse.

Prerequisite: A grade of C or better in ENG 132 or ENG 135.

ENG 248 African American Literature 3 Credit Hours

A survey of African American Literature from its eighteenth-century beginnings to the modern era, emphasizing the reading and analysis of representative texts in all genres, including poetry, slave narrative, fiction, essay, and drama.

Prerequisite: A grade of C or better in ENG 131.

ENG 295 Directed Study in English 1 Credit Hour

A course allowing advanced study under the direction of a member of the English Division faculty. This course may be taken only after consultation with the instructor to determine the course content and the credit hours appropriate for the chosen project.

Prerequisites: A grade of C or better in ENG 131 and permission of the Associate Dean.

ENG 296 Directed Study in English 2 Credit Hours

A course allowing advanced study under the direction of a member of the English Division faculty. This course may be taken only after

consultation with the instructor to determine the course content and the credit hours appropriate for the chosen project.

Prerequisites: A grade of C or better in ENG 131 and permission of the Associate Dean.

ENG 297 Directed Study in English 3 Credit Hours

A course allowing advanced study under the direction of a member of the English Division faculty. This course may be taken only after consultation with the instructor to determine the course content and the credit hours appropriate for the chosen project.

Prerequisites: A grade of C or better in ENG 131 and permission of the Associate Dean.

ENGR 130 Introduction to Engineering 3 Credit Hours

Instructional course work and projects deal with real-world application of teamwork, technical, economic, safety, environmental, social and ethical aspects of engineering as related to engineering problems. Technical communication skills include reporting of a team on engineering projects. Discussion of engineering ethics is presented.

Prerequisite: Pre-engineering enrollment; MATH 110, MATH 112 or high school algebra and trigonometry

Note: Recommended for students interested in pursuing a career in engineering.

ENGR 201 Science of Materials 3 Credit Hours

An introductory course in the science of engineering materials. The properties of metals, alloys, polymers, and ceramics are correlated with their internal structure (atomic, crystal, micro-, and macro-) and service environment (mechanical, chemical, thermal, magnetic, and radiation effects).

Prerequisites: MATH 180 and CHEM 141

Suggested Prerequisites: Concurrent enrollment in PHYS 231 and MATH 183 is recommended

ENGR 232 Statics 3 Credit Hours

Covers basic concepts and principles of statics including an introduction to the mechanics of materials. Among the topics covered are vector algebra, equilibrium of mechanical systems, centroids, moments of inertia, stress and deflections of beams under load, statically indeterminate loads, and virtual work.

Prerequisites: MATH 180 and PHYS 231

Note: Recommended for students transferring to engineering school.

ENGR 233 Dynamics 3 Credit Hours

Covers basic concepts and principles of dynamics with the application of Newton's Laws of Motion to engineering. Topics covered include kinematics, kinetics of particles and rigid bodies, equations of motion, impulse-momentum principles, impact and work-energy principles, and oscillations.

Prerequisite: ENGR 232

Note: Recommended for students transferring to engineering school.

ENT 100 Basic Workplace Skills (PO) 1 Credit Hour

This course is designed to prepare students to function effectively as a multi-level skilled trade or service technician in the energy/

maintenance technology/ trade and apprentice fields with emphasis on basic workplace skills and knowledge. The course will emphasize the hands-on aspect of basic skills where possible in a workplace laboratory setting. The course is designed to include the immediate and essential workplace skills required of installation, service, operation and maintenance technicians entering various multiskilled operation and maintenance technician fields. This course covers general workplace and worker personal and employment skills along with safety, hazardous or environmental concerns for workers on the job.

ENT 101 Introduction to Energy Technology 2 Credit Hours

Introduces students to Energy Technologies and Renewable Energies by providing the study of basic energy conversion systems, differing energy systems and measurement of their basic quantities. The student is introduced to and uses the basic methods for measuring, monitoring, calculating, and analyzing pressure flow, temperature, humidity, electrical, pneumatic, gas analysis, power systems, energy conversions and types related to natural gas, solar energy, fossil fuels, wind, nuclear energy, biomass energy, thermal energy, fuel cells and energies of the future.

Prerequisites: Basic exposure and introduction course to Energy Technology or Fundamentals of Renewable Energies.

ENT 103 DC and AC Electricity 3 Credit Hours

This is an introductory course in electricity, covering the fundamentals of DC and AC circuits and circuit calculations. Included are electrical definitions, units of electrical measure, series and parallel resistive circuits, capacitance, and inductance. The use of meters and oscilloscopes will be included during lab experiences along with an introduction to basic wiring and the troubleshooting of circuit faults.

ENT 104 Heating Technology (PO) 4 Credit Hours

Prepares students to be multi-functional entry-level service technicians on residential and light commercial gas, oil, and electric forced air and hot water heating systems and equipment. Covers combustion; venting; piping; applied heating system design and installation; electric and electronic microprocessor-based controls; high-efficiency and mid-efficiency equipment; planned service procedures; applied electrical troubleshooting; and reading, sketching, and writing electrical schematic diagrams for service, installation, and troubleshooting. Lab experiences duplicating the workplace are approximately half of the course and include planned service checking; troubleshooting; and installation, repair, and replacement of components using appropriate tools and instruments.

Prerequisites: ENT 101 and completion of or concurrent enrollment in ENT 103

ENT 105 Introduction to RACH (PO) 2 Credit Hours

An introductory course in heating, air conditioning, and refrigeration, providing the student with basic principles in each of the major subject areas and orientation to the service and maintenance technician's job in the field. Practical laboratory sessions involve copper tubing, test instruments, tools, and equipment.

Prerequisites: Completion of or concurrent enrollment in ENT 103

ENT 106 Sheet Metal Fabrication for Systems 2 Credit Hours

An introductory, hands-on course that exposes students to the process of layout and fabrication of standard sheet metal fittings. The student, through the use of demonstrations and laboratory exercises, constructs a minimum of twelve standard fittings. This course is 80% hands-on with the remainder concentrating on layout, tools, and safety.

ENT 108 Introduction to Heating and Cooling Codes 2 Credit Hours

A basic course which introduces the student to the Michigan Mechanical and AGA Gas Codes which replaced the BOCA codes. This course benefits the student requiring some knowledge of code early in his or her preparation for job-entry-level skills in the Heating and Cooling and Power Engineering Certificate programs.

Prerequisites: ENT 104 and ENT 113, or permission of the instructor

ENT 109 HVAC Installation and Start-Up 2 Credit Hours

A course to provide the Entry-Level HVAC Technician the basic skills, hands-on, for installing and starting up an HVAC system. The course will emphasize practical applications of installation and start-up techniques. It will provide examples and simulations of projects that will require knowledge in sheet metal construction and installation, basic electricity and refrigeration as well as the procedures and safety steps for effectively installing and starting up HVAC systems. Good for hands-on experience, 80% lab experience.

Prerequisites: ENT 101, ENT 103, ENT 104, ENT 105, ENT 106, ENT 108 and ENT 113

Note: Course offered: Mondays, 3:30 p.m. - 5:30 p.m.

ENT 113 Refrigeration Technology 4 Credit Hours

Designed to prepare students to be multi-level service technicians in the refrigeration field, covering basic refrigeration system design and components and equipment for various domestic, residential, and light commercial systems. Subjects include refrigerant characteristics; charging; evacuation, dehydration, and recovery; use of refrigeration system tools, materials, and instruments; and installation and repair of these systems. Emphasis is on hands-on troubleshooting and maintaining both mechanical and electrical refrigeration system. ARI Refrigeration Certification handling test conducted last day of the class.

Prerequisites: ENT 101, ENT 103, ENT 104 and ENT 105

ENT 119 Air Conditioning Technology 4 Credit Hours

Prepares students to be multi-level service technicians on residential and light commercial combination of heating and air-conditioning systems. This course covers system design and layout; equipment selection; duct system sizing, venting, air balance, and adjustment; air quality control; psychrometrics of air-conditioning systems; and applied installation and repair of total systems. Emphasis is on hands-on troubleshooting and maintaining residential and light commercial total systems. Students use past-gained knowledge of troubleshooting HVAC equipment through learned process functions of mechanical, electrical components and electrical diagrams.

Prerequisites: ENT 101, ENT 103, ENT 104, ENT 105 and ENT 113

ENT 124 Construction Blueprint Reading 2 Credit Hours

This is a print-reading course that familiarizes students with skilled trades, construction industry/trades, architecture including: Energy (HVAC) Technology, plumbing, pipefitting, electrical, carpentry, steel and other related construction technical and trades. Included are project management and estimating. Topics will include an introduction to print reading, working fractions and decimals, measurement, and volume measurement. Of great importance to the trades and technical industry is learning how to use fractional rulers and tape measures. This course includes exposure to lines, symbols, and differing types of drawing views along with working notes and the importance of title blocks. This course differs from that of machine blueprint reading as it is related to the construction trades and technical trades.

ENT 141 Power Engineering I- Energy Conversion Fundamental (PO) 2 Credit Hours

A basic course in applied power plant fundamentals which is designed to prepare students to take necessary boiler and steam licensing exams and to prepare them to function effectively as multi-functional power or process plant engineers, boiler operators or heating plant operators. Students study heat fundamentals, basic power plant science, operation and maintenance through applying these principles and related power and heating plant operational concepts to "live" workplace situations. Students operate equipment in a state-of-the-art cogeneration power plant laboratory setting. Lab experiences, which duplicate workplace skills and meet requirements of National Skill Standards, account for 40-60% of the course.

ENT 145 Power Engineering II - Boilers and Auxiliaries (PO) 4 Credit Hours

A comprehensive applied technology course designed to prepare students for necessary boiler and steam licensing exams and to function effectively as multi-functional facilities, power or process plant engineers, boiler operators, and heating plant operators. Students learn to operate and maintain boilers and auxiliaries and must operate, service, and maintain boiler and auxiliary equipment in a state-of-the-art cogeneration power plant laboratory setting. Lab experiences, which duplicate the workplace and meet the National Skills Standards, account for half the course.

Prerequisite: ENT 141

ENT 201 Applied Instrumentation: Electronics 3 Credit Hours

An intermediate course designed to provide an overview of electronic instruments. Emphasis is placed on the operation and use of electronic instruments by use of application exercises for specific components. Introduction to microprocessor uses is provided.

Prerequisite: ENT 103

ENT 212 Light Commercial Heating Systems (PO) 3 Credit Hours

An advanced college-level heating course on large commercial/ industrial burners and light commercial rooftop systems. This course covers installation, repair, troubleshooting, and service of burners and rooftop systems; flame safeguard control and applications; and boiler

and burner control systems. Students study, sketch, wire, and operate systems in the laboratory, which accounts for 50% of the course.

Prerequisites: ENT 103, ENT 104 or ENT 141 and ENT 145, or departmental permission

ENT 216 Light Commercial Refrigeration Systems 3 Credit Hours

An advanced course in the service and installation of light commercial refrigeration and air conditioning units. Laboratory experience (50% of the course) includes installation, repair, replacement of major and minor components, and troubleshooting of such items as terminal air conditioning units, rooftop units, ice machines, walk-in coolers, and retail store equipment. Students make extensive use of electrical schematic diagrams, manufacturers' service information, service tools, equipment, and instruments.

Prerequisites: ENT 113 or departmental permission

ENT 219 RACH Light Commercial Systems 3 Credit Hours

An advanced course continuing the study of light commercial heating, air conditioning/cooling systems. The focus is on the lash up, installation, and troubleshooting of all associated controls and control packages. Through lectures and laboratory experiences, students gain knowledge of the functions, operations and components in relation to pneumatic, electronic and DDC (Direct Digital Control), building control systems.

Prerequisites: ENT 113 and concurrent enrollment in ENT 212 and ENT 216 or departmental permission

ENT 230 Michigan Mechanical Contractor 4 Credit Hours Licensing Examination Preparation

Lectures and a variety of testing exercises prepare and help potential contractors qualify to take the Michigan Mechanical Contractor's License Examination. Taken with qualifications, orientation and pre-examination work to prepare for examinations in the classifications of laws, rules and regulations, refrigeration, limited heating service, limited refrigeration and air conditioning service, and HVAC equipment.

Prerequisites: The student will first demonstrate that he or she has the necessary work experience and preparation to qualify for the Michigan Mechanical Contractor Licensing Examinations.

ENT 231 Applied Digital Control Systems 3 Credit Hours

The use of feedback, feedforward, ratio, and Cascade control is covered in appropriate settings. Electronic instrumentation is studied with solid-state electronics and the use of integrated circuitry, as well as digital logic as an introduction to microprocessor control. Final control elements and sizing of control-valves are also covered.

Prerequisites: ENT 103 and ENT 201

ENT 235 Industrial Controls Calibration Techniques 3 Credit Hours

Covers the principal aspects of measurement, tuning and calibration. Techniques are demonstrated through laboratory demonstrations and experiences. Emphasis is placed on situations using computer simulations, industrial gauging and standard instrument practices.

Prerequisites: ENT 201

ENT 240 Control Systems: Microprocessor 3 Credit Hours Based

An introduction to microprocessor application in process control: integration of microprocessors with combinational instrumentation and control systems. Appropriate languages and computer programs are covered. Computer interface with process instruments and maintenance are emphasized.

Prerequisites: ENT 101 and ENT 235

ENT 241 Refrigeration Operator License Review (PO) 3 Credit Hours

Designed for refrigeration operators seeking a license. This course covers the fundamentals of operation and maintenance, focusing on license examination subjects such as knowledge of basic refrigeration, problems in heat transfer and refrigeration system operation, and knowledge of special systems. Students answer questions, work problems, and sketch components and systems.

Prerequisites: ENT 105 (Students may take the MFMT 241 online course to meet objectives provided by this course)

ENT 248 Power Engineering First Class License Review (PO) 3 Credit Hours

An advanced steam license review course covering power engineering subjects including basic thermodynamics, boiler operation and maintenance, boiler and plant efficiency and emissions control, pumps, auxiliaries, power plant equipment and accessories, turbines, engines, and compressors. It includes a review of national, state, and local steam and boiler codes. Problem solving and lab experiences are included.

Prerequisites: Departmental permission (Students may take the MFMT 248 online course to meet objectives provided by this course).

ENT 256 Power Engineering III Steam Plant Operation Lab (PO) 4 Credit Hours

An applied technology course designed to prepare students to take boiler and steam licensing exams and to function as multi-functional power or process plant engineers, prime mover operations, electric generation equipment operators, and cogeneration plant operators. Students learn to operate and maintain turbines, engines, and plant auxiliaries and accessories and are required to operate, service, and maintain turbine/cogeneration and auxiliary equipment in a state-of-the-art cogeneration power plant laboratory setting. Lab experiences, which duplicate the workplace and meet National Skill Standards, may account for half of the course activities depending upon the students' backgrounds.

Prerequisites: ENT 141, completion of or concurrent enrollment in ENT 145 or permission of instructor.

ENT 259 Power Engineering IV-Plant/Building Operations & Maintenance (PO) 2 Credit Hours

An advanced course in applied heat/power plant operation and maintenance designed to prepare students to take boiler and steam licensing exams and to function as multifunctional power or process plant engineers, boiler operators, or heating plant operators. Students learn the operation and maintenance of heat systems and equipment through application of principles and concepts in workplace situations.

Prerequisites: ENT 141, ENT 145 or concurrent enrollment, or permission of the instructor

ENT 260 Energy Systems Management (PO) 4 Credit Hours

A course in the technical, economic, and regulatory aspects of effective energy management, providing in-depth coverage of the Energy Policy Act and offering a comprehensive learning and problem-solving forum for those who want a broader understanding of the latest energy cost-reduction techniques and strategies. Laboratory applications emphasize both residential and commercial energy systems with extensive use of software simulations through assigned energy sites.

Prerequisites: ENT 101, ENT 103, ENT 104, ENT 105, ENT 108, ENT 113, ENT 119 and ENT 219.

ENT 265 Energy Systems Design 5 Credit Hours

A course presenting the design principles of heating, cooling, and hydronic systems. Topics include both residential and commercial heat loss and gain, equipment selection, duct design, piping design, and air terminal selection.

Prerequisites: ENT 101, ENT 103, ENT 104, ENT 105, ENT 108, ENT 109, ENT 113, ENT 119 and ENT 219.

ENT 267 Bidding and Estimating for the Mechanical Contractor 2 Credit Hours

A course to provide the Mechanical Contractor the basic skills for conducting an estimate for mechanical construction. The course will emphasize practical applications of estimating techniques. There will be a review of basic computer skills in Windows, Word, Excel and software functions. Blueprint reading skills will also be covered. The course will use commercially available software for setting-up and detailing assigned projects.

ENT 269 Project Management 2 Credit Hours

This course relates to a project management approach to planning, scheduling, and controlling a project through the use of case study methods analysis. Participants will understand new and best project management techniques, organization principles, and group synergism. The course will use various Microsoft software programs.

Prerequisite: None; however, suggested completion of or concurrent enrollment in HFCC business classes related to Microsoft computer programs - Word, Excel, PowerPoint, and Project.

FRE 131 Elementary French I 4 Credit Hours

Trains the student in pronunciation as well as the basic grammatical principles necessary for comprehending and expressing simple ideas in both spoken and written French. Class assignments are complemented by CD-Roms, tapes, and videos.

FRE 132 Elementary French II 4 Credit Hours

A continuation of FRE 131 with the addition of short stories. Class assignments are complemented by CD-Roms, tapes, and videos.

Prerequisites: FRE 131, one year of high school French, or permission of the instructor

FRE 141 Elementary Conversation 3 Credit Hours

An enrichment course entirely conducted in French designed for students wishing to expand active vocabulary, improve oral facility, and write simple compositions. Class discussions are based on assigned readings, student reports, and current events. This course is

transferable but is not a substitute for a basic language requirement. It can be taken concurrently with FRE 231 or FRE 232.

Prerequisites: Two years of high school French, a minimum of one year of college, or permission of the instructor

FRE 231 Second Year French 4 Credit Hours

French 231 includes review and application of grammatical principles by means of oral and written exercises. Students practice pronunciation and comprehension of spoken French. Reading both in and out of class promotes speed and comprehension. Class assignments are complemented by CDs, DVDs, tapes and videos.

Prerequisite: FRE 132, three years of high school French, or permission of the instructor

FRE 232 Second Year French, Continued 4 Credit Hours

A continuation of FRE 231, using materials of increasing difficulty. Emphasis is on oral discussion of contemporary life and literature. Students write weekly essays. Class assignments are complemented by CD-Roms, tapes, and videos.

Prerequisite: FRE 231, three years of high school French, or permission of the instructor

FRE 296 Directed Study in French 2 Credit Hours

Individual study of a topic of special interest in the area of French for the student, to be undertaken under the direction of a member of the French staff. Appropriate methods of research are applied, and the results reported in a research paper. This class may be repeated once for credit.

Prerequisites: Open to any student who has completed FRE 132

FS 201 Fire Investigation: Origin and Causes 3 Credit Hours

This course presents the fundamentals of arson investigation. The focus is on types of fires and the techniques used to determine if they are accidental or incendiary in nature. Emphasis is placed on investigation and preservation of evidence. The course content follows the recommendations set forth by the NFPA 921 standard. The MI Fire Fighters Training Council recognizes the course as equivalent to the National Fire Academy course, Arson Detection for the First Responder.

Note: This course is offered at the availability of the staff. In general, the course is offered in the fall.

GEOG 131 Principles of Physical Geography 4 Credit Hours

An overview examining the spatial distribution of the physical environment and major earth systems including plate tectonics, climate, land forms, vegetation, and natural hazards with emphasis on the ways humans utilize and alter the earth's surface.

GEOG 132 World Regional Geography 3 Credit Hours

An overview examining the spatial distribution of people and places around the world, with emphasis on the cultural, political, social, and economic aspects of regions. Topics are explored by examining ways that humans interact with the environment and one another. Emphasis is placed on the spatial variation of human activities at all scales from local to global.

GEOG 133 Geography of Michigan 2 Credit Hours

A comprehensive survey examining the spatial distribution of the human and environmental landscapes of Michigan. Particular attention is given to the historical geography of settlement and human use of the natural environment.

GEOG 231 Introduction to Geographic Information Systems 3 Credit Hours

An overview introducing the basic concepts, techniques, and applications of geographic information systems (GIS). Enables students to create spatial data files using GIS software and to manipulate and analyze data. Two hours of lecture/discussion and two hours of laboratory per week.

GEOL 131 Physical Geology 4 Credit Hours

An introduction to the materials, processes, and concepts of geology. Topics include minerals, rocks, plate tectonics, earthquakes, volcanism, erosion, water, wind, glaciers, and geologic time. Laboratory work is devoted to hands-on projects involving geologic materials and processes, including rocks and minerals, maps, folds and faults, and dating of geologic features and events. This is a four (4) credit hour course with three (3) hours of lecture and two (2) hours of laboratory per week.

GER 131 Elementary German I 4 Credit Hours

Trains the student in pronunciation as well as the basic grammatical principles necessary for comprehending and expressing simple ideas in both spoken and written German. Class assignments are complemented by CD-Roms, tapes, and videos.

GER 132 Elementary German II 4 Credit Hours

A continuation of GER 131 with the addition of short stories. Class assignments are complemented by CD-Roms, tapes, and videos.
Prerequisite: GER 131, one year of high school German, or permission of the instructor

GER 141 Elementary Conversation 3 Credit Hours

An enrichment course entirely conducted in German designed for students wishing to expand active vocabulary, improve oral facility, and write simple compositions. Class discussions are based on assigned readings, student reports, and current events. This course is transferable but not a substitute for a basic language requirement. It can be taken concurrently with GER 231 or GER 232.
Prerequisites: Two years of high school German, a minimum of one year of college German or permission of the instructor

GER 231 Second Year German 4 Credit Hours

Includes application of grammatical principles by means of oral and written exercises. Students practice pronunciation and comprehension of spoken German. Reading of German stories is added for acquisition of vocabulary and class discussion. Class assignments are complemented by CDs, DVDs, tapes, and videos.
Prerequisites: GER 132, three years of high school German, or permission of the instructor

HCS 103 Employment Skills for Health Careers 1 Credit Hour

A lecture course designed to guide the students toward greater understanding of the healthcare industry as well as the organizational behavior work within that industry. Networking, communication skills, conflict management, organization systems, management/employee issues are explored. Students will also develop marketing strategies for health care positions as well as develop strategies for improving their career options.

HCS 106 Introduction to Phlebotomy 1 Credit Hour

This lecture/laboratory course introduces the basic theory and techniques of blood specimen collection. This course focuses upon proper aseptic technique, specialized equipment, adult/pediatric specimen collection procedures including difficult draws, specialized collection procedures, specimen handling, as well as safety issues. Quality issues, communication skills, and legal issues are also discussed. Students are expected to perform several venipunctures and skin punctures on their lab partners during this course. This course is specifically designed as either an optional or required support course for students in one of the health career/nursing programs. This course does not include a clinical component and is not designed to satisfy the national requirements for a certification in phlebotomy.

Prerequisites: Currently enrolled student in one of the health career/nursing programs or permission of department. Good manual dexterity skills required. Documented completion of the first inoculation in the Hepatitis B vaccine series or a signed waiver. Documents to be presented by the student at the first class session.

HCS 124 Basic Health Assessment 1 Credit Hour

This is a lecture/laboratory course which focuses upon the theory and techniques involved with basic patient assessment through vital signs. Course also addresses the issues of medical asepsis, universal precautions, and patient transportation/movement.

HCS 131 Computers in Health Care 3 Credit Hours

Computerized equipment and systems have become vital components within the health care industry. This lecture/lab course is designed to guide health care and nursing students in the fundamentals of computer terminology while stressing applications that are important to the delivery of health care. Students also will review legal and ethical considerations in the processing of confidential patient and medical information. This course meets the HFCC General Education Requirement for Computer Literacy.
Prerequisite: Basic keyboarding skills recommended.

Note: This course meets the graduation requirement for General Education

HIST 111 Ancient World History 3 Credit Hours

This course will cover the rise of civilization to the decline of major world civilizations in the early Common Era (c.200 to c. 750 CE). It will include study of the ancient civilizations of Mesopotamia, Egypt, India, China, the Greco-Roman world, and early Arabia.

HIST 112 Early Modern World History 3 Credit Hours

The study of world civilizations during the transition from the Ancient classical times to the Modern Period, i.e., the Medieval and

Early Modern periods (c.600 B c. 1650 CE). The World civilizations include China from the Sui to the early Qing dynasties; Japan from its origins to the early Tokugawa Shogunate; the Abbasid, Seljuk, and Ottoman empires; the Mongol Empire; the Aztec and Incan civilizations; and the European Middle Ages, Renaissance, and Reformation.

HIST 113 Modern World History 3 Credit Hours

Study of world civilizations from the seventeenth to the twentieth century. The course emphasizes the Scientific, Political and Industrial Revolutions and their global impact. Cultural and political events that have affected national or international politics, such as the Enlightenment, nationalism, imperialism, and communism, will also be included.

HIST 151 American History I 3 Credit Hours

Covers Colonial America and the United States through the Civil War period.

Note: This course meets the graduation requirement for General Education Outcome 1: American Society, Events, Institutions and Cultures.

HIST 152 American History II 3 Credit Hours

Covers the United States since the Civil War period.

Note: This course meets the graduation requirement for General Education Outcome 1: American Society, Events, Institutions and Cultures.

HIST 225 The Modern Middle East 3 Credit Hours

Proceeding from the traditional civilizations in the Middle East, examines the impact of the industrialized powers, nationalism, industrialization, and religious and cultural change.

HIST 230 History Of England To 1688 3 Credit Hours

A survey of the history of England and the surrounding countries from the time of the Celts to the time of the Stuarts, with attention to the economic, religious, social, constitutional, and political developments.

HIST 235 The Era of the Vietnam War 3 Credit Hours

Traces the causation factors leading to the escalation of U.S. involvement in the Vietnam conflict from 1945 until 1975. Within the historical context of colonial rule over Vietnam, as well as the struggle for Vietnamese nationalism, the political, diplomatic, and military strategy of the United States will be emphasized.

HIST 236 The American Civil War 3 Credit Hours

A study of the American Civil War, including the causes, personalities, soldiers, social groups, significant battles, and legacy of America's defining conflict from 1820-1877.

HIST 237 The Cold War, 1917-1991: Capitalism, Communism, and the Contest for Global Domination 3 Credit Hours

Traces the development and evolution of the Cold War from a global perspective, including its roots before and during World War II, through the postwar to the collapse of the Soviet state in 1991.

HIST 238 The History of Rome, 753 BCE-500 CE 3 Credit Hours

By exploring the social, political, economic and military aspects of Roman civilization, this course seeks to explain: 1) how Rome rose from a small central-Italian city-state to the ruler of the Mediterranean world; 2) how it administered and ruled its diverse populations; and 3) the circumstances surrounding the end of the Roman Empire.

HIST 240 Coming To The New World: American Ethnic And Immigration History From First Nations To The Present 3 Credit Hours

Traces the history of immigrants to North America and the United States from before Columbus to the present. There will be a particular focus on issues of cultural contact and conflict in American society. There will also be emphasis on issues of immigrant assimilation and acceptance into mainstream American cultures.

HIST 241 The Revolutionary War Era 3 Credit Hours

A study of the American Revolutionary War, including the causes, personalities, social groups, military aspects, founding documents, and the legacy of America's formative period, 1754-1791.

HIST 255 African-American History 3 Credit Hours

A history of African-American citizens in the Colonies and the United States from African beginnings to the present. Particular emphasis is placed upon the conditions of slavery and on the cultural development of African-American peoples since the Emancipation.

HIST 257 History of Women in the United States 3 Credit Hours

Examines changes in the ideas about women and in the lives of women from colonial times to the present, looking at various classes and ethnic and racial groups. This course also describes the activities and accomplishments of women in the building of the United States.

HIST 260 American Social History Since 1875 3 Credit Hours

A social history of the United States since the late nineteenth century, with special attention to changes resulting from industrialization and urbanization.

HIST 262 American Labor History 3 Credit Hours

Traces the history of American laborers in the contexts of social group character, industrial unionism, and the responses to the changing conditions of the broader American society.

HIST 265 History of Michigan 1 Credit Hour

A general survey of the historical development of Michigan from the French exploration to the present. The economic, social, and political development of the state is studied as a part of the history of the United States.

HIST 295 Directed Study 1 Credit Hour

Offers students the opportunity to study a particular topic or issue in greater depth, working individually with an instructor of History.

Students will begin to learn the methodologies of the discipline, such as the use of primary sources or source criticism. The amount of work and expected outcomes depends on the number of credit hours.

Prerequisites: Any two history classes and written consent of the instructor

HIST 296 Directed Study 2 Credit Hours

Offers students the opportunity to study a particular topic or issue in greater depth, working individually with an instructor of History. Students will begin to learn the methodologies of the discipline, such as the use of primary sources or source criticism. The amount of work and expected outcomes depends on the number of credit hours.

Prerequisites: Any two history classes and written consent of the instructor

HIST 297 Directed Study 3 Credit Hours

Offers students the opportunity to study a particular topic or issue in greater depth, working individually with an instructor of History. Students will begin to learn the methodologies of the discipline, such as the use of primary sources or source criticism. The amount of work and expected outcomes depends on the number of credit hours.

Prerequisites: Any two history classes and written consent of the instructor

HIT 150 Basic Coding: Theory and Practice 3 Credit Hours

Provides the theory and practice of coding diseases and procedures using ICD-9-CM for inpatient facilities. Incorporates practice in this coding using planned exercises and prototype medical documents. Explores the Prospective Payment System and the significance of Diagnosis Related Groupings. Surveys medical documents, both electronic and paper based, that serve as resources for coding for inpatient reimbursement. Examines the practices and importance of confidentiality of medical information and HIPAA guidelines.

Prerequisites: AH 100, MOA 100, and BCA 140

Co-requisite: MOA 110

Suggested Prerequisites: Although not a prerequisite, anatomy & physiology is recommended for this course.

HIT 230 Ambulatory Coding 3 Credit Hours

The course provides the theory and practice of coding techniques of coding systems used to capture billing data for care given to patients in settings other than acute care such as ambulatory surgery, emergency care, outpatient care, long term care, observation as well as for care rendered by health care practitioners especially physicians.

Prerequisites: HIT 150, MOA 100, and MOA 110

HONORS 151 Honors Colloquium 3 Credit Hours

An interdisciplinary humanities course that examines a given topic or problem from a variety of approaches. Emphasis is placed on the interchange of ideas among the honors students under the direction of the course instructor.

Prerequisites: Henry Ford II Honors Program

HONORS 231 Honors Directed Study 1 Credit Hour

In this sophomore-level directed study, students are challenged to apply the knowledge and research skills acquired in their freshman year in the Henry Ford II Honors Program. Students work individually with a faculty member of their choice on a mutually

agreed upon study topic. Students present summaries of their research before a meeting of Henry Ford II Honors Program students and faculty held at the end of the semester.

Prerequisite: ENG 131 Honors, ENG 132 Honors and HONORS 151, and Henry Ford II Honors Program

HONORS 232 Honors Directed Study 1 Credit Hour

In this sophomore-level directed study, students are challenged to apply the knowledge and research skills acquired in their freshman year in the Henry Ford II Honors Program. Students work individually with a faculty member of their choice on a mutually-agreed upon study topic. Students present summaries of their research before a meeting of Henry Ford II Honors Program students and faculty held at the end of the semester.

Prerequisite: ENG 131 Honors, ENG 132 Honors and HONORS 151, and Henry Ford II Honors Program

HONORS 233 Honors Directed Study 1 Credit Hour

In this sophomore-level directed study, students are challenged to apply the knowledge and research skills acquired in their freshman year in the Henry Ford II Honors Program. Students work individually with a faculty member of their choice on a mutually agreed upon study topic. Students present summaries of their research before a meeting of Henry Ford II Honors Program students and faculty held at the end of the semester.

Prerequisite: HONORS 231, HONORS 232, and Henry Ford II Honors Program

HONORS 234 Honors Directed Study 1 Credit Hour

In this sophomore-level directed study, students are challenged to apply the knowledge and research skills acquired in their freshman year in the Henry Ford II Honors Program. Students work individually with a faculty member of their choice on a mutually agreed upon study topic. Students present summaries of their research before a meeting of Henry Ford II Honors Program students and faculty held at the end of the semester.

Prerequisites: HONORS 231, HONORS 232, and Henry Ford II Honors Program

HONORS 251 Great Works 3 Credit Hours

An introduction to seminal works from a range of disciplines, including literature, philosophy, history, religion, anthropology, psychology, and science. Each "great work" will be explored in terms of its capacity not only to assess issues crucial to its own era but also in terms of its power to illuminate the parameters of ethical, social, and cultural principles in the modern world.

Prerequisites: ENG 131, open enrollment

HOSP 101 Wines of the World 1 Credit Hour

Examines the major grape varieties, the effect of soil and climate, classification systems, and the unique methods of various wine makers. Instruction focuses on the major wine producing areas, tracing the process of wine making from grape to bottle to table and giving complete guidelines for reading a wine label as well as purchasing, storing, and serving.

Note: 5 sessions course - see schedule for dates that the class meets.

HOSP 103 Major Wine Grape Varieties 1 Credit Hour

An advanced class for those students interested in examining varietal wines from many broad geographical areas. Students learn to identify alcohol, acid, sugar, and tannin in wines. Vintage and specialty wines are studied. This course provides information relating to the challenges of wine service in the hospitality industry.

Suggested Prerequisites: HOSP 101

Note: 5 sessions course - see schedule for dates that the class meets.

HOSP 105 Applied Foodservice Sanitation 2 Credit Hours

A study of food contaminants, bacterial growth, safe food storage, and safe food handling procedures, as well as procedures for scheduling, cleaning, sanitizing, and pest control for facilities and equipment. At the completion of this course students will have the opportunity to take the examination given by the National Restaurant Association - Educational Foundation. Students successfully completing the exam will be awarded the Serve Safe Food Protection Manager Certificate, which is recognized by the local health department.

Note: Recommended the first semester in the Culinary Arts programs

HOSP 108 Creative Cookery 3 Credit Hours

Explores the art of cooking, including international dishes, fundamentals of ingredients, and catering techniques. This course stimulates the imagination, brings out originality, and perfects skills, from the initial concept to purchasing, preparation, and culinary presentations.

Note: Chefs uniform required to be purchased for culinary lab

HOSP 110 Introduction to Hospitality Industry 3 Credit Hours

Surveys career opportunities in the hospitality industry. Presents hospitality as a single, yet interrelated industry, emphasizing problem-solving tools rather than answers, and points out trends, past and present. The following areas will be explored: marketing, franchising, food service operations, hotel operations, and tourism.

HOSP 115 International Cooking 4 Credit Hours

Demographic changes and the accessibility of travel have altered our cultural perspective of the world pertaining to a culinary journey. Students will develop a comprehensive picture of cuisines throughout the world. Emphasis will be on the country's specific ingredients, cooking methods, terminology and presentation. A variety of international dishes will be prepared and served by students. This course will enlighten students on the evolution of each region's cookery and how it affects the cuisine of the present time.

Note: Cognate course for the Culinary Arts - Associate in Applied Science Degree.

Chefs uniform required to be purchased for culinary lab. Contact department on process to order uniforms before first class session.

HOSP 121 Introduction to Quality Food Preparation - Lecture 2 Credit Hours

Covers basic concepts in food preparation and techniques used in food service operations. This course includes the mastery of basic culinary terminology, proper use of tools and equipment, interpretation of recipes and formulas, and production methodology. Emphasis is placed on proper safety and sanitation.

Prerequisites: Concurrent enrollment in HOSP 123

Suggested Prerequisites: HOSP 105

HOSP 123 Introduction to Professional Cooking - Lab 6 Credit Hours

Teaches students to apply basic concepts in food preparation and techniques in food service operations, including proper kitchen procedures with hands-on food production methods. The student applies the principles, standards, and practices involved in professional quantity food production.

Prerequisites: Concurrent enrollment in HOSP 121

Suggested Prerequisites: HOSP 105

Note: Chefs uniform required to be purchased for culinary lab. Contact department on process to order uniforms before first class session.

HOSP 130 Food and Nutrition 3 Credit Hours

Examines basic concepts of nutrition, food composition, food technology, and controversies in nutrition and marketing nutrition in the food service business. Discussion and study topics include carbohydrates, fats, protein, vitamins, minerals, RDA, food labeling, menu planning, weight management, cardiovascular disease, nutrition and cancer, modifying recipes for health and lower calorie content.

HOSP 140 Advanced Food Preparation 8 Credit Hours

Provides practical experience in quantity food preparation. This class is designed so that each unit of the kitchen is emphasized. Students participate in broiling, sauteing, meat cutting, baking, preparing buffets, and identifying products. They demonstrate their culinary skills in the student training dining room - Fifty-One O One Restaurant - Student & Culinary Art Center.

Prerequisites: Completion of or concurrent enrollment in HOSP 123

Suggested Prerequisites: HOSP 105

Note: Chefs uniform required to be purchased for culinary lab - contact department on process to order uniforms before first class session.

HOSP 150 Dining Room Service and Operations 3 Credit Hours

Applies basic principles of table service in the production dining room. Emphasis is placed upon effective serving procedures and techniques, including cordial and prompt attention to customers, proper dress and grooming practices, and in-depth knowledge of menu items.

HOSP 160 Hospitality Purchasing 3 Credit Hours

Explains procedures for purchasing food and beverages for hotels, restaurants, and institutions. Emphasis is placed on markets, federal and trade grades, governmental regulations, packaging, comparative versus price buying, yields, and quality controls.

Prerequisites: Completion of or concurrent enrollment in HOSP 110

HOSP 170 Food and Beverage Controls 3 Credit Hours

A detailed study of wines, spirits, beer, soft drinks, and their importance to the hospitality industry. The student becomes familiar with various food and beverage cost control systems. This course

emphasizes food and beverage cost calculation, inventory control, and profit.

Prerequisites: Completion of or concurrent enrollment in HOSP 110

Suggested Prerequisites: BMA 110 or higher

HOSP 190 Hospitality Studies Co-Op 1 Credit Hour

Offers practical work experience within a hospitality or tourism related organization through participation in a supervised cooperative education program. This course integrates work experience, classroom instruction, and related career issues.

Prerequisites: Permission of the Cooperative Education Specialist, office T-112

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

HOSP 210 Hospitality Supervision and Leadership 3 Credit Hours

Covers current topics in the hotel and lodging industry. Students participate in simulated collective bargaining and hotel sales. They also study and review major organizations, hotel management, personnel development and human resources, which include recruiting, orientation, evaluating, discipline, time management and managing change.

Prerequisites: HOSP 110 or concurrent enrollment

HOSP 221 Front Office Procedures and Guest Services 3 Credit Hours

Designed to familiarize the student with the major profit center of the lodging industry - the Rooms Department - including an analysis of the various jobs in the hotel-motel front office. Emphasis is on the guest cycle: reservations, rooming, registration, guest relations, night audit, and check-out procedures.

Prerequisites: Completion of or concurrent enrollment in HOSP 110

Suggested Prerequisites: BCA 140

Note: Required for all Hotel, Restaurant Management students, can be used as a cognate course for Culinary Arts degree.

HOSP 231 Advanced Baking & Pastry 6 Credit Hours

Provide advance study of commercial baking skills, which will enable the students to become industry ready. The course will stress the fundamentals of baking and the production and presentations of cakes and pastries. Students will receive in-depth instruction in the art of cake designing, baking and decorating, including wedding cakes and fondant cakes, European pastries, petit fours and specialty desserts.

Prerequisites: HOSP 140

Note: A chef uniform is required to be purchased for culinary lab - contact department on the process to order uniforms before first class session.

HOSP 241 Garde Manger & Menu Planning 6 Credit Hours

The course will emphasize the art of food preparation and focus on cold foods. Topics of instruction include the preparation and presentation of salads, sandwiches, hors d'oeuvres, cold sauces & dressings, pate & terrine, and sausage making. Students receive in-depth instruction in catering and menu planning. Additional topics

reviewed include American Regional Cuisine and Leading sauces and their respective Small sauces.

Prerequisites: HOSP 140

Note: A chef uniform is required to be purchased for culinary lab - contact department on the process to order uniforms before first class session.

HOSP 245 Hotel and Restaurant Desserts 3 Credit Hours

Specifically designed to provide practical information for the individual serious about the baking industry. The emphasis is placed on individual practice and production. This course includes volume banquet desserts, chocolate decorating, sugar casting, and the intricacy of cake decorating. Additional attention is focused on assembling and presenting desserts, including tortes, petit fours, French pastries, candies, and decorative centerpieces.

Note: This course is required for the Culinary and Baking Certificate, and can be used as an elective in the Culinary Arts Associate degree.

Chefs uniform required to be purchased for culinary lab - contact department on the process to order uniform before first class session

HOSP 250 Hospitality and Travel Marketing 3 Credit Hours

Examines the basic needs and values of cooperative marketing effort among hotels, airlines, restaurants, travel agents, and others in the industry. Discussion and study topics include marketing, research and analysis, development and implementation of marketing plans and strategies, advertising, promotions, public relations, and pricing structures.

Suggested Prerequisites: HOSP 110

Note: Chefs uniform required to be purchased for culinary lab - contact department on the process to order uniform before first class session

HOSP 280 Culinary Art, Food I 3 Credit Hours

Students will become acquainted with the application of basic concepts in food preparation and techniques in food service operations. This course includes proper use of kitchen procedures with hands-on food production methods. The student will utilize the principles, standards and practices involved in professional quantity food production.

Suggested Prerequisites: HOSP 105

Intended for evening students only - HOSP 280 and HOSP 285 can be substituted for HOSP 121 and HOSP 123 for graduation requirements.

Note: Chefs uniform required to be purchased for culinary lab - contact department on process to order uniforms before first class

HOSP 285 Culinary Art, Food II 3 Credit Hours

A continuation of HOSP 280 covering recipe conversions and modification to produce a variety of food items. Special categories discussed are baking principles and preparation of cold and hot entrees. Students are required to cover menu planning, and demonstrate a mystery basket in the culinary lab.

Prerequisite: HOSP 280

Suggested Prerequisite: HOSP 105

Intended for evening students only - HOSP 280 and HOSP 285 can be substituted for HOSP 121 and HOSP 123 for graduation requirements.

Note: Chefs uniform required to be purchased for culinary lab - contact department on the process to order uniform before first class session

HOSP 290 Hospitality Studies Co-Op 2 Credit Hours

Offers practical work experience within a hospitality or tourism related organization through participation in a supervised cooperative education program. This course integrates work experience, classroom instruction, and related career issues.

Prerequisites: Permission of the Cooperative Education Specialist, office T-112

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

HPE 120 Lifetime Fitness (Rotating Skill) 2 Credit Hours

This course rotates fitness activities for each term's class with up-to-date movement for health and enjoyment. Overall body conditioning may include such activities as Tae Bo, Kick Boxing Aerobics, Step Aerobics or Pilates. Refer to the subtitle for the specific activity following the course title "Lifetime Fitness."

HPE 127 Aquacise 2 Credit Hours

Emphasizes the importance of physical fitness through water exercise. Students should achieve improvement in cardiovascular endurance, flexibility and strength from participation in this class. An understanding of the proper methods needed to achieve physical fitness and proper weight management will be presented. Participants do not need to know how to swim!

HPE 140 Lifetime Wellness 2 Credit Hours

The most prominent cause of death and disability in North America are diseases that are largely lifestyle related. Statistics indicate that nearly 80% of these deaths could be prevented by following a positive lifestyle. That is the focus of this course. The class will assess the student's current level of wellness and provide the tools necessary to improve and motivate the student to practice healthier lifestyles throughout adulthood.

HPE 142 Advanced First Aid 3 Credit Hours

Provides information and skills for identifying life-threatening conditions and carrying out emergency procedures at the scene of an accident. The American Red Cross Emergency Response certificate is issued if student performance is satisfactory. Also, a student may become certified in Basic Life Support for the professional rescuer. This course is useful to any adult in his or her daily life.

HPE 150 Physiology of Exercise 3 Credit Hours

Designed to teach the basic physiological principles of exercise. The student will learn what changes occur to the body during exercise and as a result of regular exercise. Emphasis is on applied exercise physiology to improve health and fitness of the general population and how to optimize performance. Ideal for the student interested in pursuing further study in the health or physical education field. Also, the serious exercise participant may find this class useful in establishing an individualized exercise program. Physical therapists, nutritionists, and health care professionals find this class a complement to their fields of study.

HPE 151 Methods of Teaching Aerobic Exercise 3 Credit Hours

A course for the individual interested in ideas and teaching techniques used when instructing exercise classes and personal training. The student learns what should be included in a total exercise program and how to develop appropriate exercises for different segments of the population. This course is designed to help students pass industry certification exams in personal training and group exercise.

HPE 152 Tests and Measurements 2 Credit Hours

Provides a background of tests and measurements in health and physical education, including methods for evaluating the health-related and skill-related components of physical fitness. Tests include anthropometric measurement, stress testing, and posture evaluation. Students also learn to evaluate test results and understand how they can be useful to the exercise participant. This course is required in the Fitness Leadership program.

HPE 153 Nutrition 2 Credit Hours

Emphasizes the importance of proper nutrition through the understanding of basic nutrition principles and their application to everyday life. Dietary requirements of protein, carbohydrates, fats, vitamins and minerals are explained along with their food sources. Other topics include digestion and metabolism; weight loss, weight gain and stabilization; water balance and exercise.

HPE 154 Facilities and Equipment 2 Credit Hours

Explains the planning and operation of an athletic or health club facility. Specifically, this course includes instruction in the operation of a swimming pool, the selection and care of exercise and strength equipment and the management of a locker room. This is a required course in the Fitness Leadership Program.

HPE 156 Personal Training 3 Credit Hours

This course prepares students for the American Council on Exercise (ACE) Personal Trainer Certification Exam and other national exams. Students obtain the skills and knowledge needed to provide personal training to clients in a fitness center as well as one-on-one instruction.

HPE 192 Internship in Physical Education 2 Credit Hours

This internship is for students nearing completion of the Fitness Leadership program. The student will complete 100 supervised hours in a work setting such as a community center, physical education classroom, physical therapy center or wellness center. Students are encouraged to choose internship sites that will provide important job opportunities as well as strengthen an area in which they are weak. The internship is unpaid and may be completed at times that are convenient for the student and the internship site.

HPE 253 Nutrition for the Professional 3 Credit Hours

A course designed to teach health care professionals the basics of nutrition and its application to disease, growth and development.

HPE 260 Health, Nutrition, and PE 3 Credit Hours
 This course will provide information in the three areas of Health, Nutrition and Physical Education that the classroom teacher will need for knowledge and practical use in teaching. Teaching strategies and projects in Health and Nutrition as well as movement education and games will be presented. The emphasis will be for potential teachers to provide learning experiences for children's development of positive lifestyle behaviors, as well as to fulfill objectives for the Michigan Model for Health.

HPEA 104 Basketball I 2 Credit Hours
 Instruction in the fundamental skills of basketball with a comprehensive discussion and implementation of the rules and etiquette.

HPEA 105 Bowling I 2 Credit Hours
 Instruction in the fundamental skills of bowling with a comprehensive discussion and implementation of the rules, etiquette and terminology of the game.
Note: This class is held off-campus. The location varies each semester.

HPEA 106 Golf I 2 Credit Hours
 Instruction in the fundamental skills of golf, including proper use of woods and irons, putting and specialty shots. Rules, terminology and etiquette will be presented.
Note: This class is held off-campus. The location varies each semester.

HPEA 109 Tennis I 2 Credit Hours
 Provides instruction in the fundamental skills of tennis, including proper grips, ground strokes, volleys and serves. The rules, terminology, scoring and etiquette of tennis are stressed.

HPEA 110 Volleyball I 2 Credit Hours
 Covers the fundamental skills, strategy, history, rules and values of volleyball. The student gains social experiences and develops a sense of team play along with an appreciation for the sport as a player and a spectator. Nutrition and health related fitness is included as it pertains to disease prevention and weight prevention.

HPEA 117 Weight Train & Phys Conditioning 2 Credit Hours
 Includes the principles and proper technique in strength and cardiovascular conditioning including evaluation of all components of physical fitness. Emphasis is on flexibility, strength cardiovascular conditioning, muscular endurance, and body composition. The course includes nutrition and exercise as it relates to weight management and disease prevention. Risk factors are discussed.

HPEA 126 Aerobic Dance 2 Credit Hours
 An exercise class that uses movement to music for the purpose of producing a more fit cardiorespiratory system. The benefits are similar to those experienced in jogging, cycling, swimming and cross country skiing. In addition, included in the class is strength and flexibility training. Absolutely no dance background is required.

HPEA 127 Aquacise 1 Credit Hour
 Designed to emphasize the importance of physical fitness through water exercise. The benefits of swimming, proper exercise alignment, and various creative exercises will be incorporated into this class. No swimming skill is required. This course is held off campus. The location varies each semester.
Note: This class is always offered in the evening during the first 8 weeks of the fall semester only.

HPEA 155 Relax Techniques for Stress Management 2 Credit Hours
 Teaches the physiology of the stress response and how to recognize this response. Emphasis is on the use of stress reduction techniques and how to incorporate these into one's lifestyle.

HPEA 204 Basketball II 2 Credit Hours
 Further develops the fundamental skills of basketball, encourages a strong interest in the improvement of team play, and explores the different types of offenses and defenses used in the game.
Prerequisite: HPEA 104 or permission of the instructor

HPEA 205 Bowling II 2 Credit Hours
 Designed for students interested in acquiring intermediate-level skills in bowling. Emphasis is on refinement of basic skills and competition in league bowling. This class is held off-campus. The location varies each semester.
Prerequisite: HPEA 105 or permission of the instructor

Note: This class is held off-campus. The location varies each semester.

HPEA 206 Golf II 2 Credit Hours
 Continuation of HPEA 106. Includes a review of basic skills as well as instruction in course management, competitive events, and the rules of golf.
Prerequisite: HPEA 106 or permission of the instructor
Note: This class is held off-campus. The location varies each semester.

HPEA 209 Tennis II 2 Credit Hours
 Offers a review of the basic skills, forehand, backhand, and serve, with greater focus on auxiliary strokes, volley, overhead, lob, and spin. Through analysis, drill work, and competitive play, students develop greater ball control, consistency, and court strategy.

HPEA 210 Volleyball II 2 Credit Hours
 Designed to develop intermediate skills in volleyball. Emphasis is on court position and strategy, refinement of skills, and tournament play.

HPEA 217 Weight Training and Physical Conditioning II 2 Credit Hours
 Continuation of HPEA 117 including the principles and proper technique in strength and cardiovascular conditioning including evaluation of all components of physical fitness. Emphasis is on flexibility, strength cardiovascular conditioning, muscular endurance, and body composition. The course includes nutrition and exercise as it relates to weight management and disease prevention. Risk factors are discussed.

HUM 101 Introduction to the Humanities 3 Credit Hours

Introduces the visual arts, music, and drama of Western and Non-Western societies. This course teaches appreciation of the arts through the study of individual works. It focuses on the aesthetic and technical aspects of the arts, as well as the understanding of the arts in the light of historical and cultural conditions.

Prerequisites: ENG 131

ICO 191 Industrial Co-op 2 Credit Hours

Offers practical work experience within the student's program of study through participation in a supervised cooperative education program. This course integrates work experience, classroom instruction, and related career issues.

Prerequisites: Permission of the Cooperative Education Specialist

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

ICO 192 Industrial Co-Op (2) 2 Credit Hours

Offers practical work experience within the student's program of study through participation in a supervised cooperative education program. This course integrates work experience, classroom instruction, and related career issues.

Prerequisites: Permission of the Cooperative Education Specialist

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

ICO 193 Industrial Co-op 1 Credit Hour

Offers practical work experience within the student's program of study through participation in a supervised cooperative education program. This course integrates work experience, classroom instruction, and related career issues.

Prerequisite: Permission of the Cooperative Education Specialist

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

ICO 291 Industrial Co-Op (3) 2 Credit Hours

Offers practical work experience within the student's program of study through participation in a supervised cooperative education program. This course integrates work experience, classroom instruction, and related career issues.

Prerequisites: Permission of the Cooperative Education Specialist

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

ICO 292 Industrial Co-Op (4) 2 Credit Hours

Offers practical work experience within the student's program of study through participation in a supervised cooperative education program. This course integrates work experience, classroom instruction, and related career issues.

Prerequisite: Permission of the Cooperative Education Specialist *Note:* Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

ICO 293 Industrial Co-op 1 Credit Hour

Offers practical work experience within the student's program of study through participation in a supervised cooperative education program. This course integrates work experience, classroom instruction, and related career issues.

Prerequisite: Permission of the Cooperative Education Specialist

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

ITAL 131 Elementary Italian I 4 Credit Hours

Trains the student in pronunciation as well as basic grammatical principles necessary for comprehending and expressing simple ideas in both spoken and written Italian. Class assignments are complemented with an audio program that accompanies the text.

ITAL 132 Elementary Italian II 4 Credit Hours

Completes a systematic survey of grammar and includes discussion of cultural topics. Oral expression is emphasized. Class assignments are complemented with an audio program that accompanies the text.

Prerequisite: ITAL 131

JOUR 131 News Writing 3 Credit Hours

A course designed to be an introduction to news writing. Students learn to write news stories, thought-provoking opinion columns, and stimulating reviews. Students also read and analyze professional newspapers. All major assignments are required to be word processed.

JOUR 134 Advertising 3 Credit Hours

A course designed to be an introduction to the advertising industry. Particular attention is given to the analysis of current and historical case studies that illustrate interesting demographic, social, psychological, and ethical aspects of the advertising world. Creative problem solving strategies are encouraged throughout the course and culminate during the development of an advertising campaign (term project). All major assignments are required to be word processed.

LGA 120 Introduction to the Law and Paralegalism 2 Credit Hours

This course sets forth the scope of paralegal employment including on-the-job realities of the occupation, ethics, and the language of the law office. The numerous skills required to be successful are examined by introducing students to legal terminology, judicial and legislative systems, professional responsibility, interviewing and factual investigations, and law office management.

Suggested Prerequisite: ENG 131

LGA 121 Legal Writing and Research I 2 Credit Hours

This course sets forth the scope of language in the law office, carefully examines its numerous skills, and promotes a sense of confidence in the various writing activities of a law office.

Prerequisites: ENG 131 and LGA 120

Co-requisites: BLW 253

LGA 122 Legal Writing and Research II 3 Credit Hours

This course introduces legal bibliography and library tools and teaches the basic skills of legal research and the techniques for legal writing. Through a series of progressively complex exercises, students develop their ability to analyze, interpret, and communicate factual information and legal thought.

Prerequisite: LGA 121

LGA 130 Trial Practice and Appeals Civil and Criminal 3 Credit Hours

This course provides an understanding of trial practice in both civil and criminal trials beginning with a review of the preparation of the basic pleading necessary to institute and respond to a civil law suit and the necessary elements of a criminal complaint, warrant, and grand-jury indictment. The course focuses on the discovery process under both the state and federal court rules.

Prerequisites: LGA 121, completion of or concurrent enrollment in LGA 122

LGA 133 Wills and Trusts 2 Credit Hours

This course is a study of the basic provisions of wills and trusts and their effect on the distribution of assets.

Prerequisite: ENG 131 and LGA 121

LGA 135 Family Law 3 Credit Hours

This course is a survey of general divorce procedures beginning with the pre-commencement interview to determine underlying problems of the parties and possible solutions and to collect pertinent data regarding property, custody, support, or other relief available. Procedures that are introduced include commencement of various actions, functions of Friend of the Court, miscellaneous motion procedures, and order preparation and enforcement. Additionally, marital counseling, support actions, and paternity actions are introduced.

Prerequisites: LGA 121, completion of or concurrent enrollment in LGA 122

LGA 136 Probate Administration (Administration of Decedents Estates) 3 Credit Hours

This course provides information and procedures with respect to the administration of the estate of a decedent from the time of the notification of death through the final distribution. Included is an examination of court procedure, forms, and documents. Consideration is also given to the tax aspect of estate administration and to client contact.

Prerequisite: Completion of or concurrent enrollment in LGA 122

LGA 137 Property Law 2 Credit Hours

This course presents the principles of property law with particular emphasis on the types of property, property rights, landlord and tenant rights, easements, and bailment. This course is designed to give students a general understanding of the property concepts that permeate the field of law.

Prerequisite: LGA 121, completion of or concurrent enrollment in LGA 122

LGA 138 Corporate and Tax Law 3 Credit Hours

This course explains the various forms that a business association may take, such as sole proprietorship, partnership, and

incorporation. The structure, power, formation, registration, rights, and liabilities to the public of each type of association are included. This course surveys the theory of taxation behind each business association and its ramifications on ownership.

Prerequisite: LGA 121, completion of or concurrent enrollment in LGA 122

LGA 139 Commercial Law and Collection 2 Credit Hours

This course explains commercial law, including contract formation, the rights and duties of the parties, and their remedies upon default. This course acquaints the student with the sale of goods and the remedies of buyer and seller in the marketplace, as well as the collection process, including debtor and creditor relief, judgments, small claims, bankruptcy, consumer protection, and bills and notes.

Prerequisite: LGA 121, completion of or concurrent enrollment in LGA 122

LGA 141 Personal Injury and Torts 3 Credit Hours

This course explains the substantive law of negligence, tort, and personal-injury litigation. This course introduces pre-trial case preparation including screening clients, gathering evidence, organizing files, interviewing, and drafting pleadings by the paralegal.

Prerequisites: LGA 121, completion of or concurrent enrollment in LGA 122

LGA 150 Case Management 2 Credit Hours

This course provides an introduction to the management of document and information organization and case computerization. This study promotes best practices and use of industry standards in connection with document control, document storage systems, case computerization, and case-estimating skills used in the legal field.

Prerequisites: BCA 140, completion of or concurrent enrollment in LGA 121

LGA 292 Legal Assistant Internship 2 Credit Hours

Offers credit for actual work experience in a legal office. Students should have completed most of the course work in the Legal Assistant program before applying for the internship.

Prerequisite: Permission of the Cooperative Education Specialist

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

LGA 293 Legal Assistant Internship 3 Credit Hours

Offers credit for actual work experience in a legal office. Students should have completed most of the course work in the Legal Assistant program before applying for the internship.

Prerequisite: Permission of the Cooperative Education Specialist

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer is a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

LGA 294 Legal Assistant Internship 4 Credit Hours

Offers credit for actual work experience in a legal office. Students should have completed most of the course work in the Legal Assistant program before applying for the internship.

Prerequisite: Permission of the Cooperative Education Specialist

Note: Co-op is available for the Fall, Winter, and Spring/Summer semesters (Spring/Summer for a full 15-week semester). Placements may be days, evenings, or weekends depending on employer needs.

MATH 064 Basic Mathematics 3 Credit Hours

This course is intended as a preparation for MATH 074 or as a review of arithmetic. Topics covered include place value, an introduction to fractions and decimals, arithmetic with whole numbers and arithmetic with decimal numbers.

MATH 074 Pre-Algebra 4 Credit Hours

This course is intended to prepare students for algebra in MATH 080 or MATH 100. Topics covered include fractions, percents, measurement and geometry, signed numbers, linear equations and proportions. Techniques of problem solving and applications are included throughout the course.

MATH 080 Beginning Algebra 3 Credit Hours

This course is intended as a developmental course for students who need to develop skills in beginning algebra topics. Topics covered include solutions of linear equations and inequalities, an introduction to graphing linear equations, polynomial operations, factoring, properties of integer exponents, and solutions to quadratic equations by factoring. Techniques of problem solving and applications are included throughout the course.

Prerequisite: A grade of C or better in MATH 074 or a satisfactory score on the placement test

MATH 100 Basic Technical Mathematics 4 Credit Hours

This course is intended for students in technology programs who have not had one year of algebra and one year of geometry or who need to review beginning algebra and geometry. Topics include a review of arithmetic, an introduction to the graphing calculator, working with approximate numbers, dimensional analysis, beginning algebra, geometry, trigonometry and statistics. This course emphasizes practical technical applications.

Prerequisites: A satisfactory score on the placement test

MATH 101 Mathematics for Health Careers 4 Credit Hours

Provides the mathematical skills required for various careers in the health professions. Topics include computational skills, essential algebraic concepts, ratio and proportion, measurement and geometry, and an introduction to data analysis with problems chosen to represent those commonly encountered in health careers. Problem-solving strategies are included throughout the course.

MATH 103 Technical Mathematics 4 Credit Hours

This course is intended for students in technology programs who have had MATH 100 or one year of Beginning Algebra. Topics covered include functions and graphs, properties of lines, the trigonometric functions, systems of linear equations, rational expressions, quadratic equations, solution of right triangles, vectors, integer exponents, linear regression, complex numbers, and an introduction to the graphing calculator.

Prerequisite: A grade of C or better in MATH 100 or a satisfactory score on the placement test

MATH 104 Mathematics for Food Service Careers 4 Credit Hours

This course provides the mathematical skills required for various careers in the food service professions. Topics covered include calculator usage,

computational skills, ratio and proportion, percentages, measurement, dimensional analysis and an introduction to data analysis with problems chosen to represent those commonly encountered in food.

Prerequisites: A grade of C or better in HOSP 121 or concurrent enrollment in HOSP 121

Note: Math 104 requires the use of a scientific calculator. Any calculator capable of calculating the values of trigonometric, logarithmic and exponential functions is acceptable.

MATH 110 Intermediate Algebra 4 Credit Hours

Topics covered include solving linear, quadratic, rational, and square root equations, solving linear and compound inequalities, an introduction to functions, rational expressions, exponents, radicals, and solving systems of linear equations. Techniques of problem solving and applications are included throughout the course along with modeling data using linear and quadratic functions.

Prerequisite: A grade of C or better in MATH 080 or a satisfactory score on the placement test

MATH 112 Trigonometry 3 Credit Hours

Intended for students in a technical or science program that requires a knowledge of trigonometry. Topics include circular functions and their graphs, identities, conditional equations, the solution of triangles, vectors, and physical applications. This course does not satisfy the MATH 180 prerequisite.

Prerequisites: A grade of C or better in MATH 110 or MATH 103 or a satisfactory score on the placement test

MATH 115 College Algebra 5 Credit Hours

Topics covered include coordinate geometry, functions and their graphs, algebraic and graphical solutions of equations and inequalities, graphs and zeros of polynomial functions, Fundamental Theorem of Algebra, conic sections, linear modeling, systems of equations and inequalities, matrices and their operations, sequences and series, and the Binomial Theorem. Techniques of problem solving and applications are included throughout the course along with an introduction to the usage of graphing calculators.

Prerequisites: A grade of C or better in MATH 110 or a satisfactory score on the placement test

MATH 121 Mathematics for Elementary Teachers I 3 Credit Hours

Intended for students who are involved in a curriculum for elementary teachers. Topics include problem solving, an introduction to logic, set theory, number theory, numeration systems, whole numbers, and fractions. Concept development, communication skills, both oral and written, and problem solving skills will be addressed in accordance with the NCTM Standards. Topics in algebra will be integrated throughout.

Prerequisites: A grade of C or better in MATH 110 or a satisfactory score on the placement test.

Completion of or concurrent enrollment in ENG 131

MATH 141 Introduction to Statistics 4 Credit Hours

This course is intended as a first course for students in business administration, education, social sciences, engineering, and other fields

in which data are collected and predictions are made. Topics covered include descriptive measures, the summarizing of data, an introduction to probability, discrete probability distributions, normal probability distributions, sampling distributions, estimation, confidence intervals, hypothesis testing, correlation, regression, chi square tests, one-way analysis of variance (ANOVA), and use of nonparametric tests. In addition, students will use a statistical software package to conduct data analysis and solve applied problems.

Prerequisites: C grade or better in MATH 110 or satisfactory score on course placement test

Note: A graphing calculator is required of each student. The Mathematics Division recommends and uses the TI-83 or TI-83/84 Plus Graphing Calculator.

MATH 150 Finite Mathematics **4 Credit Hours**

For students in business administration and the social sciences. Topics include mathematical models, sets, systems of equations, linear programming, the mathematics of finance, and probability. Students are exposed to using technology for business-related applications.

Prerequisite: A grade of C or better in MATH 110 or a satisfactory score on the placement test

MATH 153 Calculus for Business, Life and Social Science **5 Credit Hours**

For students in business and life and social sciences but not engineering, mathematics, or physical science majors. This course is an introduction to the study of differential and integral calculus of algebraic, logarithmic, and exponential functions of one variable. Topics covered include graphical, numerical and algebraic determination of derivatives and definite integrals, applications of the derivative including minima and maxima, and integration and its applications. Applications are included throughout the course. Credit cannot be earned for both MATH 153 and MATH 180.

Prerequisite: A grade of C or better in MATH 115 or MATH 150 or MATH 175, or a satisfactory score on the placement test

MATH 175 Precalculus **5 Credit Hours**

Topics include algebraic, graphical, and numerical representations of functions, including composition and inverses of functions. The primary focus is the study of rational functions, exponential and logarithmic functions, and trigonometric functions of real numbers and angles. Also included are analytic trigonometry, solutions of triangles, polar coordinates and vectors. Techniques of problem solving and applications are included throughout the course requiring the frequent usage of graphing calculators.

Prerequisites: A grade of C or better in MATH 115 or a satisfactory score on the placement test

MATH 180 Calculus I **5 Credit Hours**

For students whose program of study requires a concentration in mathematics. Topics include limits, continuity, the derivative, differentiation of algebraic, exponential, logarithmic, trigonometric, and inverse trigonometric functions, applications of the derivative, antidifferentiation and the definite integral. Numerical, graphical, and algebraic approaches are used whenever possible. Credit cannot

be earned for both MATH 153 and MATH 180.

Prerequisites: A grade of C or better in MATH 175 or a satisfactory score on the placement test

MATH 183 Calculus II **5 Credit Hours**

Topics include applications of the integral, techniques of integration, numerical integration, improper integrals, solutions of differential equations, polynomial approximations of functions, and infinite series. Numerical, graphical, and algebraic approaches are used whenever possible. Applications are included throughout the course.

Prerequisite: A grade of C or better in MATH 180

MATH 221 Mathematics for Elementary Teachers II **3 Credit Hours**

Intended for students who are involved in a curriculum for elementary teachers. Topics include the rational numbers, the real numbers, algebra, and topics from geometry. Geometer's Sketchpad will be used to develop geometry content. Concept development, communication skills, both oral and written, and problem solving skills will be addressed in accordance with the NCTM Standards.

Prerequisites: A grade of C or better in MATH 121 and a grade of C or better in ENG 131

MATH 225 Mathematics for Elementary Teachers III **3 Credit Hours**

Intended for students who are involved in a curriculum for elementary teachers. Topics include probability and statistics and topics from geometry. Geometer's Sketchpad will be used to develop geometry content. Computer software will be used to enhance the probability and statistics units. Concept development, communication skills, both oral and written, and problem solving skills will be addressed in accordance with the NCTM Standards.

Prerequisite: A grade of C or better in MATH 221

MATH 275 Discrete Mathematics **4 Credit Hours**

Intended for students in a computer engineering or computer science program. Topics include logic, methods of proof, set theory, algorithms, recursion, correctness, relations, partial orderings, graphs, trees, Boolean algebra, grammars, and finite-state machines. Various applications are included throughout the course.

Prerequisite: A grade of C or better in MATH 180 or MATH 175 or concurrent enrollment in MATH 180

MATH 280 Calculus III **5 Credit Hours**

Topics covered include the calculus of vector-valued functions, the differential calculus of functions of more than one variable, directional derivatives, gradients, partial derivatives, multiple integration, vector fields and line integrals. Numerical, graphical, and algebraic approaches are utilized whenever possible. Applications are included throughout the course.

Prerequisite: A grade of C or better in MATH 183

MATH 283 Linear Algebra **3 Credit Hours**

An introduction to matrix algebra and linear algebra. Topics include systems of linear equations, matrix operations and properties of matrices, determinants, the vector space R^n , general vector spaces,

inner product spaces, linear transformations, and eigenvalues and eigenvectors. Various applications are presented.

Prerequisite: A grade of C or better in MATH 183

MATH 289 Differential Equations 4 Credit Hours

Introduces ordinary differential equations by means of numerical, graphical, and algebraic analysis. Topics include first order differential equations, second and higher order linear equations, methods for nonhomogeneous second order equations, series solutions, systems of first order equations, and Laplace transforms. Various applications are covered throughout the course.

Prerequisites: A grade of C or better in MATH 280, or a grade of C or better in MATH 183 and concurrent enrollment in MATH 280

MATH 293 Topics in Mathematics 3 Credit Hours

Designed to explore selected topics as determined by an instructor. The specific topic or topics are announced together with the prerequisites each term. The student can repeat the course for additional credit when different topics are offered. This course may not be applied toward fulfilling the specific degree requirements for an associate degree.

Prerequisite: Permission of the instructor

MFMT 102 Applied Mechanical Skills (PO) 2 Credit Hours

An introductory course in the elements of industrial power transmission, motion control, basic hydraulics and pneumatics, alignment, measuring mechanical systems operation and application of mechanical systems and components to industrial process, production operation, and maintenance. Students study and apply procedures for the removal, repair, and installation of machine components and further study methods of installation, lubrication practices, and maintenance procedures for industrial machinery. Includes study of techniques for calibration and repair of electromechanical devices and practice in computations pertaining to industrial machinery.

MFMT 103 Industrial Computer Application 2 Credit Hours

This is an introductory course appropriate for all technical and skilled trade students. The course is designed to provide computer familiarity, not proficiency. Industrial applications of computers will be stressed. Computer software, programming, storage/input/output devices and controls as they apply to industry will be explored. Design as well as hands-on, primarily competency based. The course will provide experiences and demonstrations in keyboarding, window programs, word processing, spreadsheets, databases, computer graphics, basic programming, time permitting two-dimensional computer aided drafting.

Note: This course meets the graduation requirement for General Education Outcome 2: Computer Literacy

MFMT 114 Energy Conversion Principles, Tools, Instruments, Processes 2 Credit Hours

An online course in applied facilities and power plant fundamentals designed to provide introductory practical science studies for students entering the power, facilities, HVAC, and process operation and maintenance fields. Covers: tools; instruments; materials and

practical science including basic thermodynamics; plant visits; operation and maintenance fundamentals with exercises; and experiences that meet or exceed requirements of National Skill Standards for heat, power, HVAC, and facilities technicians and engineers.

MFMT 115 Boiler(LP)/Heating Plant Operation & Maintenance 2 Credit Hours

An introductory online course for orientation to Boiler (Low Pressure) Heating Plant Operation and Maintenance covering the skills, knowledge and competencies for persons employed as building engineers or seeking positions as building and plant multi-skilled facilities technicians. Study materials which are taken from workplace literature and actual field systems and utilize a workbook to complete multi-skilling tasks similar to those completed by skilled technicians in the field.

Prerequisites: This is an online course which must be taken on the computer and students taking the course must be computer literate using basic DOS, Windows, word processing, e-mail, Internet and other computer capabilities effectively. Your computer equipment must be connected to an Internet service and have Internet capability. This course does not offer any assistance in using the computer, using software programs nor in troubleshooting your equipment or your computer systems.

MFMT 116 HP Boiler Operation/Maintenance 2 Credit Hours And License Prep

An online High Pressure and 3rd Class Boiler, Power or Process Plant Operation/Maintenance and License Preparation course covering the necessary information on skills, knowledge and competencies for persons employed as boiler operators and plant engineers or seeking positions as plant multi-skilled facilities technicians. Students are required to complete sketches, workbook exercises, and optional field activities along with quizzes and exams related to the study materials and field systems.

Pre-requisites: Suggest 1-2 years of field experience operating boilers and power plant equipment or equivalent education or training program-courses or permission

MFMT 116a 3rd Class Turbine/Engine License 2 Credit Hours Prep (OL)

Additional preparation in the Turbine/Engine, Auxiliaries and Refrigeration areas for License Preparation for 3rd Class Steam and Refrigeration or 4th Class NIULPE Licenses. This is a course covering the necessary information on skills, knowledge and competencies for persons employed as boiler operators and plant engineers or seeking positions as plant multi-skilled facilities technicians. Building-plant major equipment and controls maintenance for systems are covered to allow the employed or prospective engineer/technician to grasp the elements of operating procedures, required maintenance and repair, along with continuing oversight to ensure continuity of operation. Students study materials which are taken from workplace literature and actual field systems and utilize a workbook to complete sketches, workbook exercises, and optional field activities along with quizzes and exams related to the study materials and field systems.

MFMT 151 Power and Process Plant Operation **5 Credit Hours**

This course is designed to prepare a student to function effectively as an entry level Stationary Steam Apprentice or introductory personnel, upon starting their term at a plant as an apprentice or as an introduction to power and process plants operation & maintenance. This course provides basic skills, knowledge and familiarization with power, process, and heating-cooling plants through the study of basic principles and how they apply to the various types of equipment and systems found in such plants. The course emphasizes a hands-on approach to the study of basic skills where possible in a workplace laboratory setting. This course covers general workplace and personal safety along with hazardous or environmental concerns for workers on the job. The elements in the course meet or exceed the requirements of various certification and licensing agencies. May be conducted as an online course.

MFMT 155 Data Acquisition for Energy and Maintenance Technicians **2 Credit Hours**

This course provides a hands-on approach to various data communications functions found in industrial and commercial facilities environments and in the interface to the outside world including access to wide area networks (WAN), i.e., communications between temperature control systems and manufacturing conveyor controls and data acquisition.

MFMT 162 Boiler Installers - Repairers License Review **5 Credit Hours**

Boiler Installers License Review is a course designed to cover the Michigan code requirements for the installation and repair of low pressure and high pressure boilers. Persons taking this course and expecting to prepare to “write” for the Michigan Boiler Installers or Boiler Repair Licenses must have a minimum of 5 years of experience in all phases of boiler installation/repair in the class of license for which the applicant is applying. For qualification to “write” for the license, applicants must also be able to document (for inspection if required) a minimum of 4 installations they have made. Taking this course does not qualify the student to take the license exam.

Prerequisites: Meet the requirements or have equivalent background and experience required to take the State of Michigan Boiler Installers or Repairers License Exam or permission

MFMT 204 Introduction to Embedded Microcontrollers **2 Credit Hours**

This course is designed to provide a fundamental understanding of microcontrollers and how they are integrated into various machines and operating equipment. The course will emphasize practical applications of microcontroller technology through the use of hands-on laboratory experiments. The materials and labs are designed for entry-level students in the field of Manufacturing Maintenance Technology.

MFMT 222 Manufacturing Fabrication **2 Credit Hours**

This course is designed to prepare students to function effectively as multi-skilled maintenance technicians with emphasis on basic and intermediate material fabrication skills and knowledge. The course

will emphasize the hands-on aspect of materials fabrication where possible in a workplace laboratory setting. May be conducted as an online course.

Prerequisites: ENT 141 or completion of or concurrent enrollment in MFMT 114

MFMT 223 Facilities Fabrication **2 Credit Hours**

This course is designed to prepare students to function effectively as multi-skilled maintenance technicians with emphasis on basic and intermediate material fabrication skills and knowledge. The course will emphasize the hands-on aspect of materials fabrication where possible in a workplace laboratory setting. May be conducted as an online course.

Prerequisites: ENT 141 or completion of or concurrent enrollment in MFMT 114

MFMT 228 Building-Plant Major Equipment/ Controls Maintenance I **2 Credit Hours**

An online advanced course covering the necessary skills, knowledge and competencies for persons seeking positions as building and plant multi-skilled facilities technicians. Building-plant maintenance for mechanical, electrical, heating/cooling-HVAC and related auxiliary systems and associated controls are identified and covered to allow hands-on interfacing through planning projects, completing set up procedures, required maintenance and repair, along with continuing oversight to insure continuity of operation. This course may be conducted online.

Prerequisites: MFMT 114 or equivalent courses or permission

MFMT 229 Building-Plant Major Equipment/ Controls Maintenance II **2 Credit Hours**

An advanced course covering the necessary skills, knowledge and competencies for persons seeking positions as building and plant multi-skilled facilities technicians. Building-plant maintenance procedures and processes are covered for management of maintenance, structure and architectural portions of buildings, domestic hot water and potable water systems, plumbing and piping systems, elevators and transport systems, electric distribution and co-gen systems, waste disposal systems, fire and life safety systems, lighting systems and associated controls with hands-on interfacing to plan projects, complete set up procedures, the required maintenance and repair, along with continuing oversight to ensure continuity of operation. This course may be conducted online.

Prerequisites: ENT 141, MFMT 114 or equivalent courses or permission

MFMT 234 Facilities Capstone Project 1 **2 Credit Hours**

Advanced course providing a project approach to completing a capstone activity using workplace competencies. Students will utilize all skills and knowledge developed in pre-requisite courses. Students must complete entire project development to allow hands-on interfacing through planning, completing set up procedures, performing required maintenance and repair, along with testing and evaluation of proper operation. Students work in labs which duplicate the workplace completing multi-skilling tasks similar to those completed by skilled technicians in the field.

Prerequisites: Permission based upon program completed

MFMT 235 Facilities Capstone Project 2 2 Credit Hours

Advanced course providing a project approach to completing a capstone activity using workplace competencies. Students will utilize all skills and knowledge developed in pre-requisite courses. Students must complete entire project development to allow hands-on interfacing through planning, completing set up procedures, performing required maintenance and repair, along with testing and evaluating proper operation. Students work in labs which duplicate the workplace completing multi-skilling tasks similar to those completed by skilled technicians in the field.

MFMT 241 Power Engineering/Refrigeration 5 Credit Hours License Review

An online advanced college level course provided for 1st, 2nd and 3rd Class Refrigeration Operator License Review and Refrigeration Journeyman. Provides information and review of the fundamentals of refrigeration and special systems covered on license exams. Students are required to answer questions, work problems and sketch components on commercial-industrial refrigeration equipment and systems.

Prerequisites: Basic Refrigeration course or equivalent field experience

MFMT 248 Power Engineering - Steam 5 Credit Hours License Review

An advanced online 1st, 2nd Class Steam License Review course covering power engineering subjects including boilers, basic thermodynamics, boiler operation, maintenance, plant efficiency, pumps, auxiliaries, power plant accessories, turbines, engines, electrical, compressors, internal combustion engines, and review of national, state and local steam and boiler codes. Includes solving typical power plant problems, and practical exam skills.

Prerequisites: The course is designed for students who have the necessary work experience and practical preparation to qualify to write for local license agency courses such as the City of Detroit, City of Dearborn or for nationally identified examination agency exams such as NIULPE (National Institute for the Uniform Licensing of Power Engineers) 1st Class, 2nd Class or Chief Engineer's license examination. Normally 3-10 years of power engineering field experience is required for applicants to qualify for taking these license exams. The examinations are designed to 1) Test the applicants' knowledge in the area in which the license is being sought and, 2) Measure the applicants' ability to solve problems, interpret the steam code to operate a steam power plant safely and prudently.

Students study materials which are taken from workplace literature and actual field systems and utilize a workbook to complete multi-skilling tasks similar to those completed by skilled technicians in the field. Students are required to complete sketches, workbook exercises, and optional field activities along with quizzes and exams related to the study materials and field systems.

Power Engineers and Stationary Engineers seeking a First and/or Second Class Steam License have been working in the field a minimum of 5-6 years after completing their education or apprenticeship. Being an online course, prospective students should be computer literate, able to access the Internet readily, be familiar with e-mail systems, have the ability to easily work in a windows and Internet browser environment, be comfortable communicating in writing, be self-motivated and able to spend 6-12 hours of their time per week devoted to course study. Prospective students must have access to an Internet-capable computer utilizing a browser such as Internet Explorer or Netscape Navigator or must work from a computer in an on-campus lab.

MGT 230 Principles of Management 3 Credit Hours

This course is a study of the functions, principles, and philosophy of modern management, as well as the nature and structure of organizations. Brief consideration also is given to recent developments in corporate decision making and styles of managerial leadership. Classes consist of lectures, discussions, and case studies.

MGT 231 Supervision and Teambuilding 3 Credit Hours

This course is designed for supervisors, individuals recently promoted to supervision, and employees interested in moving into a supervisory role. Through this highly interactive class, students will be assisted in developing and improving their supervisory skills. Students will learn effective leadership techniques that will enable them to build strong teams that achieve synergy. Students will be able to examine their leadership style and compare it to more effective models. Role-playing and discussion sessions are an integral part of most class sessions.

MGT 232 Human Resources Management 3 Credit Hours

This course examines business organization and management as they apply to the personnel functions of recruitment selection, placement, induction, and training. Attention is given to job analysis; evaluation; maintenance; and measurement of morale, union-management relations, and the economic and physical security of employees.

MGT 237 Psychology in the Workplace 3 Credit Hours

This course is an introduction to psychological theory, research, and practice as they relate to the business environment. Workplace issues examined include selection criteria and predictors, training and development, performance appraisal, employee motivation and satisfaction, and occupational health.

MGT 238 Labor-Management Relations 3 Credit Hours

This course examines the principles underlying the management-union relationship; analyzes the legal and institutional framework in which collective bargaining takes place; and probes the nature, content, and problems of the collective bargaining process through lecture, discussion, and case analysis. Additionally, the purpose and problems of employee benefit plans are analyzed. Both principles and techniques of collective bargaining are emphasized.

MGT 240 Creative Problem Solving 3 Credit Hours

This course operates as a workshop with emphasis on experimentation, group studies, and students' input based on the expression of their needs. This course examines the history of creativity, recent findings of creativity research, and the application of those findings to problem-solving techniques. The introduction of such techniques to the work place is studied and planned.

MGT 241 Small Business Management & Entrepreneurship 3 Credit Hours

This course examines the role of small business and entrepreneurship in the economy. The role of and need for a business plan when starting a business are examined. Financial, marketing, management, and location considerations are examined. Internet and online businesses are discussed. Students prepare a business plan for

a start-up business of their choosing.

Co-requisites: BBA 131

MOA 100 Medical Office Procedures I - Administrative 3 Credit Hours

Serves as the foundation course for the Medical Assistant and Medical Receptionist and Medical Insurance Specialist programs. This course presents the administrative and office skills needed for understanding the significance of membership in a service profession. Topics included are personal qualifications, employability skills, ethical/legal responsibilities, receptionist duties, scheduling appointments, telephone techniques, filing, maintaining patient records, billing and collecting fees, bookkeeping, and computer applications.

Prerequisites: Score of 43 or above on ASSET Reading Test or 84 or above on COMPASS Test or satisfactory completion of ENG 081.

Co-requisite: AH 100

Note: Students considering either the Medical Office Assistant, the Medical Receptionist, or Medical Insurance Specialist programs need to coordinate their schedule with the health careers advisor.

Please review the Admission Requirements for the Medical Assistant Program as well as the recommendations for the Medical Receptionist and Medical Insurance Specialist programs.

MOA 110 Processing Health Insurance Claims 2 Credit Hours

This lecture/lab course is designed as an introductory insurance billing course centering on the medical office as well as physician insurance billing. It presents the coding procedures using the CPT/HCPCS Manual and related ICD-9 diagnosis necessary for billing Blue Shield, Medicare, Medicaid, and commercial carriers. Students will complete insurance claim forms for each of the major carriers.

Prerequisites: Score of 43 or above on ASSET Reading Test or 84 or above on COMPASS Test or satisfactory completion of ENG 081.

Suggested completion of or concurrent enrollment in AH 100 and MOA 100.

MOA 120 Medical Office Computer Applications 2 Credit Hours

Lecture and laboratory experiences will introduce the learner to microcomputer applications unique to the medical office. Applications will include the following computerized tasks: establishing information files, appointments, patient account information, accounts receivable, aging accounts, insurance billing, recall notice, and production reports.

Prerequisites: Score of 43 or above on ASSET Reading Test or 84 or above on COMPASS Test or satisfactory completion of ENG 081.

Suggested completion of or concurrent enrollment in AH 100 and MOA 100.

MOA 150 Medical Office Assistant Procedures II-Clinical 5 Credit Hours

An advanced course designed for students admitted to the program, includes the medical assisting principles and procedures specifically related to the clinical area, such as vital signs, administration of medications, venipuncture, medical and surgical asepsis, assisting with examinations and treatments, electrocardiography, routine

diagnostic laboratory tests, and medical emergencies.

Prerequisites: Score of 43 or above on ASSET Reading Test or 84 or above on COMPASS Test or satisfactory completion of ENG 081.

Completion of or concurrent enrollment in AH 100 and MOA 100.

Co-requisites: MOA 160, MOA 170, HPE 142, and PSY 131

Note: Students must be formally admitted into the Medical Assistant Program for MOA 150.

MOA 160 Basic X-Ray Techniques 2 Credit Hours

Designed for medical assistants and other health care workers who assist with radiographic procedures in ambulatory care facilities. This lecture/lab course focuses upon the basic components of radiation protection, radiation safety, basic radiologic positioning, fundamental procedures, equipment, special studies, darkroom procedure as well as film processing.

Note: MOA 160 is also highly recommended for students applying for admission to HFCC's Radiographer Program.

MOA 165 Physician Billing Concepts 4 Credit Hours

This lab/lecture course focuses upon the physician office billing process. Both paper and electronic claims are presented with an emphasis on correctly billing primary, as well as secondary claims.

Prerequisites: MOA 110 and AH 100

Co-requisites: HIT 150 and HIT 230

MOA 168 Facility Billing Concepts 4 Credit Hours

This lecture/lab course focuses upon the billing process unique to health care facilities. The hospital billing environment, coding, payment methods, UB92 claims will be addressed together with billing simulations.

Prerequisites: MOA 110 and AH 100

Co-requisites: HIT 150 and HIT 230

MOA 170 Medical Correspondence 3 Credit Hours

Emphasizes spelling, grammar, punctuation, as well as specific writing styles for medical assistants and medical receptionists. This course focuses upon the variety of correspondence encountered in an ambulatory health care facility. Lecture and laboratory activities lead to an exit performance of speed, accuracy and clarity in the preparation of printed documents.

Prerequisites: AH 100 and MOA 100

Suggested Prerequisites: Keyboarding proficiency of 30 wpm

MOA 181 Medical Collection & Legal Issues 3 Credit Hours

This advanced physician billing course focuses upon payment posting, fee schedules, HMO capitation reports, rejections, billable/non-billable services, claim status, and collections. Ethics in relation to billing and billing issues will also be discussed.

Prerequisites: MOA 165 and MOA 168

MOA 190 Medical Office Externship 4 Credit Hours

A capstone clinical externship for the medical assistant student, including 184 hours of clinical experience in an assigned ambulatory care facility. This course also includes a structured seminar component.

Prerequisites: Successful completion of all MOA Required Core and Required Support courses.

Note: Accreditation standards require that students do not receive compensation/payment, monetary or otherwise, from any clinical site for any portion of their clinical externship (MOA 190 Medical Office Externship).

MOA 205 Insurance Coding and Reimbursement 3 Credit Hours

This lecture/laboratory course will further develop the methods and skills necessary for optimal reimbursement for services rendered in a healthcare setting. Billing and reimbursement cycle, HIPAA, diagnostic coding and procedural coding, coding compliance, claims processing, as well as physician and hospital coding reimbursement will be developed. This course will also provide an overview of the key financial circumstances impacting the healthcare delivery system.

Prerequisites: MOA 165 and MOA 168

MPS 100 Manufacturing Processes I 6 Credit Hours

A beginning hands-on course with theory in which the student gains experiences in manufacturing processes involving turning, threading, drilling, reaming, tapping, milling, and shaping. Part processing, machines, and tooling used along with speeds and feeds and inspection techniques are covered in relation to operations. Safety is an integral part of the course.

MPS 110 Manufacturing Processes II 6 Credit Hours

A hands-on course with some theory in which the student gains advanced manufacturing processes experience on the lathe, mills, and grinders. The proper and safe use of equipment and tools used in performing machining operations is integral to this course. The efficient use and the troubleshooting of carbide, ceramic, and diamond cutting tool materials are covered.

Prerequisites: Completion of or concurrent enrollment in MPS 100, or permission of the instructor

MPS 120 Practical Problems In Machine Tools I 4 Credit Hours

A course for students who wish to increase their machining efficiency and quality of workmanship. Individualized instruction helps the student overcome deficiencies in machining on the lathe, drill press, and shaper. Tool sharpening, set-up, and safety are stressed.

Prerequisites: Completion of or concurrent enrollment in MPS 100

MPS 125 Practical Problems in Machine Tools II 4 Credit Hours

Designed to develop the student's machining efficiency. Individualized instruction helps the student overcome any deficiencies in machining on the lathe, mill, or grinders. Material, tolerance, finish, and design are considered in emphasizing quality and quantity of parts within a time limit. Safe work habits are stressed.

Prerequisites: Completion of or concurrent enrollment in MPS 120

MPS 130 Quality Control Gaging and Inspection 4 Credit Hours

A beginning course that covers the following manufacturing inspection methods: layout; surface plate techniques; tool and instrument reading and uses; and floor and receiving inspection. Surface finish measurement, introduction to SPC techniques, and GDT are integral portions of this course.

MPS 140 Introduction to CNC 4 Credit Hours

A beginning course covering the basic concepts of computer numerical control (CNC). Experience is obtained through the setup, operation, and programming of a CNC Mill and CNC Lathe.

Prerequisites: Completion of or concurrent enrollment in MPS 100

MPS 145 CNC Operations 6 Credit Hours

Introduces the student to the concept of computer numerical control (CNC) operations as they exist in the manufacturing environment. Students acquire skills in setup, operation, and programming of the CNC Mill and CNC Lathe through MDI and off-line programming.

Prerequisites: MPS 140

MPS 146 Introduction to CNC Machine Tool Probing 1 Credit Hour

This course covers the elementary functions of use and application of the electronic probe on a Vertical Machining Center. Topics covered in this course include: set-up and calibration of the probe, and use and application of the following cycles - Bore/Boss measuring cycle, Web/Pocket measuring cycle, and internal and external cycle. Students will be involved in both classroom and laboratory applications activities.

Prerequisite: MPS 145

MPS 147 Basic Macro Programming for CNC 1.5 Credit Hours

This is an introductory course to Macro programming as applied to CNC machine tools. Basic elements of this type of programming include: defining a macro, defined variables vs. undefined variables, the use and application of arithmetic, logical and Boolean operators. This course includes both classroom and application based activities in the CNC laboratory.

Prerequisite: MPS 145

MPS 148 Advanced CNC Probing 1 Credit Hour

This course takes the student to the next level in the use and application of the electronic probe on CNC machine tools. Students will be involved in writing their own cycles to use the probe in such activities as: vector measuring, 4th axis applications, stock allowance and angle measurement along with work coordinate offset measurement. Students will prove their work on the CNC Vertical Machining Center.

Prerequisites: MPS 145, MPS 146, and MPS 147

MPS 150 SPC In Manufacturing 4 Credit Hours

Covers the use of SPC (Statistical Process Control) in manufacturing to achieve optimum product quality at lowest cost. Development of statistical charts and their interpretation related to process improvement are integral parts of the course. Formulas pertaining to various charts, gage R & R, Cp, and Cpk are covered.

MPS 160 Computer Assisted N/C Programming 4 Credit Hours

An introductory course in computer-assisted part programming. The student will use CAD/CAM software running on a personal computer (PC). Programming for both the CNC Mill and CNC Lathe will be done in this class.

Prerequisites: MET 140 or departmental approval

MPS 170 Advanced Computer Assisted N/C Programming 4 Credit Hours

A study in advanced methods of part programming using CAD/CAM software on a personal computer (PC). Special emphasis is placed on programming three-dimensional parts. Class assignments will also include multiple-part programming.

Prerequisite: MPS 160

MPS 210 Non-Traditional Manufacturing Processes 4 Credit Hours

An advanced course covering theory in the "nontraditional" material removal techniques applying mechanical, chemical, electrical, and thermal energies. Practical experience includes electrode development and operation of EDM. Safety is stressed.

Prerequisites: MPS 110 or permission of the instructor

MPS 275 Advanced CNC Operations 6 Credit Hours

Concentrates on the total aspects of computer numerical control (CNC) as applied in manufacturing today. This course covers estimating for CNC manufacturing, DNC, tool selection, cutting tool material selection, and small batch production.

Prerequisites: MPS 145

MUS 107 Concert Choir 1 Credit Hour

Four semesters of Concert Choir including preparation and performance of a broad spectrum of choral music, from classical to pop, show tunes, and jazz. At least two performances are scheduled each semester, often accompanied by band or orchestra. These courses are open to college students and adult members of the community. New singers may audition during the first week of class. No preparation is necessary, only a good ear and a clear voice.

MUS 108 Concert Choir 1 Credit Hour

Second of four semesters of Concert Choir including preparation and performance of a broad spectrum of choral music, from classical to pop, show tunes, and jazz. At least two performances are scheduled each semester, often accompanied by band or orchestra. These courses are open to college students and adult members of the community. New singers may audition during the first week of class. No preparation is necessary, only a good ear and a clear voice.

Prerequisites: Follow course sequence

MUS 109 Wind Ensemble 1 Credit Hour

Four semesters of wind Ensemble (symphony band) including preparation and performance of standard concert band and transcriptions of all styles. This group performs for college as well as community functions. These courses are open to college students, adult members of the community, and advanced placement high

school students. Woodwind, brass, and percussion instrumentalists should contact the director for auditions prior to the first rehearsal.

MUS 110 Wind Ensemble 1 Credit Hour

Four semesters of wind Ensemble (symphony band) including preparation and performance of standard concert band and transcriptions of all styles. This group performs for college as well as community functions. These courses are open to college students, adult members of the community, and advanced placement high school students. Woodwind, brass, and percussion instrumentalists should contact the director for auditions prior to the first rehearsal.

MUS 111 Jazz Lab Band 1 Credit Hour

Four semesters of Jazz Lab Band, including preparation and performance of a variety of jazz styles from swing to contemporary. This group, which performs several concerts each semester, is open to college students, and adult members of the community. New instrumentalists should contact the director to arrange for an audition prior to the first rehearsal.

MUS 112 Jazz Lab Band 1 Credit Hour

Four semesters of Jazz Lab Band, including preparation and performance of a variety of jazz styles from swing to contemporary. This group, which performs several concerts each semester, is open to college students, and adult members of the community. New instrumentalists should contact the director to arrange for an audition prior to the first rehearsal.

MUS 113 Applied Music 1 Credit Hour

Four sequential semesters of weekly ½ hour private lessons intended to improve vocal or instrumental musicianship through study with a professional teacher. Students should contact the applied music lead teacher during the first week of the semester for teacher assignments. A juried performance is required at the conclusion of each semester. In addition to tuition, the student must also pay a fee to the private instructor.

Note: Follow course sequence

MUS 114 Applied Music 2 Credit Hours

Four sequential semesters of weekly ½ hour private lessons intended to improve vocal or instrumental musicianship through study with a professional teacher. Students should contact the applied music lead teacher during the first week of the semester for teacher assignments. A juried performance is required at the conclusion of each semester. In addition to tuition, the student must also pay a fee to the private instructor.

Note: Follow course sequence

MUS 115 Applied Music 1 Credit Hour

Four sequential semesters of weekly ½ hour private lessons intended to improve vocal or instrumental musicianship through study with a professional teacher. Students should contact the applied music lead teacher during the first week of the semester for teacher assignments. A juried performance is required at the conclusion of each semester. In addition to tuition, the student must also pay a fee to the private instructor.

Note: Follow course sequence

MUS 116 Applied Music 2 Credit Hours

Four sequential semesters of weekly ½ hour private lessons intended to improve vocal or instrumental musicianship through study with a professional teacher. Students should contact the applied music lead teacher during the first week of the semester for teacher assignments. A juried performance is required at the conclusion of each semester. In addition to tuition, the student must also pay a fee to the private instructor.

Note: Follow course sequence

MUS 117 Class Piano I 2 Credit Hours

Beginning piano students learn to read and play piano music. Instruction takes place in the HFCC digital piano lab.

MUS 118 Class Piano II 2 Credit Hours

Builds upon skills developed in MUS 117 (Piano 1). Instruction takes place in the HFCC digital piano lab.

Prerequisites: MUS 117 or permission of the instructor

MUS 121 Jazz Improvisation 2 Credit Hours

Two sequential semesters of jazz improvisation in which skills are developed through the study of jazz theory and the performances of a variety of jazz styles in a small group, jazz combo setting.

Note: Follow course sequence

MUS 122 Jazz Improvisation 2 Credit Hours

Two sequential semesters of jazz improvisation in which skills are developed through the study of jazz theory and the performances of a variety of jazz styles in a small group, jazz combo setting.

MUS 123 Voice Techniques I 2 Credit Hours

This course covers basic singing techniques including breath control, diction, posture, and tone quality; instruction takes place in a classroom setting. Techniques are applied to a variety of songs. This course is for singers of all ages and interests.

MUS 126 Digital Recording Studio 1 Engineering 3 Credit Hours

This course provides hands-on experience in digital audio engineering. Students will learn to engineer recording sessions by working in an actual recording studio with live musicians. The course covers basic techniques in setting up recording sessions, preparing computer files, microphone usage and placement, digitizing principals, audio acquisition options, midi integration and session management.

Prerequisites: TCM 151 or permission of instructor

Co-requisites: MUS 127

Note: Students should have strong computer skills. A fundamental understanding of music theory is recommended.

MUS 127 Digital Audio Mastering 1 3 Credit Hours

This course provides hands on experience and guided practice in digital audio mixing and mastering. Students will learn to prepare complex digital audio files for duplication. The course covers basic techniques in mixing room acoustics, preparing audio for mixing, software plug-ins, trouble shooting audio problems, equalization,

stereo imagery, noise limitation, and bit conversion. Students will work with professional audio production software.

Prerequisites: TCM 151 or consent of instructor

Co-requisites: MUS 126

Note: Students should have strong computer skills. A fundamental understanding of music theory is recommended.

MUS 130 Music Appreciation 3 Credit Hours

This basic appreciation course includes a study of the elements of music and emphasizes listening skills, music vocabulary, and an open-mindedness toward all music. Fulfills Humanities requirements.

MUS 132 Music Literature 3 Credit Hours

A survey of various musical compositions from the Medieval period through the Twentieth Century, emphasizing the development of listening skills. Provides more in-depth knowledge than MUS 130.

MUS 133 The History of Rock and Roll 3 Credit Hours

This course covers Rock & Roll from its origins to the present. A field trip to The Rock & Roll Hall of Fame is offered. This course is primarily for the non-music major and fulfills Humanities requirements.

MUS 134 Music Fundamentals 3 Credit Hours

Explains how to read music, including notes, clefs, rhythms, time signatures, scales, intervals, and basic chords. This course is recommended for the student who has a minimal background in music.

MUS 138 Music Theory I 3 Credit Hours

This course covers basic elements of music including pitch, intervals, triads, major and minor keys, time signatures and rhythm. Suggested

Co-requisite: MUS 141

MUS 139 Music Theory II 3 Credit Hours

Second semester Music Theory, covering triads in inversion, phrase and cadences, harmonic progressions, and four part harmonization.

Prerequisites: MUS 138 or permission of the instructor

Suggested Co-requisite: MUS 142

MUS 141 Sight Singing/Ear Training I 2 Credit Hours

This course teaches singing and the transcribing of simple melodies, as well as fundamental conducting techniques for the development of rhythmic skills. This course is recommended for all instrumental and vocal musicians.

Suggested Co-requisite: MUS 138

MUS 142 Sight Singing/Ear Training II 2 Credit Hours

This course is a second semester of sight singing and ear training. Students learn to sing and transcribe two-part and four-part pieces in major and minor keys. More challenging than MUS 141. This course is recommended for aspiring full-time music students.

Prerequisites: MUS 141 or permission of the instructor

Suggested Co-requisite: MUS 139

MUS 143 Show Choir 1 Credit Hour

Four sequential semesters of Jazz Choir, covering preparation and performance of a variety of jazz and popular music. This group performs for college as well as community functions. Auditions are held during the first week of class.

Prerequisite: Audition only

MUS 144 Show Choir 1 Credit Hour

Four sequential semesters of Jazz Choir, covering preparation and performance of a variety of jazz and popular music. This group performs for college as well as community functions. Auditions are held during the first week of class.

Prerequisite: Audition only

MUS 147 Basic Music I for the Elementary Classroom Teacher 3 Credit Hours

Develops useful musical skills for future elementary classroom teachers. No prior musical experience is necessary.

MUS 149 Music Synthesis 2 Credit Hours

Teaches how to combine the power of the computer with MIDI equipment to create and manipulate digital music. This course covers current practices in music synthesis including basic theory and the creation of printed music. Basic knowledge of music fundamentals, personal computers, and piano keyboard is recommended but not required.

MUS 151 Introduction to Music Technology 3 Credit Hours

This course introduces the uses of technology in creating, promoting and managing music. Students will gain practical experience through hands-on projects. Topics to be covered include basic computer operation, MIDI set-up and uses, using music notation software, using music instruction software, and the uses of spreadsheets and word processors to manage musical events. Students are required to spend time outside of class in the music technology lab in order to complete assignments.

MUS 152 Music Notation with Finale I 2 Credit Hours

This course provides basic instruction in the use of “Finale” by Coda. “Finale” is the industry standard for music software. Students will use the music technology lab to gain hands-on experience with Finale. Topics to be covered include basic document set-up, using templates, use of the tool palettes, importing and saving files, and file playback. Students must have a basic knowledge of how to use a computer.

MUS 207 Concert Choir 1 Credit Hour

Three out of four semesters of Concert Choir including preparation and performance of a broad spectrum of choral music, from classical to pop, show tunes, and jazz. At least two performances are scheduled each semester, often accompanied by band or orchestra. These courses are open to college students and adult members of the community. New singers may audition during the first week of class. No preparation is necessary, only a good ear and a clear voice.

Note: Follow course sequence

MUS 208 Concert Choir 1 Credit Hour

The fourth semester of Concert Choir including preparation and

performance of a broad spectrum of choral music, from classical to pop, show tunes, and jazz. At least two performances are scheduled each semester, often accompanied by band or orchestra. These courses are open to college students and adult members of the community. New singers may audition during the first week of class. No preparation is necessary, only a good ear and a clear voice.

Note: Follow course sequence

MUS 209 Symphonic Wind Ensemble 1 Credit Hour

Three of the four semesters of Wind Ensemble (symphony band) including preparation and performance of standard concert band and transcriptions of all styles. This group performs for college as well as community functions. These courses are open to college students, adult members of the community, and advanced placement high school students. Woodwind, brass, and percussion instrumentalists should contact the director for auditions prior to the first rehearsal.

Note: Follow course sequence

MUS 210 Symphonic Wind Ensemble 1 Credit Hour

The fourth semester of Wind Ensemble (symphony band) including preparation and performance of standard concert band and transcriptions of all styles. This group performs for college as well as community functions. These courses are open to college students, adult members of the community, and advanced placement high school students. Woodwind, brass, and percussion instrumentalists should contact the director for auditions prior to the first rehearsal.

Note: Follow course sequence

MUS 211 Jazz Lab Band 1 Credit Hour

Three out of four semesters of Jazz Lab Band, including preparation and performance of a variety of jazz styles from swing to contemporary. This group, which performs several concerts each semester, is open to college students, and adult members of the community. New instrumentalists should contact the director to arrange for an audition prior to the first rehearsal.

Note: Follow course sequence

MUS 212 Jazz Lab Band 1 Credit Hour

Fourth semester of Jazz Lab Band, including preparation and performance of a variety of jazz styles from swing to contemporary. This group, which performs several concerts each semester, is open to college students, and adult members of the community. New instrumentalists should contact the director to arrange for an audition prior to the first rehearsal.

Note: Follow course sequence

MUS 213 Applied Music 1 Credit Hour

Four sequential semesters of weekly one-hour private lessons intended to improve vocal or instrumental musicianship through study with a professional teacher. Students should contact the applied music lead teacher during the first week of the semester for teacher assignments. A juried performance is required at the conclusion of each semester. In addition to tuition, the student must also pay a fee to the private instructor.

Note: Follow course sequence

MUS 214 Applied Music 2 Credit Hours

Four sequential semesters of weekly one-hour private lessons intended to improve vocal or instrumental musicianship through study with a professional teacher. Students should contact the applied music lead teacher during the first week of the semester for teacher assignments. A juried performance is required at the conclusion of each semester. In addition to tuition, the student must also pay a fee to the private instructor.

Note: Follow course sequence

MUS 215 Applied Music 1 Credit Hour

Four sequential semesters of weekly half-hour private lessons intended to improve vocal or instrumental musicianship through study with a professional teacher. Students should contact the applied music lead teacher during the first week of the semester for teacher assignments. A juried performance is required at the conclusion of each semester. In addition to tuition, the student must also pay a fee to the private instructor.

Note: Follow course sequence

MUS 216 Applied Music 2 Credit Hours

Four sequential semesters of weekly hour private lessons intended to improve vocal or instrumental musicianship through study with a professional teacher. Students should contact the applied music lead teacher during the first week of the semester for teacher assignments. A juried performance is required at the conclusion of each semester. In addition to tuition, the student must also pay a fee to the private instructor.

Note: Follow course sequence

MUS 232 Music History I 3 Credit Hours

An intensive course providing a practical background in Western music from Greek Antiquity to 1750. Musical forms, styles, composers, compositions, and important influences on the development of Western music are covered through text readings, listening examples, and class discussion.

MUS 233 Music History II 3 Credit Hours

An intensive course providing a practical background in Western music from 1750 to the present. Musical forms, styles, composers, compositions, and important influences on the development of Western music are covered through text readings, listening examples, and class discussion.

MUS 238 Music Theory III 3 Credit Hours

Fourth semester of Music Theory, building upon skills developed in MUS 139.

Prerequisite: MUS 139 or permission of the instructor

MUS 243 Show Choir 1 Credit Hour

Third and fourth semesters of Show Choir.

Prerequisites: MUS 144

MUS 244 Show Choir 1 Credit Hour

Third and fourth semesters of Show Choir.

Prerequisite: MUS 144

NCS 100 Competency Evaluated Nurse Aide 16 Credit Hours

Basic nursing skills necessary to perform the duties of a nurse aide are acquired. The course incorporates 90 hours of theory, 128 hours of clinical laboratory practice, and 52 hours in a clinical agency. Successful mastery allows testing at the state level to receive the C.E.N.A. designation. Course includes attendance in class 8:30 a.m. - 4:30 p.m., 4 days per week.

Pre-requisite: High school graduate or GED

NSG 083 Supplement to Nursing and Self-Care II and III 1 Credit Hour

Supplemental course designed in two sections, taken concurrently, to provide special help with NSG 150-Nursing and Self-Care II, and NSG 155-Nursing and Self-Care III. Emphasis is on the use of critical thinking to facilitate application of psychiatric and medical-surgical nursing theory to clinical practice. One hour of lecture per week.

Note: Student must be enrolled NSG 150 and NSG 155. Students should be sure to choose the supplemental that starts with the course taken during the first 8 weeks.

NSG 085 Supplement to Nursing and Self-Care IV 1 Credit Hour

Supplemental course designed to be taken concurrently with NSG 221 and NSG 222-Nursing and Self-Care IV, in order to provide special help with the course. Emphasis is on the use of critical thinking to facilitate application of medical-surgical nursing theory to clinical practice. One to one-and-a-half hours of lecture per week.

Co-requisites: NSG 221 and NSG 222

NSG 087 Supplement to Nursing and Self-Care V 1 Credit Hour

Supplemental course designed in two sections, taken concurrently, to provide special help with NSG 250-Nursing and Self-Care V. Emphasis is on the use of critical thinking to facilitate application of maternity and pediatric nursing theory to clinical practice. One or two hours of lecture per week for ten weeks.

Suggested Prerequisite: NSG 250

Note: Students should select the section that matches the area of NSG 250 they are currently in. If they are in OB the first five weeks, they should choose the supplemental that starts with OB concepts and not the one that starts with Pediatrics.

NSG 091 Nursing Systems II: LPN Transition 1 Credit Hour

Course required of all students registered and admitted into the LPN-ADN Advanced Placement status. The course will provide a detailed overview of the Advanced Placement program and methods available to receive nursing course credits. Students will begin the process of assimilation into the advanced, second semester, NSG 155, NSG 150, depending upon review of LPN program. The course will introduce Dorothea Orem's Self-Care Deficit Theory Model, document math competency in medication administration, and validate application of the nursing process. Individual advisement will be available to each student.

Prerequisites: Acceptance into the Nursing Program as an Advanced Placement student articulating to the ADN program. Permission of the Associate Dean of Nursing and LPN Facilitator required.

NSG 095 Calculating Medication Dosages I 1.5 Credit Hour

Aids the student entering the nursing program who experiences difficulty with mathematics. Emphasis is on working actual clinical medication and intravenous problems with accuracy and proficiency in a realistic time period. Proficiency in calculating dosages is gained through class work, practice problems, and practice timed testing. Three hours of class per week for eight weeks.

Prerequisites: Enrollment in the first year of the Nursing program or in current nursing practice or approval of the division

Note: Day or evening offerings depend on student requests and availability of instructors.

NSG 096 Calculating Medication Dosages II 1.5 Credit Hours

Aids the student experiencing difficulty with calculating dosages who desires more intensive assistance. Emphasis is on working complex dosages and intravenous and pediatric calculations with accuracy in a realistic time period. Proficiency in calculating dosages for medical/surgical and pediatric clients is gained through class work, practice problems, and practice time testing. Three hours of class per week for eight weeks. Summer semester only.

Prerequisites: Enrollment in the second year of the Nursing program or in current nursing practice

NSG 097 Calculating Pediatric Medication Dosages 0.5 Credit Hours

Aids the student experiencing difficulty with calculating dosages. Emphasis is on working pediatric medication/intravenous problems with accuracy within a realistic time period. Knowledge of the process of calculating pediatric dosages based on weight, body surface area, and intravenous flow rates is gained. Proficiency is attained through classwork, practice problems, and practice timed testing. Four hours of class on two Saturdays. Winter semester only.

Prerequisites: Enrollment in a pediatric nursing course

Note: Concurrent enrollment in NSG 250 is required

NSG 098 Calculating Medication Dosages - Advanced Medical-Surgical Nursing 0.5 Credit Hours

This course is designed for the student entering the second year nursing classes who needs assistance with dosage calculations. Emphasis is on complex medication and ICU medication dosage calculations. Students gain proficiency in calculating medication dosage problems for advanced medical/surgical clients through classwork, timed practice tests, and assigned homework problems.

Prerequisite: Enrollment in NSG 221/NSG 222

NSG 120 Nursing and Health Care Systems I 2 Credit Hours

Socializes the student nurse into today's nursing and introduces concepts necessary for functioning at optimal levels as a student and ADN graduate nurse. This course includes Orem's Self-Care Deficit Theory of Nursing; principles of major theories such as role, learning, systems, and change; professional values and ethics; legal issues; trends and components of the health care delivery system. Two consecutive hours of theory per week.

Prerequisite: Acceptance to the Nursing program

Note: The theory portion of this course is taught during the day. The

students who enter the program in fall take the course in fall. Those who enter in winter semester take it in winter.

NSG 126 Nursing and Self-Care I 7 Credit Hours

Introduces the nursing process and Orem's Self-Care Model as the conceptual model for nursing practice. Laboratory practice precedes clinical experience with actual clients. In clinical experience the emphasis is on development of competence for ADN roles. Proficiency in dosage calculation is required for continuation in the course. Four hours of theory, twelve hours of clinical practice per week in an acute hospital or extended care setting.

Prerequisites: Acceptance to the Nursing program

Suggested Prerequisite: NSG 120, BIO 233, PSY 131, and BLS-C

Note: It is strongly suggested that all non-nursing support courses are completed prior to entry to the Nursing program. There is one section of theory taught in the evening during the fall only. This course is taken in fall by students who are accepted in the fall and in winter by those accepted in the winter.

NSG 150 Nursing and Self-Care II 5 Credit Hours

Continues development of the nursing process to assist psychiatric adult clients with diagnoses related to indirect self-destructive behavior, inability to relate with others, alterations in mood, severe anxiety, social maladaptation, and psycho-physiological conditions. Legal/ethical standards for ADN practice are explained. Therapeutic communication and therapeutic use of self are emphasized. Five hours of theory and fifteen hours of clinical practice per week for 7.5 weeks in a mental health care setting.

Prerequisites: NSG 120, 126; BIO 233, and PSY 131

Suggested Prerequisite: NSG 155, PSY 253, and BIO 234

Note: It is highly suggested that the student complete PSY 253 prior to taking this course and not concurrently. This course is offered in winter for students accepted into the program in fall. It is offered in spring or summer for students accepted into the program in winter.

NSG 155 Nursing and Self-Care III 5 Credit Hours

Continues development of competency in the nursing process to help adults achieve self-care goals. Principles, concepts, and factors related to the client's health state are emphasized. Legal/ethical dimensions of practice are integrated with nurse agency, ADN role, and standards of care. Current issues and trends in delivery of quality health care are included. Proficiency in dosage calculation is required for continuation in the course. Five hours of theory and fifteen hours of clinical practice per week for 7.5 weeks in an acute hospital care setting.

Prerequisites: NSG 120, 126; BIO 233, and PSY 131

Suggested Prerequisite: NSG 150, PSY 253, and BIO 234

Note: It is suggested that students complete PSY 253 and BIO 234 prior to taking this course. This course is offered in winter for students who are accepted into the program in fall. It is offered in spring or summer for students who are accepted into the program in winter.

NSG 203 Introduction to Critical Care I 2 Credit Hours

Provides beginning theoretical concepts related to caring for the critically ill client for the student or practicing nurse who is considering specializing in this area. This course covers different content areas than NSG 204. It meets three hours per week for ten consecutive weeks.

Prerequisites: Enrollment in the third semester of the Nursing program or a licensed nurse, and completion of BIO 234

Note: This theory course assists students who are approaching the beginning of their second year to apply medical/surgical concepts, integrate medications, and understand the need for accurate lab results in planning client care. It is a wonderful enhancement course for students who are not successful with the first attempt at NSG 221, 222.

This course is offered only spring or summer not both. See class schedule.

NSG 210 Healing Practices: Alternative and Complementary Therapies 3 Credit Hours

Introduces the student to a variety of healing philosophies and beliefs. Discussion covers the resurgence of natural healing and the role of the National Center for Complementary and Alternative Medicine (NCCAM). Topics may include: herbal medicine, nutrition, supplements, homeopathy, naturopathy, mind-body therapies, posture/mobility/movement therapies, touch and bodywork, chiropractic, energy therapies, Eastern therapies, and other traditional and indigenous therapies. Can also be taken for independent study with permission of the instructor.

Prerequisites: (NOTE: All interested nurses, members of the college community, and local community members are invited.)

Note: Course is offered according to student request and availability of instructor.

NSG 221 Nursing and Self-Care IV - Part I 5 Credit Hours

Provides development of competency in applying the nursing process in the care of adults with common medical-surgical problems affecting the cardiac, urinary, gastro-intestinal and endocrine systems with emphasis on oxygenation, urinary elimination and metabolism. This course emphasizes principles, concepts, and factors related to the client's health state, as well as issues, trends, legal and ethical accountability, and promotion of quality care in nursing practice. Proficiency in dosage and IV calculation is required for continuation in the course. Six hours of theory, twelve hours of clinical practice (including one hour of data collection) per week in an acute hospital setting is required.

Prerequisites: AH 120, BIO 233, 234; NSG 150, 155; PSY 131, 253; and SOC 131

NSG 222 Nursing and Self-Care IV - Part II 5 Credit Hours

Provides continued development of competency in applying the nursing process to adults with common medical-surgical problems of nutrition, reproductive health and for clients with neurosensory and musculoskeletal disorders. Discussion of the community role in disaster nursing is continued. Principles, concepts, and factors related to client's health state, as well as issues, trends, legal and ethical accountability, and promotion of quality care in nursing practice are emphasized. Proficiency in dosage and IV calculation is required for continuation in the course. Six hours of theory, twelve hours of clinical practice (including 1 hour of data collection) per week in an acute hospital setting is required.

Prerequisites: AH 120, BIO 233, 234; PSY 131, 253; NSG 150, 155; and SOC 131

NSG 250 Nursing and Self-Care V 7 Credit Hours

Develops competency in using the nursing process to help the child (birth through adolescence) and childbearing-family achieve self-

care goals, applying scientific principles, concepts, and factors related to the child and the family as a self-care agent. Current issues, trends, legal and ethical accountability, and the promotion of quality care are integrated into nursing practice. Five hours of theory, twelve hours of clinical practice per week for ten weeks (five weeks in pediatric setting and five weeks in maternity setting).

Prerequisites: NSG 150, 155, 221, 222; BIO 233, 234; PSY 131, 253; SOC 131; and ENG 131, 132

Note: It is suggested that nursing students take all non-nursing support courses before entering the program. However, students may elect to take POLS 131 at this time. Students spend the first five weeks in pediatric nursing or in maternity nursing. After five weeks they switch to the opposite speciality.

NSG 255 Nursing and Health Care Systems II 3 Credit Hours

Emphasizes the transition phase from student to ADN graduate nurse, focusing on management strategies necessary for setting priorities, including organizing and delegating work when responsible for a group of clients and applying prior learning in delivery of nursing care, work relationships, and legal and ethical accountability in the promotion of quality care. Three hours of theory, fifteen hours of clinical per week for five weeks in an acute hospital or extended care setting.

Prerequisites: NSG 150, 155, 221, 222, 250; BIO 233, 234; PSY 131, PSY 253; SOC 131; and ENG 131, 132

Suggested Prerequisite: POLS 131

Note: This is the capstone course for nursing. All non-nursing courses should be completed at this point with a C or better. A computer competency test or computer course that fulfills the college requirement for computer literacy should be completed as well.

NSG 285 Pathophysiology for Nurses 4 Credit Hours

This course covers the etiology of diseases, the pathophysiological changes occurring in the body, and the clinical features of the disease. Diagnostic methods, complications of each disorder, prognosis and treatment plans are reviewed. Emphasis is placed on helping RNs and nursing students understand the disease process and apply concepts to clinical practice, including pharmacological measures and treatment modalities. The course uses critical thinking skills to integrate pathophysiological concepts and enhance the learning process.

Prerequisites: Passing grade of C or better in BIO 233 and 234 or equivalent, or Registered Nurse licensure

Note: This course assists students with a greater understanding of the disease process. It is an elective open to all nursing students or those who are considering a nursing career. Students who fall out of NSG 155, NSG 221, or NSG 222 are strongly advised to take this course.

PHIL 131 Introduction to Logic 3 Credit Hours

Examines the methods and principles of assertion and validity in argumentation. This course includes the study of the nature of logic and its relationship to language, informal fallacies, and both traditional and modern symbolic methods of deduction.

Note: First semester course for all students.

PHIL 133 History of Philosophy to the 18th Century 3 Credit Hours

An introduction to the history of Western Philosophy from its origins in Greece to the rise of science. Six stages of intellectual development will be examined from Thales to Hobbes.

Note: Second semester course for all students.

PHIL 135 History of Modern Philosophy 3 Credit Hours

A continuation of the history of Western philosophy focusing on the major philosophers and major developments through the twentieth century from Descartes through Wittgenstein. Influential currents such as rationalism, empiricism, idealism, romanticism, Marxism, Darwinism, positivism, pragmatism, phenomenology, existentialism, and analysis are examined.

Note: Third semester course for all students.

PHIL 137 Topics in Philosophy 3 Credit Hours

A non-historical approach to philosophy for serious students interested in the professions or for professionals interested in focusing on topics of professional or personal significance. Section offerings are sufficiently diverse to acquaint serious students or professionals with the extensive scope of philosophy. The range of philosophy is as broad as human experience. Diverse areas such as philosophy of religion, philosophy of science, aesthetics, philosophy of law, business ethics, biomedical ethics, or philosophy of language may be the current topic offered that semester. Topics vary each semester and with each instructor.

PHIL 139 Ethics 3 Credit Hours

Ethics emphasizes practical and normative ethical questions as well as analytical or metaethical questions. This course provides a systematic examination of problems by covering various classical and contemporary theories which include standards or criteria of moral action, the nature and justification of both value judgments and moral judgments, the nature of ethical knowledge, the meaning of ethical terms, intelligent decision-making, and free will vs determination.

Note: Fourth semester course for all students.

PHT 100 Introduction to Pharmacy Technology 2 Credit Hours

An introduction to the role of the pharmacy technician in the delivery of pharmacy services. Discussion topics include ethical, legal, and professional issues related to the practice of pharmacy. Special emphasis is placed on pharmaceutical terminology, specific distribution systems, pharmacy standards, and the role of the technician. Two hours of lecture per week.

Prerequisites: Acceptance into the Pharmacy Technician program

Co-requisites: PHT 124

Note: Please see the admission requirements for the Pharmacy Technician Program.

PHT 119 Out Patient Pharmacy Externship 2 Credit Hours

Assignment to selected outpatient pharmacy facilities for directed practice in pharmacy technology. This is a required, supervised learning experience under the direction of a pharmacist. Rotation selections include community, independent, and hospital out patient

pharmacy locations. The eight week clinical rotations include eight hours per week in the clinical area.

Prerequisites: Acceptance into the Pharmacy Technician Program and PHT 100, PHT 124, and PHT 132.

Co-requisites: PHT 125, PHT 150, PHT 165, and PHT 175.

Note: The eight week externship rotation begins in March. You must be enrolled and passing in all of the following courses while completing the Out Patient Externship Rotation: PHT 125, PHT 150, PHT 165, and PHT 175.

PHT 124 Pharmacology I for Pharmacy Technicians 3 Credit Hours

The first of a two-course sequence in pharmacology for pharmacy technicians. The course examines general pharmacological concepts, principals, actions, side effects, dosage forms, and route of administration. The course will cover concepts in drug development and drug usage, focusing on antibiotics, antifungal, antihistamines, decongestants, antitussives, expectorants, anesthetics, and analgesics. Additionally, special consideration to drug effects upon the nervous system is highlighted.

Prerequisites: Acceptance into the Pharmacy Technician Program

Co-requisites: PHT 100 and AH 100

PHT 125 Pharmacology II for Pharmacy Technicians 3 Credit Hours

The second part of a two-course sequence in pharmacology for pharmacy technicians. The course will cover systems including respiratory, gastrointestinal, endocrine, renal, and cardiac. Muscle relaxants, topicals, and vitamins and nutritional supplements are also studied in this course. Chemotherapy and infection control are highlighted. Students learn to recognize inconsistencies in orders, routes of administration, and frequency of administration. Three hours of lecture per week.

Prerequisites: PHT 124

Co-requisites: PHT 150 and PHT 175

PHT 132 Basic Pharmacy Software Applications 2 Credit Hours

Computer technology has become a vital component of pharmacy practice in all settings (community, long term care, hospital and home infusion). This course will introduce various specialized pharmacy programs: out-patient and in-patient medication dispensing, drug information, pharmacokinetics, management, quality assessment and procurement. The course will also emphasize record keeping, third-party billing as well as drug distribution systems.

Prerequisites: Acceptance into Pharmacy Technician Program

Co-requisites: PHT 100 and HCS 131

PHT 144 Pharmacy College Admission Testing (PCAT) and Current Issues in Pre-Pharmacy 2 Credit Hours

This seminar course will provide an overview of the pharmacy profession including licensure, areas of practice, career options, and pharmacy workplace issues. General pharmacy school information including the PHARM D curriculum, the considerations in selecting a school of pharmacy, and admission requirements will be discussed. A mock PCAT exam will be given to determine the student's strengths

and weaknesses. Select test preparation options will then be discussed.

Suggested Prerequisite: BIO 152, CHEM 141, ENG 131, CIS 100 or BCA 140 are recommended prerequisites (but not required), as well as, CHEM 142, ENG 132, PHYS 131, and SPC 131.

PHT 150 Pharmaceutical Calculations 3 Credit Hours

Applies basic mathematical skills in calculations required for the usual dosage determinations, as well as solution preparations using weight, metric, household, and apothecary systems. Discussion in applying ratio and proportion, allegations, and business calculations in pharmacy operations. Two lecture hours per week and one hour computer lab per week.

Prerequisites: PHT 100, PHT 124, and MATH 101 or MATH 110

Co-requisites: PHT 125 and PHT 175

PHT 165 Issues in Pharmacy 2 Credit Hours

Explores today's health care environment, emphasizing the issues facing pharmacy and the pharmacy technician. Skills, talents, and tools required to cope today and succeed tomorrow will be discussed and practiced. This course covers such workplace topics as communication issues, CQI for the pharmacy, legal issues, teamwork concepts, and conflict resolution tools. Student participation, role-playing, and other interactive learning methods are emphasized.

Prerequisites: Acceptance into the Pharmacy Technician Program and PHT 100

PHT 175 Applied Pharmacy Systems 4 Credit Hours

Gives detailed instruction in medication distribution systems, including in-patient systems, preparation of intravenous admixtures, prescription dispensing to ambulatory patients, compounding, manufacturing and repackaging, and inventory control systems. Instruction also includes inpatient and out patient software for order entry and patient profiles. Two hours of lecture per week and two hours of laboratory per week.

Prerequisites: PHT 100, PHT 124, and PHT 132

Co-requisites: PHT 125 and PHT 150

PHT 193 Pharmacy Externship 3 Credit Hours

Assignment to selected health care facilities for directed clinical practice in pharmacy technology. This is a required, supervised learning experience under the direction of a pharmacist. Rotation selections include hospital, home infusion, and long-term care pharmacy locations. A special ten- to twelve-week spring, summer, or fall session includes thirty-two or twenty-four hours per week in the clinical area.

The ten or twelve week externship rotation begins in May, July or August. Successful completion of all Pharmacy Technician course work is required before assignment to specific hospital and home infusion/long term care pharmacy rotations.

Prerequisite: Successful completion of all required Pharmacy Technician course work

PHYS 120 Technical Physics 4 Credit Hours

Designed to give students in technical and apprenticeship programs an understanding of physical principles and their application to

industry. This course consists of a study of measurements, forces, motion, and vectors; energy, power, and machines; properties of materials and fluids; and heat and heat transfer. Three hours of lecture and two hours of laboratory per week.

Prerequisites: Completion of or concurrent enrollment in MATH 103

PHYS 121 Technical Physics (Continued) 4 Credit Hours

A continuation of PHYS 120 into wave motion, electricity, and DC electrical circuits, atomic physics, and nuclear physics. Designed to give students in technical and apprenticeship programs an understanding of physical principles and their application to industry. Three hours of lecture and two hours of laboratory per week.

Prerequisite: PHYS 120

PHYS 131 Liberal Arts Physics 4 Credit Hours

A liberal arts course in the principles of physics, including units on mechanics, heat, and sound. Designed to fulfill partially the physics requirement in pre-medicine, pre-dentistry, teaching, and law. Three hours of lecture and three hours of laboratory each week.

Prerequisites: MATH 110 and MATH 112 or equivalent Math course placement test scores

PHYS 132 Liberal Arts Physics (Continued) 4 Credit Hours

A continuation of PHYS 131. Units on electricity, magnetism, light, and modern physics are included. Three hours of lecture and three hours of laboratory per week.

Prerequisites: PHYS 131 with a grade of C or better

PHYS 133 Principles of Physics 4 Credit Hours

A one-semester survey course on physical principles of motion, energy, fluids, electromagnetism, waves, light, radiation, and the atom. This course is designed to meet the need for a one-semester course in physics in many areas including Allied Health, and teacher education. It is also popular with students in business and other areas who need to fulfill a science lab requirement. Three hours of lecture and two hours of laboratory per week.

Prerequisites: MATH 080 or equivalent placement test score

PHYS 231 Engineering Physics 5 Credit Hours

A general course to meet the requirements of engineering students and physics majors. Special emphasis is placed on relating physical principles to mathematical techniques in problem solving. This lecture and laboratory course covers mechanics, wave motion, and thermodynamics. Four hours of lecture and three hours of laboratory per week.

Prerequisites: MATH 180

Suggested Prerequisite: MATH 183

PHYS 232 Engineering Physics (Continued) 5 Credit Hours

A continuation of PHYS 231. Topics covered are electricity and magnetism and physical and geometrical optics. Four hours of lecture and three hours of laboratory per week.

Prerequisites: PHYS 231 with a grade of C or better and MATH 183; concurrent enrollment in MATH 280 is recommended.

PHYS 241 Mechanics 4 Credit Hours

A general course designed to meet the requirements for engineering and physics majors. Special emphasis is placed on relating physical principles to mathematical techniques in problem solving. The lecture and laboratory course covers vectors, one- and two-dimensional motion, forces, work, energy, momentum, rotational motion, and gravitation. Three hours of lecture and three hours of lab each week.

Prerequisites: Completion of or concurrent enrollment in MATH 180

PHYS 242 Sound, Light, and Thermodynamics 4 Credit Hours

A general course designed to meet the requirements for engineering and physics majors. Special emphasis is placed on relating physical principles to mathematical techniques in problem solving. The lecture and laboratory course covers simple harmonic and wave motion, sound, geometric and physical optics, fluids and thermodynamics. Three hours of lecture and three hours of lab each week.

Prerequisites: PHYS 241 and MATH 180

Completion of or concurrent enrollment in MATH 183

PHYS 243 Electricity and Magnetism 4 Credit Hours

A general course designed to meet the requirements for engineering and physics majors. Special emphasis is placed on relating physical principles to mathematical techniques in problem solving. The lecture and laboratory course covers the various aspects of electromagnetism, including the study of electric charge, electric fields, circuits, magnets, magnetic fields, electromagnetic induction, motors, generators, and electromagnetic waves. Three hours of lecture and three hours of lab each week.

Prerequisites: PHYS 242 and MATH 183

Completion of or concurrent enrollment in MATH 180 MATH 280

PLMB 100 Fundamentals of Plumbing and Pipefitting 2 Credit Hours

A plumbing preparation course for construction candidates, apprentices, and those interested in the plumbing-pipefitting trade. This course familiarizes students with the proper selection of materials for installation and repair of gas, domestic water, sewer, soil, waste, and vent systems and various pipefitting systems. The course also gives the candidate familiarity with proper procedures related to design and layout of residential and commercial systems. The use of blueprints and isometric diagrams is reviewed throughout the course. This course includes lecture and some minor labs.

PLMB 110 Drains, Wastes, and Vents 2 Credit Hours

Introduction to the proper selection of materials for the installation and repair of sewer, soil, waste, and vent systems. Proper procedures for the design and layout of residential and commercial systems are also covered. The use of blueprints and isometric diagrams is reviewed throughout the course.

PLMB 120 Hydronic Heating Systems 2 Credit Hours

A pipefitting-plumbing preparation course for technical construction apprentices and those interested in seeking hydronic plumbing-pipefitting skills. This course familiarizes students with the proper

selection, sizing, and installation of pipe and fittings related to hydronic and steam systems. The student is introduced to the principles of steam and hydronic systems, converter trap sizing, and traps and boilers. Application exercises allow students the opportunity to design and lay out typical systems. This course includes lecture and labs.

PLMB 250 Plumbing-Pipefitting Codes 2 Credit Hours

Introduces the use and application of the Michigan (International) Plumbing Code. The student reviews each code for its content and application, not memorization. Examples provide real-life situations. The student codes plumbing and pipefitting situations. The student becomes familiar with the code for fast access for industry use. A major portion of the questions on the State of Michigan Plumber-Pipefitters licensing exam is directly from the Michigan (International) Plumbing Code book.

PLMB 275 Practical Plumbing Lab-State License Preparation 4 Credit Hours

This course familiarizes the apprentice and journeyman students with the subject of pipes and tubes, their uses, the materials of which they are made, and some of the related general specifications. This class will be 25% lecture related to safety, tools/equipment, and demonstrations prepping for 75% hands-on in the lab. This class is designed to introduce the candidate to existing and new process skills related to plumbing-pipefitting.

Prerequisites: All pre-275 level classes or industry experience

PLMB 280 Plumbing-Pipefitting State of Michigan License Preparation 2 Credit Hours

A course that helps Plumbers-Pipefitters, Apprentices, and near Journeymen prepare to take the State of Michigan Journeyman's exam. Lectures, independent work, and on-line activities along with a variety of testing exercises prepare potential candidates for the various sections of the license examination. Areas of study include State of Michigan construction laws, rules and regulations, administration, codes, and review of hands-on skill requirements needed to pass the section tests.

POLS 090 Supplement to Political Science 1 Credit Hour

A supplemental course designed to be taken concurrently with POLS 131. Emphasis is on note-taking, outlining, and textbook study as well as the vocabulary and content of the POLS 131 course.

Prerequisites: Concurrent enrollment in POLS 131

POLS 131 Introduction to American Government and Political Science 3 Credit Hours

Examines principles and problems of American political institutions, including the role of government and politics in society, the balancing of liberty with authority, and theories of the state. Mechanisms of popular control (public opinion, pressure groups, political parties, elections) and formal structure are examined. Additional components include foreign policy, public policy, and contemporary events.

Note: This course meets the graduation requirement for General Education Outcome 1: American Society, Events, Institutions and Cultures.

POLS 135 American Legal Systems and Processes 3 Credit Hours

Considers legal systems as social/political phenomena and explores the U. S. Constitution, landmark court decisions, and patterns of behavior characterizing legal system participants. This course is appropriate as a lead-in for those interested in the fields of political science, criminal justice, legal secretarial, and paralegal, as well as those considering law school.

POLS 152 International Relations 3 Credit Hours

Designed to help the student understand the diverse phenomena of international relations, the complex patterns of political and economic conflict, interdependence between nation-states and non-governmental organizations. The student is encouraged to think critically and analytically about the world and develop a healthy skepticism toward simple solutions to complex world problems. This course also surveys American foreign policy.

POLS 155 State and Local Government 3 Credit Hours

Examines political institutions and processes in the fifty states, including their cultures and constitutions, as well as the public policies of state governments in areas such as education, social welfare, and the environment. City governments are studied using Detroit as a basis for comparison.

POLS 200 Introduction to Peace and Conflict Studies 3 Credit Hours

This course examines social, political, economic, ethnic, cultural, and religious conflict and the methods used to resolve, regulate, and prevent conflict. The mechanisms for developing cooperation to resolve and mitigate conflict among peoples and states will be central to this course. The course will focus on international and intra-state conflicts including civil wars, social strife, and rebellion. The investigation of specific conflicts and the strategies of conflict resolution will employ case studies and other social scientific methods. Students will learn about the causes and consequences of conflict and ways to objectively understand them.

PSCI 131 Introduction to Physical Science 4 Credit Hours

Covers topics from the five major areas of physical science - astronomy, physics, chemistry, geology, and meteorology - in order to help non-science majors understand and appreciate the interaction between energy and matter in nature. Laboratory experiences are designed to improve scientific intuition and develop confidence in dealing with science. Three hours of lecture and two hours of laboratory per week.

PSCI 133 Atomic Science 2 Credit Hours

A non-mathematical introduction to the basic concepts of atomic energy. This course is designed to help the non-scientific student enjoy and appreciate current trends in science, nuclear reactions, and atomic energy in particular. The approach taken is historical and philosophical. Effort is made to place concepts in their relation to prevalent world thinking. Two hours of lecture per week.

Note: Offered occasionally based on student demand.

PSCI 135 Sound & Light in Fine-Arts 4 Credit Hours

Offered as a general education science course for students interested in Fine-Arts, specifically, Music, Art or Theater. The physical nature of sound and light waves will be covered focusing on how they relate to music, art, theater and each other as well as how subjective perceptions of the ear and eye are related to objective properties of waves.

PSY 090 Supplement to Psychology 1 Credit Hour

A supplemental course designed to be taken concurrently with PSY 131. Emphasis is on note-taking, outlining, and textbook study as well as the vocabulary and content of the PSY 131 course.

Prerequisites: Concurrent enrollment in PSY 131

PSY 131 Introductory Psychology 3 Credit Hours

Introduces elementary concepts and principles related to the scientific study of behavior and the mental processes of cognition and affective states. Variables examined include the history of psychology, the scientific method, theory, biological foundations, psychological processes related to cognition and affective states, developmental changes over time, and applications related to healthy and unhealthy personalities.

PSY 152 Child Psychology 3 Credit Hours

The class provides information on the physical, emotional, intellectual, and social development of the child and adolescent. This includes a variety of theories, recent research, and practical application. The course consists of a 20-hour field experience at a child-care facility to be determined by the student's academic goals.

Prerequisites: PSY 131

PSY 161 Human Sexuality 3 Credit Hours

Designed to help students evaluate their own attitudes, feelings, and beliefs about sexuality and compare them to those held by others. Frank, open discussions and explicit visual materials cover historical and contemporary issues related to the physiological, emotional, cultural, and legal implications of sexuality with emphasis on the expanding research that is contributing to serious intellectual inquiry.

Prerequisites: PSY 131

PSY 251 Abnormal Psychology 3 Credit Hours

Students will explore the nature and causes of various forms of abnormal behavior, including schizophrenia, depression, anxiety disorders, etc. Disorders will be viewed from psychological, cultural, developmental, and historical perspectives. This class will explore the symptoms, etiology, and treatment of each disorder.

Prerequisites: PSY 131

PSY 253 Life Span Development 3 Credit Hours

The study of change in the behavioral processes of individuals as a function of aging throughout the life span. The course begins with prenatal concerns and progresses through the years of infancy, childhood, adolescence, adulthood, and aging. Course content includes theory and research associated with biological, cognitive, affective, and social development.

Prerequisites: PSY 131

PSY 254 Social Psychology 3 Credit Hours

Introduces the social forces affecting people's lives and how people affect their group. This course examines three areas of behavior resulting from intentional influence, membership in a group, and social interaction. Self-perception, behavior and attitude, attraction, aggression, altruism, and group process are also explored. This course may be taken for credit in either psychology or sociology but not both. (See SOC 254.)

Prerequisites: SOC 131 and PSY 131 or permission of the instructor

PSY 256 Educational Psychology 3 Credit Hours

This experiential approach to learning combines theory with practice and increases students' understanding and application of educational psychology theory. The course enhances students' abilities to observe children's behavior in a natural setting and apply their observations to theory. Students learn about different instructional techniques and their appropriateness in the school setting.

Course topics include theories of learning and cognition, how academic, social, emotional and physical development proceeds, and the implications for instruction of a diverse population, as well as how to deal with those implications effectively. Managing classroom discipline, motivating students to learn, leading classroom instruction, and assessing K-12 students' learning are also discussed.

PSY 256 is to be taken concurrently with the corresponding section of PSY 294-Educational Psychology Practicum, which involves placement in a classroom setting. Course assignments in PSY 256 are coordinated with PSY 294. Students seeking elementary certification are placed in a classroom in Grade 1-6. Students seeking secondary certification are placed in a Grade 7-12 classroom. Students seeking CDA credentials are placed in a preschool setting. See PSY 294 for more information.

This course is not to be taken concurrently with PSY 152. Observation hours in PSY 152 do not count for PSY 256.

Prerequisites: ENG 131, ENG 132, and PSY 131

Co-requisite: PSY 294

PSY 260 Adolescent Psychology 3 Credit Hours

This course is intended for students seeking a degree in secondary education and/or psychology. Adolescent Psychology will expose the student to the major areas of adolescent behavior and development. Some of the areas will include but not be limited to: the theoretical construct of adolescent, the physical and cognitive development of the adolescent, the social structure surrounding the adolescent, the transitions from upper elementary to middle school and then to high school, the personality development of the adolescent, the psycho-sexual development of the adolescent, as well as the psychological issues facing the adolescent.

Prerequisite: PSY 131

PSY 294 Educational Psychology Practicum 1 Credit Hour

PSY 294 is a required 45-clock hour practicum, to be taken concurrently with the corresponding section of PSY 256-Educational Psychology. The practicum experience increases educational psychology students' understanding and application of the educational psychology courses' theory into practice. Course

assignments for students enrolled in PSY 294 will be coordinated between the PSY 256 instructor at HFCC and the HFCC student's assigned school practicum. Scheduling of the 45-clock hours will be coordinated between the HFCC student and the coordinating teacher at the practicum placement, according to the student's hours available.

Course topics include theories of learning and cognition, how development proceeds, and the implications for instruction of a diverse population as well as how to deal with those implications effectively. Managing classroom discipline, motivating students to learn, leading classroom instruction, and assessing K-12 students' learning are applied to the classroom setting through a variety of projects.

Students seeking elementary certification are placed in a classroom in Grade 1-6. Students seeking secondary certification are placed in a Grade 7-12 classroom. Students seeking CDA credentials are placed in a preschool setting.

This course is not to be taken concurrently with PSY 152. The observation hours in PSY 152 do not count for pre-student teaching hours in PSY 294.

See PSY 256 for more information.

Prerequisites: ENG 131, ENG 132, and PSY 131

Co-requisite: PSY 256

PSY 296 The Exceptional Child 3 Credit Hours

This course will increase the understanding of the characteristics, identification, assessment and instruction of students with exceptionalities. Psychology students, current teachers, future teachers and para-professionals will increase their knowledge of special education children and their environments, and learn how to service children with exceptionalities. Includes theories, laws and procedures surrounding special education. The main labels of special education that will be discussed and researched are: learning disabilities, autism, mild and severe behavior disorders, emotional impairment, mental retardation, visual and hearing impairments, speech impairment, giftedness, physical impairments and chronic medical conditions. Also discussed will be the different special education learning environments such as inclusion, mainstreaming, pullout programs, resource rooms, co-teaching environments and the self-contained classroom.

Prerequisite: PSY 131

PTA 102 Introduction to Physical Therapy Practice 2 Credit Hours

Introduces the student to health care and specifically the field of physical therapy. Course content includes instruction in the roles of various health professionals, the concept of the rehab team, the history and scope of physical therapy, legal and ethical issues related to communication and the practice of physical therapy, and organizational structures of various types of physical therapy facilities. Students will also learn about the role of the PTA, various methods of documentation used in physical therapy, and the structure and function of the American Physical Therapy Association. Current issues and trends in physical therapy will be

discussed and students will become familiar with the Guide to PT Practice.

Prerequisites: Admission to the PTA program

Note: PTA 102, PTA 132, and PTA 165 must be taken concurrently

PTA 108 Therapeutic Techniques I 3 Credit Hours

Provides instruction in patient care with an emphasis on physical therapy interventions. Course content includes massage, body mechanics, bed mobility and positioning, PROM exercise, transfers, gait training, patient and family education, and the use of wheelchairs and assistive devices. Students practice techniques in a guided lab setting.

Prerequisites: Admission to the PTA program, PTA 102, PTA 132, and PTA 165

Note: PTA 108, PTA 118, PTA 119, PTA 142, and PTA 225 must be taken concurrently.

PTA 118 Exercise Techniques I 2 Credit Hours

Provides instruction in therapeutic exercise procedures utilized by physical therapist assistants. Course content includes assessment of joint motion and muscle strength, implications of ROM and muscle testing for exercise prescription, types of exercise, basic exercise programs, and the use of exercise equipment. Course focuses on theory only.

Prerequisites: Admission to the PTA program, BIO 233, PTA 102, PTA 132, and PTA 165

Note: PTA 108, PTA 118, PTA 119, PTA 142, and PTA 220 must be taken concurrently

PTA 119 Exercise Techniques II 4 Credit Hours

Provides opportunity for application of the techniques learned in PTA 118. Focuses on therapeutic exercise procedures utilized by physical therapist assistants as well as assessment of joint motion and muscle strength, implications of ROM and muscle testing for exercise prescription, types of exercise, basic exercise programs, and the use of exercise equipment. Students practice techniques in a guided lab setting.

Prerequisites: Admission to the PTA program, BIO 233, PTA 102, PTA 132, and PTA 165

Note: PTA 108, PTA 118, PTA 119, and PTA 142 must be taken concurrently

PTA 132 Kinesiology for PTAs 3 Credit Hours

Focuses on a review of surface anatomy and functional anatomy, muscles and muscle function, proper posture and analysis of posture, and gait analysis and deviations. A lab component familiarizes the student with functional aspects of human motion. Medical terminology is reinforced.

Prerequisites: Admission to the PTA program and BIO 233

Note: PTA 102, PTA 132, and PTA 165 must be taken concurrently

PTA 142 Therapeutic Modalities 3 Credit Hours

Provides instruction in the principles, indications, contraindications, and precautions of physical agents including heat, cold, water, electrical stimulation, traction, light, and sound. Students practice techniques in a guided lab setting.

Prerequisites: Admission to the PTA program, PTA 102, PTA 132, and

PHYS 133

Note: PTA 108, PTA 118, PTA 119, PTA 142, and PTA 220 must be taken concurrently

PTA 165 Life Span Development for PTAs 2 Credit Hours

Explains the normal gross motor development of humans from infancy on. The early developmental sequence and reflexive maturation are related to rehabilitation techniques utilized with adult patients. The development of adults, the aging process, and death and dying are discussed. Psychosocial and cognitive issues throughout the life span will be incorporated into course material.

Prerequisites: Admission to the PTA program and BIO 233

Note: PTA 102, PTA 132, and PTA 165 must be taken concurrently

PTA 225 Applied Pathology for PTAs 4 Credit Hours

Instruction provided in a classroom setting in the signs, symptoms, etiology, course, prognosis, medical intervention, and treatment of diseases with an emphasis on diseases commonly encountered in physical therapy. Medical terminology is reinforced. Instruction provided in patient care with emphasis on physical therapy interventions relevant to the body system involved in various pathologies. Course content includes aseptic technique and wound care, cardiac rehab and chest PT, and selected manual therapy techniques. Students practice techniques in a guided lab setting.

Prerequisites: Admission to the PTA program and AH 100

Note: PTA 108, PTA 118, PTA 119, PTA 142, and PTA 225 must be taken concurrently.

PTA 250 Extremity Orthopedics 4 Credit Hours

Provides instruction in the etiology, course, prognosis, medical intervention, and treatment of orthopedic conditions of the extremities. Course content includes physical therapy intervention. Students practice techniques in a guided lab setting.

Prerequisites: Admission to the PTA program and PTA 132

Note: PTA 250 and PTA 254 must be taken concurrently.

PTA 254 Spinal Orthopedics 3 Credit Hours

Provides instruction in the etiology, course, prognosis, medical intervention, and treatment of orthopedic conditions of the spine. Course content includes physical therapy intervention. Students practice techniques in a guided lab setting.

Prerequisites: Admission to the PTA program and PTA 132

Note: PTA 250 and PTA 254 must be taken concurrently.

PTA 262 Rehabilitation of Neurological Conditions I 2 Credit Hours

Provides review of basic neuroanatomy and neurophysiology followed by instruction in the theory and rationale of the treatment approach for the patient with neurological involvement. Emphasis is on the functional approach to patient treatment including the use of Neurodevelopmental Treatment and Proprioceptive Neuromuscular Facilitation for adults with neurological conditions such as traumatic brain injury and cerebrovascular accidents.

Prerequisites: Admission to the PTA program and PTA 132

Note: PTA 250, PTA 254, PTA 262, PTA 264, and PTA 291 must be taken concurrently.

PTA 264 Rehabilitation of Neurological Conditions II 4 Credit Hours

Provides opportunity for application of the techniques learned in PTA 262 with an emphasis on the functional approach to patient treatment. This includes the use of Neurodevelopmental Treatment and Proprioceptive Neuromuscular Facilitation for adults with neurological conditions such as traumatic brain injury and cerebrovascular accidents. Students practice techniques in a guided lab setting.

Prerequisites: Admission to the PTA program and PTA 132

Note: PTA 250, PTA 254, PTA 262, PTA 264, and PTA 291 must be taken concurrently.

PTA 270 Physical Therapist Assistant Seminar 1 Credit Hour

This course is intended to integrate classroom and practical clinical experiences. The course includes student presentations and discussions as well as review and reinforcement of clinical skills, medical terminology, and effective communication skills.

Prerequisites: Admission to the PTA program and PTA 291

PTA 291 Clinical Externship I 2 Credit Hours

A part-time supervised clinical practicum at affiliated physical therapy departments. Students participate in patient treatment under the delegation and supervision of a licensed physical therapist. Students will begin to integrate information from all previous course work to assist in those delegated components of patient care.

Prerequisites: Admission to the PTA program, PTA 108, PTA 118, PTA 119, PTA 142, and PTA 220

Co-requisites: PTA 250, PTA 254, PTA 262 and PTA 264

PTA 295 Clinical Externship II 9 Credit Hours

A full-time supervised clinical practicum at affiliated physical therapy departments. Students participate in patient treatment under the delegation and supervision of a licensed physical therapist. Students will be integrating classroom knowledge and laboratory experience to achieve the competencies of an entry-level Physical Therapist Assistant as outlined by the APTA.

Prerequisites: Admission to the PTA program and PTA 291

RAD 101 Introduction to Radiography 1 Credit Hour

Provides an overview of radiography and its role within health care delivery. Student responsibilities are outlined. Students are oriented to the academic and administrative structure, key departments and personnel, and the profession as a whole. Basic principles of radiation protection, basic equipment manipulation, and types of diagnostic examinations are introduced.

Prerequisites: BIO 233 and admission to the Radiographer program

Note: RAD 101, RAD 108, RAD 109, RAD 111, and RAD 118 must be taken concurrently.

RAD 109 Clinical Education I 3 Credit Hours

A clinical course offering structured experiences in chart recognition, basic assessment, patient communication, and basic radiographic procedures and policies.

Prerequisites: Admission to the Radiographer program

Note: RAD 101, RAD 108, RAD 109, RAD 111, and RAD 118 must be taken concurrently.

RAD 111 Principles of Radiation Protection 2 Credit Hours

Provides an overview of the principles of radiation protection, including responsibilities of the radiographer for the patients, personnel, and public. This course addresses the concepts of As Low As Reasonably Achievable, stochastic and nonstochastic effects, and effective absorbed dose equivalent limits. Regulatory agencies are identified, and the involvement of those agencies in radiation protection is discussed.

Prerequisites: Admission to the Radiographer program

Note: RAD 101, RAD 108, RAD 109, RAD 111, and RAD 118 must be taken concurrently.

RAD 114 Basic Patient Care in Radiography 3 Credit Hours

Course is designed to develop the basic concepts of patient care, including consideration for the physical as well as psychological needs of the patient and family. Content is designed to introduce basic concepts of pharmacology and the theory and practice of basic venipuncture. Both routine and emergency patient care procedures are described, as well as infection control procedures using standard precautions.

Prerequisites: Acceptance into the Radiographer program

Note: RAD 101, RAD 109, RAD 111, RAD 114, and RAD 118 must be taken concurrently.

RAD 118 Radiographic Positioning I 3 Credit Hours

This is the first of a five semester curriculum in radiographic positioning and procedures. The material is presented through lecture and laboratory components. The course provides a knowledge of positioning terminology, chest, abdomen, and upper extremity procedures. Students will be presented with positioning guidelines during lecture. Psychomotor skills and common knowledge are reinforced through laboratory assignments. Film critique is also a part of the course.

Prerequisites: Admission to the Radiographer program

Note: RAD 101, RAD 108, RAD 109, RAD 111, and RAD 118 must be taken concurrently.

RAD 158 Radiographic Positioning II 3 Credit Hours

This lecture/laboratory course is the second of a five-semester curriculum focusing upon radiographic positioning and procedures. The course describes positioning terminology as well as shoulder girdle, lower extremity, and pelvic girdle procedures. Students will be presented with specific positioning guidelines. Positioning skills in concert with specific radiographic procedures will be reinforced through lab assignments. A film critique is also a part of this course.

Prerequisites: RAD 101, RAD 108, RAD 109, RAD 111, RAD 118 and BIO 233

Co-requisites: BIO 234, RAD 158, RAD 161, RAD 171, RAD 190 and RAD 257 must be taken concurrently.

RAD 161 Imaging Equipment 1 Credit Hour

This course is designed to provide knowledge routinely utilized to produce diagnostic images. Various recording media and techniques are discussed. The major emphasis will be on the components of the diagnostic x-ray tube

and fluoroscopic imaging systems. Other imaging equipment, such as CT, MRI, and digital imaging are also described.

Prerequisites: RAD 101, RAD 108, RAD 109, RAD 111 and RAD 118

Note: RAD 158, RAD 161, RAD 171, RAD 190, RAD 257 must be taken concurrently.

RAD 171 Principles of Exposure and Film Evaluation 3 Credit Hours

This course focuses upon the factors that govern and influence the production of the radiographic image. The course details the main properties of radiograph density, contrast, detail and distortion as well as the factors that control and/or contribute to producing a quality image. The parameters of film evaluation will be developed in this course. Lecture material is supplemented with lab experiments. The elements of film critique and film evaluation will remain a major component of the remaining units of this program.

Prerequisites: RAD 101, RAD 108, RAD 109, RAD 111, and RAD 118

Co-requisites: RAD 158, RAD 161, RAD 171, RAD 190, RAD 257 must be taken concurrently.

RAD 188 Radiographic Positioning III 2.5 Credit Hours

This lecture/laboratory course is the third of a five-semester curriculum focusing upon radiographic positioning and procedures. The course describes radiographic anatomy as well as positioning of the vertebral column and the bony thorax. Students will be presented with specific positioning guidelines. Positioning skills in concert with specific radiographic procedures will be reinforced through lab assignments. A film critique is also a part of this course.

Prerequisites: RAD 158, RAD 161, RAD 171, RAD 188, RAD 190 and RAD 257

Note: HCS 131 and RAD 194 must be taken concurrently.

RAD 190 Clinical Education II 3 Credit Hours

A structured clinical course focusing on basic radiographic equipment, techniques, procedures, and positioning. Patient interaction is also a component of this course.

Prerequisites: RAD 109

Note: BIO 234, RAD 158, RAD 161, RAD 171, RAD 190, and RAD 257 must be taken concurrently.

RAD 194 Clinical Education III 1 Credit Hour

A structured clinical course focusing on procedures and techniques needed for radiographic studies of the upper and lower extremities, chest, abdomen, trunk, and spine. Patient interaction will also be a component of this course.

Prerequisites: RAD 190

Note: HCS 131, RAD 188, and RAD 194 must be taken concurrently.

RAD 197 Clinical Education IV 3 Credit Hours

This is a structured clinical course with emphasis on increasing technical proficiency in chest, abdomen, upper extremities, lower extremities, hip, pelvis and spine radiographic examinations.

Prerequisites: RAD 194, departmental approval

RAD 209 Clinical Education V 3 Credit Hours

A structured clinical course emphasizing the radiographic procedures involving the spine and bony thorax.

Prerequisites: RAD 197

Note: PHYS 133, RAD 206, RAD 209, RAD 212, and RAD 227 must be taken concurrently.

RAD 214 Pathology and Cross Sectional Anatomy 2 Credit Hours

Content is designed to introduce concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease and impact on exposure factor selection. Course is designed to establish a knowledge base in basic cross sectional anatomy of head, neck, thorax and abdomen.

Prerequisites: RAD 188

Note: RAD 209, RAD 214, RAD 227, and RAD 267 must be taken concurrently.

RAD 227 Radiographic Positioning IV 3 Credit Hours

Designed to address, through lecture and laboratory sessions, radiographic anatomy and positioning of the skull, facial bones and paranasal sinuses.

Prerequisites: RAD 188

Note: RAD 206, RAD 209, RAD 212 and RAD 227 must be taken concurrently.

RAD 257 Radiographic Positioning V 2 Credit Hours

This is a section of a five semester curriculum in radiologic positioning and procedures. This course will cover the equipment needs, contrast requirements, and general procedures for radiographic examinations of the gastrointestinal tract, biliary tract, and urinary system. Consideration will also be given to special procedures in diagnostic radiography. Additionally, students will study and evaluate radiographic images of these procedures.

Prerequisites: RAD 101, RAD 108, RAD 109, RAD 111 and RAD 118

Note: RAD 158, RAD 161, RAD 171, RAD 190, and RAD 257 must be taken concurrently.

RAD 267 Radiation Physics 4 Credit Hours

This lecture course focuses upon fundamental physics for radiographic technology including electrostatic, electrodynamic, electromagnetic induction, fundamentals of x-ray generating equipment, x-ray production, and beam characteristics. X-ray photon interactions with matter will be reviewed.

Prerequisites: RAD 206, RAD 209, RAD 212 and RAD 227

Co-requisites: RAD 166, RAD 267, RAD 274 and RAD 290 must be taken concurrently.

RAD 270 Image Acquisition and Display 3 Credit Hours

Course is designed to establish a knowledge base in factors that govern the film-screen image production process. Course is designed to establish a knowledge base in the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are explained. Guidelines for selecting exposure factors and evaluating images within a digital system assist students to bridge

between film-based and digital imaging systems. Principles of digital system quality assurance and maintenance are also presented.

Prerequisite: RAD 171

Note: RAD 270, RAD 274, and RAD 290 must be taken concurrently.

RAD 274 Radiation Biology 2 Credit Hours

This lecture course provides an overview of the principles related to the interaction of radiation with the living systems. Radiation effects on biological molecules and organisms as well as the factors affecting the biological response are presented. Acute and chronic effects of radiation are discussed.

Prerequisites: RAD 206, RAD 209, RAD 212, and RAD 227

Co-requisites: RAD 166, RAD 267, RAD 274, and RAD 290 must be taken concurrently.

RAD 284 Principles of Computed Tomography 1 Credit Hour

Course is designed to provide entry-level radiography students with basic principles of Computed Tomography (CT) imaging.

Prerequisites: RAD 161 and RAD 267

Note: RAD 284, RAD 286, and RAD 295 must be taken concurrently.

RAD 286 Registry Review 2 Credit Hours

A comprehensive review designed to prepare the radiographic technology student for the registry examination. The basic intent is to facilitate an orderly review based upon the topics itemized in the registry index. Test-taking strategies are also discussed.

Prerequisites: RAD 166, RAD 267 and RAD 294

Co-requisites: RAD 286, RAD 298, ENG 132/ENG 135, and HCS 106 must be taken concurrently.

RAD 290 Clinical Education VI 3 Credit Hours

A structured clinical course emphasizing the radiographic procedures involving the face, skull, and sinuses.

Prerequisites: RAD 209

Co-requisites: ENG 131, POLS 131, RAD 166, RAD 267, RAD 274, and RAD 290 must be taken concurrently.

RAD 295 Clinical Education VII 2 Credit Hours

This is a structured clinical course emphasizing radiographic procedures involving the facial bones, skull, sinuses, contrast studies, mobile and surgical radiography. Structured clinical experiences are offered in some speciality rotations which may include Ultrasound, Computed Tomography, Magnetic Resonance Imaging, Radiation Therapy, Mammography and Positron Emission Tomography.

Prerequisites: RAD 290, departmental approval

Note: RAD 284, RAD 286, RAD 295, and ENG 132 or ENG 135 must be taken concurrently.

REEN 101 Survey of Renewable Energy Sources 2 Credit Hours

This course is a survey course to introduce the student to the concept of Renewable Energy. It will identify Renewable Energy Sources that are available today, as well as look at those sources of energy that are predicted to become available in the near future. The topics to be covered will include solar and photovoltaic systems, geothermal

systems, wind systems, energy from bio-mass, and fuel cell systems. This course will identify how these systems function technically and will also discuss how they will affect both our environment and economy. Demonstrations of the various energy sources as well as lab exercises are included.

REEN 110 Geothermal Systems and Water Furnace Technology 2 Credit Hours

This course will introduce the student to the topic of Geothermal Energy. It will identify geothermal energy sources and give an overview of how geothermal energy is being used today. A major emphasis of the course will be residential heating using geothermal technology. The installation of a geothermal furnace in a residential application will be covered. This will include an initial survey of the home and property, sizing of the unit, and the choice of the type of loop system to use. Installation and maintenance of a geothermal heating system will be covered. A working water furnace system will be available for laboratory activities.

REEN 120 Wind, Solar, and Fuel Cell Technology 2 Credit Hours

This course is designed to explore the theory of operation and applications of the following technologies: passive and active solar collectors, photovoltaic cells, wind generators, and fuel cells. All of these technologies are available today in limited applications, but any or all of them could hold the promise of being able to supply a major portion of tomorrow's renewable energy needs.

REEN 130 Smart Home Control Technology 2 Credit Hours

This course will help the student identify both the advantages and drawbacks of using Smart Home Technology. It will let the student explore all of the options currently available in the different types of systems and technologies available. The topics discussed will include the economics of Smart Home Technology, Smart Home Technology and conservation of energy, and how Smart Home Technology can improve a standard of living. Demonstrations of the Technology and laboratory exercises will be included.

REEN 140 Co-Generation and Back Up Power 2 Credit Hours

This course is designed to introduce the student to the topics of Co-Generation and Back-Up Power for use in a residence or business. The cost of energy today has become an incentive for many to look to alternative energy sources for both home and business. Increased pressures on the power grid have resulted in power failures that have convinced some to install Back-Up Power systems. This course will look at the various types of both Back-Up Power Units and Uninterruptible Power Units available today. Site survey, planning, cost, and the installation and maintenance of the units will be covered.

RTH 100 Principles of Respiratory Care 3 Credit Hours

An in-depth study of the cardiopulmonary system from fetal development through old age in health and disease. Topics include respiratory care history, cardiopulmonary anatomy and physiology, the effects of aging on the pulmonary system, basic pulmonary assessment and an introduction to basic pulmonary diseases. Three

hours of lecture per week.

Prerequisite: Acceptance into the Respiratory Therapist program

Note: RTH 100 and RTH 119 must be taken concurrently

RTH 125 Respiratory Care Procedures I 5 Credit Hours

This course provides instruction in beginning therapeutic procedures utilized by the respiratory therapist. Course content includes basic patient and pulmonary assessment, pulse oximetry, basic gas laws, medical gas administration, oxygen therapy delivery systems, and lung expansion techniques. Students practice these procedures in a guided laboratory setting.

Prerequisites: Acceptance into the Respiratory Therapist program

Note: RTH 100 and RTH 125 must be taken concurrently.

RTH 160 Respiratory Therapy Pharmacology 2 Credit Hours

This course focuses on the appropriate and effective administration of respiratory care medications, including an overview of pharmacology, terminology, routes, techniques of administration and calculation of dosages. The NAEPG Guidelines for Asthma Management are stressed. Two hours of lecture per week.

Prerequisites: RTH 100 and RTH 119

Note: RTH 160 and RTH 175 must be taken concurrently.

RTH 175 Respiratory Care Procedures II 5 Credit Hours

This course provides instruction in therapeutic procedures utilized by the respiratory therapist. Course content includes airway care, emergency life support, bronchial hygiene, and lung expansion therapy. Students practice these procedures in a guided laboratory setting. Three hours of lecture and two hours of laboratory per week.

Prerequisites: RTH 100 and RTH 119

Note: RTH 160 and RTH 175 must be taken concurrently.

RTH 180 RT Clinical Sciences 3 Credit Hours

This course focuses on the clinical application of science to the practice of respiratory care. Topics include common microbial pathogens seen with pulmonary infection, infection control guidelines, oxygenation, acid-base balance, and the physical principles of ventilation in health and disease. Emphasis is placed on blood gas interpretation, capnography, puncture techniques, protection of the respiratory therapist, and disinfection and sterilization of respiratory care equipment.

Prerequisites: RTH 100 and RTH 119

RTH 194 Clinical Therapeutics 2 Credit Hours

Selected experience in health care facilities for clinical practice with oxygen delivery systems and basic patient assessment techniques. Six clinical hours per week.

Prerequisites: BIO 233, RTH 100, and RTH 119

Note: BIO 234, RTH 160, RTH 175, RTH 180, and RTH 194 must be taken concurrently.

RTH 210 Ventilator Management I 4 Credit Hours

A study of the theories, techniques, and equipment used to achieve adequate spontaneous and artificial ventilation in the adult patient.

Two and one-half hours of lecture and one and one-half hours of laboratory per week.

Prerequisites: RTH 160, RTH 175, RTH 180, RTH 194, and BIO 234

RTH 216 Cardiopulmonary Testing 2 Credit Hours

This course discusses basic pulmonary function testing and electrocardiographic testing. Basic theory and techniques for testing are covered. Students are expected to perform and evaluate these tests for use by the physician. Two hours of lecture per week.

Prerequisite: BIO 234

RTH 235 Neonatal and Pediatric Respiratory Care 3 Credit Hours

A study of the anatomy, physiology, and pathophysiology of the premature neonate through adolescence. This is followed by an extensive overview of respiratory therapeutics related to the care of the neonatal/pediatric patient. Two hours of lecture and two hours of laboratory per week.

Prerequisites: RTH 210 and RTH 291

RTH 245 Applied Respiratory Care 2 Credit Hours

Emphasizes the assessment and management of patients with cardiopulmonary disease. Students apply the techniques and concepts learned in their first year to common disease states seen in the critical care areas. Two hours of lecture per week.

Prerequisites: RTH 210 and RTH 291

Note: RTH 216, RTH 245 and RTH 292 must be taken concurrently.

RTH 275 Therapeutic Management 1 Credit Hour

This laboratory course provides the student an opportunity to apply in simulated settings concepts learned throughout the program. Students spend two hours each week working on computerized clinical case study simulations, selecting appropriate treatments and managing patients.

Prerequisites: RTH 216, RTH 235, RTH 245, and RTH 292

RTH 285 Advanced Respiratory Concepts 3 Credit Hours

A study of the current theory and techniques encountered by the respiratory therapist in a variety of clinical settings. Emphasis is placed on advanced ventilatory applications, cardiopulmonary monitoring, and the Respiratory Care Professional's dynamic role in the health care setting. Three hours of lecture per week.

Prerequisites: RTH 216, RTH 235, RTH 245, and RTH 292

Note: RTH 275 and RTH 285 must be taken concurrently.

RTH 291 Advanced Clinical Therapeutics 4 Credit Hours

Develops the clinical skills related to airway management, removal of bronchopulmonary secretions, CPR, and oxygenation. Students also evaluate, modify, and monitor patients' responses to respiratory treatment regimes. A ten-week directed clinical experience which includes fifteen hours per week in selected clinical sites.

Prerequisites: RTH 160, RTH 175, RTH 180, and RTH 194

Note: RTH 210 and RTH 291 must be taken concurrently.

RTH 292 Clinical Practicum 5 Credit Hours

Develops therapeutic clinical skills for critical care areas and diagnostic labs. Emphasis is on assessing needs, designing care plans, and implementing and evaluating the procedures especially employed for mechanical ventilatory support and systemic oxygenation. Fifteen hours per week of directed clinical experience.

Prerequisites: RTH 210 and RTH 291

Note: RTH 216, RTH 235, RTH 245 and RTH 292 must be taken concurrently.

RTH 294 Advanced Clinical Practicum 8 Credit Hours

Further develops the clinical skills and techniques used to manage patients requiring mechanical ventilatory support in the hospital, subacute and home care setting. Twenty-four hours per week of directed clinical experience.

Prerequisites: RTH 216, RTH 235, RTH 245, and RTH 292

Note: RTH 275, RTH 285 and RTH 294 must be taken concurrently.

SCI 131 Revolutions in Science 3 Credit Hours

Explores the development of modern Western science from its origins in the ancient world to the present day. Students will develop an understanding of major scientific theories through the study of selected original writings in translation as well as modern commentaries.

Suggested Prerequisite: A previous college-level science course is recommended.

Note: Non-lab science class

SCI 210 Introduction to Science for Elementary Education 4 Credit Hours

This is the first science course in a sequence intended for pre-service elementary school education majors. The course will introduce students interested in elementary school teaching to a broad overview of both science instruction and the process of science. Students will investigate, discuss, and design experiments using the group inquiry method of instruction.

Prerequisites: A grade of C or better in MATH 080 or a satisfactory score on the math placement test

Note: This course may have special transfer rights to certain schools of education. Consult with the Director of the Pre-Education Program for details

SCI 212 Earth Science for Educators 4 Credit Hours

An inquiry-based course covering topics in the earth sciences - geology, meteorology, and astronomy. Course content is designed to give students a thorough familiarity with concepts critical to teaching earth science at the K-12 level. The course emphasizes three skills: investigation, critical thinking, and organization. Learning is primarily through student inquiry and discovery of core concepts, with guidance and facilitation provided by the instructor. Two combined classroom/lab sessions per week.

Prerequisite: MATH 080

SCI 210 is a recommended, but not required, prerequisite.

SCI 213 Learning by Inquiry: Life Science 4 Credit Hours

This course is designed to provide pre-service elementary and middle school teachers with the necessary tools, knowledge, and motivation to teach basic biological concepts. In this course students will integrate major biological themes and understand how the topics

covered in the course fulfill the National Science Education Standards and the Michigan Curriculum Framework. Students will use inquiry-based learning.

Prerequisites: A grade of C or better in MATH 080 or a satisfactory score on the math placement test.

Note: This course may have special transfer rights to certain schools of education. Consult with the Director of the Pre-Education Program for details.

SOC 090 Supplement to Sociology 1 Credit Hour

A supplemental course designed to be taken concurrently with SOC 131. Special help is provided with the vocabulary and content of SOC 131, as well as with note-taking and study techniques.

Pre-requisites: Concurrent enrollment in SOC 131

SOC 131 Introduction to Sociology 3 Credit Hours

Introduces the sociological approach to understanding human behavior. Students investigate how a society's culture and social organization shape actions and influence everyday life. Connections between the individual and society are explored in relation to all aspects of social life, including family, work, social inequality, religion, politics, and the economy. This course provides the basis for further study in sociology and social work.

Note: This course meets the graduation requirement for General Education Outcome 1: American Society, Events, Institutions and Cultures.

SOC 132 Marriage and the Family 3 Credit Hours

Makes the student more aware of the personal decisions one makes in life and of the cultural influences affecting decisions relating to family situations. Areas of discussion include definitions of marriage and the family, married partners as individuals, becoming partners, experiencing family commitment, changing commitments, and cross-cultural comparisons.

SOC 151 Contemporary Social Problems 3 Credit Hours

Focuses on current social problems and issues facing American society. Students investigate a series of important problems, including poverty, urban decline, family instability, crime, and discrimination, by using a sociological perspective. The primary goals of this course are increasing student awareness of the causes of social problems and investigating possible solutions.

Prerequisite: SOC 131

SOC 152 Women, Men, and Society 3 Credit Hours

Uses a sociological approach to investigate sex-related issues such as changing gender roles, sex discrimination, sexual harassment, homophobia, gender-related violence, reproductive rights, and child custody. Emphasis is on increasing student understanding of how and why the everyday experiences of women and men can differ significantly in such areas as employment, education, politics, law, medical care, sexuality, and domestic life.

SOC 251 Ethnic and Racial Diversity in Societies 3 Credit Hours

Introduces students to the sociological study of ethnic and racial groups. Students explore key concepts and issues in connection with definitions of race and ethnicity, immigration, patterns of group

inequality and domination, discrimination and prejudice. Focuses on the diversity of U.S. society and explores the experiences of Native Americans and immigrant groups, including those from Africa, Asia, and Europe. Emphasis on current patterns and consequences of immigration will be studied. Ethnic and racial diversity in other societies will also be explored.

Prerequisites: SOC 131

SOC 254 Social Psychology 3 Credit Hours

Introduces the social forces affecting people's lives and how people affect their group. This course examines three areas of behavior resulting from intentional influence, membership in a group, and social interaction. Self-perception, behavior and attitude, attraction, aggression, altruism, and group process are also explored. This course may be taken for credit in either psychology or sociology but not both. (See PSY 254.)

Prerequisites: SOC 131 and PSY 131 or permission of the instructor

SPC 131 Fundamentals of Speaking 3 Credit Hours

Designed to meet the needs of the beginning student. Emphasis is on the development of skill in oral communication through practice in extemporaneous speaking.

SPC 145 Interpersonal Communication 3 Credit Hours

Explores the process of communication between individuals in relatively informal, face-to-face situations that occur in family, social, and work groups.

SPC 232 Health Communication 3 Credit Hours

Surveys the interaction of health care and communication issues. This course examines communication theories as applied to health care issues and the role and effectiveness of persuasive and informational mass media campaigns in the health field. The focus is on ethical issues, decision-making skills, and such subjects as listening, interpersonal communication, message observation and analysis, and decision making.

Prerequisite: SPC 131

SPN 131 Elementary Spanish I 4 Credit Hours

Trains the student in pronunciation as well as the basic grammatical principles necessary for comprehending and expressing simple ideas in both spoken and written Spanish. Class assignments are complemented with tapes.

SPN 132 Elementary Spanish II 4 Credit Hours

Completes a systematic survey of grammar and includes discussion of cultural topics. Oral expression is emphasized. Class assignments are complemented by tapes.

Prerequisite: SPN 131, one year of high school Spanish, or permission of the instructor

SPN 231 Second Year Spanish III 4 Credit Hours

Includes rapid review and application of grammatical principles by means of oral and written exercises and some composition writing. Students continue practice in pronouncing and comprehending the spoken language. Reading both in and out of class promotes speed and

comprehension. Some class assignments are complemented by tapes.

Prerequisite: SPN 132, three years of high school Spanish, or permission of the instructor

SPN 232 Second Year Spanish IV 4 Credit Hours

Emphasizes oral comprehension as well as development of a sufficiently large vocabulary to enable the student to speak, read, and aurally comprehend Spanish with ease. Oral and written reports are required. Class assignments are complemented by tapes.

Prerequisites: SPN 231, four years of high school Spanish, or permission of the instructor

SPN 295 Directed Study in Spanish 1 Credit Hour

Individual study of a topic of special interest in the area of Spanish language, literature or culture, to be undertaken under the direction of an instructor. Appropriate methods of research and investigation are applied, and the results reported in a final creative product such as a research paper, electronic or physical report (such as electronic media presentation, Web page or display board) or other creative product together with a bibliography. This class may be repeated once for credit.

Prerequisites: Grade of a C or better in SPN 131, SPN 132, SPN 231 or SPN 232 or equivalent and permission of the instructor

SPN 296 Directed Study in Spanish 2 Credit Hours

Individual study of a topic of special interest in the area of Spanish language, literature or culture, to be undertaken under the direction of an instructor. Appropriate methods of research and investigation are applied, and the results reported in a final creative product such as a research paper, electronic or physical report (such as electronic media presentation, Web page or display board) or other creative product together with a bibliography. This class may be repeated once for credit.

Prerequisite: Grade of a C or better in SPN 131, SPN 132, SPN 231 or SPN 232 or equivalent and permission of the instructor

SPN 297 Directed Study in Spanish 3 Credit Hours

Individual study of a topic of special interest in the area of Spanish language, literature or culture, to be undertaken under the direction of an instructor. Appropriate methods of research and investigation are applied, and the results reported in a final creative product such as a research paper, electronic or physical report (such as electronic media presentation, Web page or display board) or other creative product together with a bibliography. This class may be repeated once for credit.

Prerequisite: Grade of a C or better in SPN 131, SPN 132, SPN 231 or SPN 232 or equivalent and permission of the instructor

SRG 101 Introduction to Surgical Technology 4 Credit Hours

The course introduces the fundamentals of operating room techniques, emphasizing principles and practices of asepsis and sterilization. Physical and psychosocial aspects of the patient are explored. Included are the role and responsibilities of the surgical technologist and other surgical team members; accountability and legal aspects; identification of common equipment, instruments, and supplies. Students practice scrubbing, gowning, and gloving. Selected laboratory practice and one OR observation are required.

Prerequisite: Acceptance into the SRG Program

Note: AH 100, BIO 135, BIO 233 and SGR 101 must be taken concurrently.

SRG 120 Surgical Procedures I 4 Credit Hours

This lecture/laboratory course is designed to continue to develop the concepts from SRG 101. It features the theory and practice for general, gynecology, genitourinary, orthopedic, otorhinolaryngology, and endoscopy surgical procedures. The course also emphasizes the scheme or steps as well as the instrumentation of these surgical interventions. Two OR observations are required.

Prerequisites: AH 100, BIO 135, BIO 233 and SRG 101

Note: BIO 234, ENG 131, HCS 103, HCS 124, SRG 120 and SRG 180 must be taken concurrently.

SRG 140 Surgical Techniques I 2 Credit Hours

A laboratory course designed to develop basic aseptic and sterile techniques used in the perioperative care of the surgical patient. This course focuses on the surgical scrub, gowning and gloving, setting up a sterile field, draping, handling of surgical instruments, and surgical counts. Students practice techniques in a guided lab setting.

Prerequisites: SRG 101

Note: SRG 120, SGR 140, and SRG 160 must be taken concurrently.

SRG 150 Surgical Techniques II 2 Credit Hours

A laboratory course designed to prepare students for clinical externship. Students will continue to practice aseptic and sterile techniques used in the perioperative care of the surgical patient. This course focuses on skills developed in SRG 140 and incorporates “mock surgery” and advanced clinical skills in a lab setting. Students practice techniques in a guided lab setting.

Prerequisites: SRG 120 and SRG 140

SRG 160 Surgical Pharmacology 3 Credit Hours

A study of medications used in the operating room with an emphasis on the common drugs used in the surgical area. This course examines the administration, actions, interactions, side-effects, and terminology of perioperative medications. Included are legal responsibilities of the surgical technologist and common calculations performed in a sterile field. The student must present two reports as well as complete a term paper.

Prerequisites: AH 100, BIO 135, BIO 233, and SRG 101

Suggested Prerequisites: BIO 234 and SRG 120

Note: SRG 120, SRG 160, and BIO 234 must be taken concurrently.

SRG 209 Clinical Externship I 5 Credit Hours

A clinical practicum developing concepts learned in SRG 101. Students are assigned to an affiliate agency where they actively participate as members of the surgical team, developing skills necessary to "scrub" and assisting in "circulating" during surgical procedures under supervision. Sixteen hours per week.

Prerequisites: BIO 233, BIO 234, SRG 101, SRG 120, and SRG 160

Note: SRG 209 and SRG 220 must be taken concurrently.

SRG 220 Surgical Procedures II 4 Credit Hours

A lecture/laboratory course designed to develop further the student’s knowledge of surgical specialties and clinical practice, including cardiovascular, thoracic, neurologic, oral, ophthalmic, reconstruction, pediatric, and geriatric procedures. The scheme

or steps as well as the instrumentation of the common procedures performed are emphasized.

Prerequisites: BIO 233, BIO 234, SRG 101, SRG 120, and SRG 160

Note: SRG 209 and SRG 220 must be taken concurrently.

SRG 240 Issues in Surgical Technology 4 Credit Hours

Students will identify and discuss advanced surgical procedures focusing upon trauma, transplants, major orthopedic procedures, and the basic principles in the application of robotics in surgery. Electrical elements/concerns and applied physics in the operating room will be discussed. The course will also emphasize the elements of professional development including professional organizations, leadership, teamwork, certification and continuing education. Students will discuss the role of the AST and its impact upon careers in surgical technology. Employability skills will be reviewed and applied. Students will be introduced to techniques and exercises in preparation for the national CST exam. Written and oral presentations by the students are key elements of this course. All students will be required to successfully complete the national Program Assessment Exam (PAE).

Prerequisites: SRG 209 and SRG 220

Note: SRG 240 and SRG 290 must be taken concurrently.

SRG 290 Clinical Externship II 8 Credit Hours

A clinical practicum that further develops clinical proficiency. Students are assigned to an affiliated agency where they actively participate as members of the surgical team, developing skills necessary to “scrub” and assisting in “circulating” during surgical procedures under supervision. Students scrub solo for some surgical procedures. Students must prepare a case study. Twenty-four hours per week.

Prerequisites: SRG 209 and SRG 220

Note: SRG 240 and SRG 290 must be taken concurrently.

SSC 131 A Survey of the Social Sciences 3 Credit Hours

Surveys the several disciplines found under the general heading of the social sciences: anthropology, economics, geography, ecology, demography, psychology, sociology, and political science. This course also presents the development of each discipline and its important concepts.

Note: This course meets the graduation requirement for General Education Outcome 1: American Society, Events, Institutions and Cultures.

SSC 235 Topics in Social Science 3 Credit Hours

Provides special study in an area of social science, organized by subject, field of inquiry, or other criteria. This course may be taken twice for credit, six hours maximum, but the two topics must be different. Specific topics and any prerequisites are listed in the current semester’s class schedule or may be obtained through the Social Science Division office.

STH 131 Theatre Appreciation 3 Credit Hours

A survey course consisting of lecture and discussion classes in the components, methods and history of theatrical production. Subject areas may include but are not limited to acting, directing, technical theater and history.

STH 132 Acting I 3 Credit Hours

An introduction to basic acting techniques, theories of acting, and rehearsal procedures. Emphasis is placed on modern and contemporary comedies and dramas. Students engage in relaxation, concentration, and vocal exercises. Attention is given to formal script analysis and breaking down dialogue and action into objective and intentions. Students will perform scenes from contemporary plays.

STH 133 Technical Theatre 3 Credit Hours

Offers practical application of the fundamentals of set construction, rigging, painting, sound, lighting, and special effects.

STH 134 Technical Theatre Specialties: Rotating Skills Course 3 Credit Hours

A laboratory class providing intensive experience in one of the following specialized areas: scenic and/or properties design; construction and/or painting; theatre sound: design, engineering and operation; special effects: design, safety, engineering, and operation; production management; stage management; house management; lighting: design, hanging, and operations; or promotion and publicity. Students work on understanding theory through practical application on multiple projects.

STH 135 Introduction to Stage Makeup 3 Credit Hours

An analysis of the basic functions of stage makeup and a demonstration of techniques of makeup application. Students explore age, animal, fantasy, horror, and foam latex prosthetic makeup techniques. Students design and apply their own makeups as well as design and apply makeups for HFCC mainstage productions.

STH 140 One Act Play Production 3 Credit Hours

Offers lecture and practice in the organization and specific skills necessary for the public performance of one-act plays. Students are provided opportunities in the areas of acting, assistant directing, stage management, publicity, and house management.

Prerequisites: STH 132 or permission of the instructor

STH 142 Theatrical Production 3 Credit Hours

Offers lecture and practice in the organization and specific skills necessary for the performance of full-length comedy, drama, musical, or evening of one-act plays for the new Playwright's Workshop.

STH 144 Improvisation for the Actor 3 Credit Hours

Introduces the principles and practice of improvisational techniques as applied to performance.

STH 145 Stage Combat 3 Credit Hours

Theory and practice in the skills necessary for basic theatrical fencing, broadsword fighting, falling, and hand to hand combat.

STH 149 Children's Theatre Production 3 Credit Hours

Offers lecture and practice in the organization of specific skills necessary for the public performance of children's plays. Students are provided opportunities in the areas of acting, assistant directing, stage management, publicity, and house management. Students participate in HFCC's annual Children's Theatre presentation.

STH 150 Stagecraft 3 Credit Hours

Basic survey of the major techniques and theories of scenography in the modern theatre, including but not limited to: scenery, tools, properties, rigging, blueprints, lighting, painting, costumes, sound production, the use of computers, and special effects. This course includes classroom lecture and demonstration.

STH 155 Theatre 3 Credit Hours

For students who participate in extra-curricular activities. They may, with the approval of the director of the activity, enroll for three hours of credit per semester.

Prerequisites: Permission of the director of the activity

STH 232 Acting II 3 Credit Hours

An introduction to basic acting techniques, theories of acting, and rehearsal procedures. Emphasis is placed on modern and contemporary comedies and dramas. Students engage in relaxation, concentration, and vocal exercises. Attention is given to formal script analysis and breaking down dialogue and action into objective and intentions. Students will perform scenes from contemporary plays.

STH 233 Advanced Technical Theatre 3 Credit Hours

Includes participation in the technical aspects of the semester's production. Students are assigned to key technical positions in the areas of lighting, shifting, rigging, properties, painting, building, sound, makeup, costumes, and special effects.

STH 234 Technical Theatre Specialties: Rotating Skills Course 3 Credit Hours

A laboratory class providing intensive experience in one of the following specialized areas: scenic and/or properties design; construction and/or painting; theatre sound: design, engineering and operation; special effects: design, safety, engineering, and operation; production management; stage management; house management; lighting: design, hanging, and operations; or promotion and publicity. Students work on understanding theory through practical application on multiple projects.

STH 235 Topics in Theater 3 Credit Hours

Provides special study in the area of theater, organized by style, production approach, historical period, or other criteria. This course may be taken twice for credit, for a maximum of six credit hours, but the two topics must be different. Specific topics and any prerequisites are listed in the current semester's class schedule or may be obtained through the departmental office.

STH 238 Theatre History 3 Credit Hours

A survey of theatrical production, including acting, directing, theatre architecture, artistic movements, and significant ideas that affect the development of theatre from the Greeks through the present. Emphasis is placed on individual research and projects.

STH 242 Advanced Theatrical Production 3 Credit Hours

Designed to allow students who have had STH 142 to further explore areas of practical theatre production.

Prerequisites: STH 142

STH 255 Lighting 3 Credit Hours

An examination of the processes, techniques and principles involved in lighting the stage, studio and location. Students learn the properties of light, color media, and stage lighting equipment. An opportunity to participate in the stage lighting of HFCC production is provided.

STH 256 Directing 3 Credit Hours

An introduction to directing for the stage, surveying the areas of composition, picturization, movement, rhythm, auditions, casting, rehearsals, and actor psychology.

STH 257 Pantomime & Physical Techniques For the Actor 3 Credit Hours

An exploration of the importance of the body in the acting process, with an emphasis on practical experience. Various technique and improvisational exercises will be used to develop a greater sensitivity to and accuracy with emotional expression and physical characterization in the variety of styles.

STH 259 Experimental Theatre Production 3 Credit Hours

Offers lecture and practice in the specific skills necessary for the production of an experimental play. Students are exposed to plays that approach the non-traditional theatrical experience including multimedia, impressionism, expressionism, surrealism, improvisation, performance art, and absurdism. Students are provided opportunities in the areas of acting, assistant directing, stage management, publicity and house management.

Prerequisites: STH 132 or permission of the instructor

STH 281 Theatre Capstone 1 Credit Hour

Provides the required assessment of knowledge and skills for students in their last semester of course work for the Associate in Arts Degree in Theater.

SWC 131 Science In Western Culture 3 Credit Hours

Considers science in its philosophical, religious, and methodological contexts throughout history, by studying examples from ancient Greek and Arabic thought, natural philosophy in the Middle Ages, the scientific revolution, and the rise of modern science. Emphasis is on understanding the nature of scientific enterprise and interactions between science and its cultural matrix. This course can be used toward fulfilling the graduation requirements for the Associate in Arts, Associate in Science, and Associate in General Studies degree programs.

TADV 060 Basic Skills for the Skilled Trades 4 Credit Hours

Designed to provide a comprehensive review of mathematical and algebraic skills as well as knowledge of the industrial workplace in order to prepare the student for an employer-administered apprenticeship test. This review includes reading comprehension, arithmetic comprehension, spatial relations, graphic arithmetic, and mechanical concepts.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TADV 100 Basic Print Reading 2 Credit Hours

This course is designed to familiarize students with the fundamentals needed for presenting concepts and techniques to various segments of today's industry. Topics include the alphabet (use) of lines; the projection of various shapes and surfaces; presentation of hidden details; and the methods, units of measurement, and techniques used for locating details in a variety of drawings.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAE1 102 DC and AC Electricity 3 Credit Hours

This is an introductory course in electricity, covering the fundamentals of both DC and AC circuits and circuit calculations. Included are electrical definitions, units of electrical measure, series and parallel resistive circuits, capacitance, and inductance. The use of meters and oscilloscopes will be included during lab experiences, along with an introduction to basic wiring and the troubleshooting of circuit faults.

Prerequisite: Completion of or concurrent enrollment of TAMA 110

Note: TAE1 102 replaces TAE1 103

TAE1 105 AC Theory and Equipment 4 Credit Hours

Covers advanced AC theory. The topics of right triangle trig and complex numbers are included in the class to be used for reactance and impedance calculations. Three-phase power applications with delta and wye distribution and calculations are included. The electrical equipment discussed in this class includes single- and three-phase transformers, induction heating equipment, and several types of AC lighting equipment.

Prerequisites: Completion of or concurrent enrollment in TAE1 102 and TAMA 120

TAE1 106 Electronics Theory 4 Credit Hours

This is a laboratory-oriented course that stresses the fundamental theories of electronic components and elementary circuit applications. The use of test equipment, including the oscilloscope and meters, is an essential part of the course.

Prerequisite: TAE1 105

TAE1 115 Digital Theory 2 Credit Hours

A theory and laboratory course covering the fundamental concepts of digital theory. Topics include gates, logic circuits, counters, timers, and display circuits.

TAE1 145 DC and AC Motors 4 Credit Hours

Includes the fundamentals of both DC and AC motors. DC generators are included along with series, shunt, and compound DC motors. Basic DC starters and control circuits are covered. Both single-phase and three-phase AC induction motors are included along with synchronous, wound-rotor, and universal motors. AC alternators are compared to DC generators.

Prerequisite: TAE1 105

TAEL 150 DC Motors and Controls 2 Credit Hours

Explains the theory of operation of DC motors and generators. DC motor starters and control circuits are covered. Laboratory experiences help the student understand the concepts presented in class. Maintenance and installation of DC machines is also a part of this course.

Prerequisite: TAE 102

TAEL 200 Ladder Diagrams and Motor Controls 4 Credit Hours

Covers the fundamentals of electrical ladder diagrams and motor control circuits. Ladder logic, as well as labels, documentation, and symbology of electrical drawings, is presented along with the use of ladder diagrams as a troubleshooting tool. Students design and draw several control circuits for three-phase induction motors and wire these circuits in the motor control lab. Several single-phase control circuits are included in the laboratory exercises.

Prerequisite: TAE 145

TAEL 205 Industrial Electronic Controls 2 Credit Hours

This course provides an overview of industrial electronic control circuits and electronic and electrical sensor circuits. This includes a review of semiconductor and digital theory, troubleshooting techniques, and electronic components including transistors, diodes, SCRs, DIACs, TRIACs, and various ICs. The control circuits discussed include three-phase and switching power supplies, DC motor drives, AC variable frequency motor drives, and resistance welding controllers.

Prerequisite: TAE 106

TAEL 245 Programmable Logic Controllers 4 Credit Hours

This is a laboratory-oriented course that emphasizes programming and industrial applications of programmable control equipment.

Prerequisites: TAE 200

TAEL 260 Robotics and Automation 4 Credit Hours

This is a lab-oriented course utilizing actual machines that represent many operations in automated manufacturing. Students prepare programs to operate the machines using Allen Bradley PLC-5 processors.

Prerequisite: TAE 245

TAEL 270 Industrial and Commercial Wiring 2 Credit Hours

Designed to acquaint the student with the materials and calculations related to lighting, motor distribution, and other circuit locations in general and hazardous locations as defined by the National Electrical Code.

Prerequisite: TAE 105

TAEL 275 Residential Wiring 2 Credit Hours

Covers the fundamentals of residential wiring, especially the aspects of the National Electrical Code specifically applying to residential construction and repairs. Electrical supplies and hardware appropriate for residential applications are included, and residential wiring techniques are explained.

Prerequisite: TAE 105

TAEL 278 NEC Review and License Test Prep 3 Credit Hours

This course teaches apprentice electricians and others the applications of the National Electrical Code as it relates to the

electrician. Topics include the design of electrical power systems and the factors relating to a safe and reliable installation as required by the code. Testing strategies will be taught to prepare electrical apprentices to take the journeyman license test.

Prerequisites: TAE 270 and TAE 275

Note: TAE 278 replaces TAE 265

TAEL 280 Low Voltage and Communication Wiring 2 Credit Hours

Designed to give students working knowledge and practical experience in installation and maintenance of signal/low voltage wiring and signal transmission, including PC board and fiber optic repair and maintenance. The laboratory consists of experiments designed to give the student practice in the use of test equipment, basic troubleshooting, installation procedures, and repair techniques. Safety is emphasized throughout the curriculum.

Prerequisites: TAE 105

TAEL 285 Industrial Truck Controls 2 Credit Hours

Designed to explain the operation of SCR solid state truck controls to industrial truck apprentices. Topics include review of basic electrical theory, DC generators and motors, batteries and battery charges, silicon-controlled rectifier theory, SCR truck control operation, and troubleshooting.

Prerequisite: TAE 102

TAEL 290 High Voltage Power Distribution 2 Credit Hours

Covers the generation, transmission, and distribution of primary electrical power. Topics include underground and overhead distribution systems, types of wire and cables, switching equipment, protective devices, test equipment, personal safety items, OSHA safety rules, and methods of providing protection when working on de-energized electrical equipment.

Prerequisites: TAE 105

TAEL 291 Electrical Power Distribution and Transmission 2 Credit Hours

This course will cover the fundamentals of electrical power distribution. The course will cover both transmission lines and substations. The operation of distribution transformers, instrument transformers, circuit breakers, reclosers, sectionalizers, fuses, relays, and disconnects will be included. Concepts of substation and transmission line protection as well as construction will be covered.

TAEL 295 Microprocessors 2 Credit Hours

Covers the fundamentals of microprocessor circuits and microprocessor programming, including the interfacing of the microprocessor with the 'outside world' through the handling of input and output data with a Peripheral Interface Adapter (PIA).

Prerequisites: TAE 115

TAFD 112 Construction Blueprint Reading 2 Credit Hours

This course introduces students to the prints utilized in the construction trades, such as plumbing, electrical, carpentry, welding, and energy technology. Students will learn the fundamentals and languages required to read construction drawings. Topics will include

measurement, lines, symbols, drawing views, working notes, and the importance of title blocks.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAFD 115 Computer Applications for Skilled Trades 2 Credit Hours

An introductory course providing familiarity rather than proficiency and stressing industrial applications. This course explores software programming, storage/input/output devices, and controls as they apply to industry. Experiences and demonstrations in keyboarding, DOS, word processors, spreadsheets, databases, computer graphics, basic programming, and two dimensional computer-aided drafting are included.

Note: This course meets the graduation requirement for General Education Outcome 2: Computer Literacy.

Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAFD 120 Industrial Safety Awareness 2 Credit Hours

Presents a comprehensive approach to safety, designed to give the skilled tradesperson the knowledge of safety fundamentals and practices, from the causes of accidents to the study of safety hazards and rules associated with equipment and tools utilized in modern industrial facilities.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAFD 130 Applied Industrial Applications Physical Science 3 Credit Hours

Offers the apprentice an exposure to the applications of physics and chemistry found in the industrial workplace. Topics include the six elemental machines, applications of forces, motion, and work, as well as the chemistry of industrial materials and chemical interactions in the environment.

Prerequisite: TAMA 120

TAFD 150 Applied Technology 3 Credit Hours

An introductory course, appropriate for all trades, using practical concepts and examples to provide knowledge of fluid power, electricity, mechanical power transfer, and rigging. Safety is stressed throughout.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAFP 150 Fluid Power Systems 4 Credit Hours

Provides an introduction to the principles of fluid power as they apply to industrial systems. Various hydraulic components are presented and studied in terms of their functions within fluid power systems. This course includes both lecture and laboratory work.

Prerequisite: TAMA 120

TAFP 160 Pneumatic Power/Pneumatic Control 4 Credit Hours

Explores the principles of fluid power pneumatics as they apply to industrial systems. Various pneumatic components are presented and studied with respect to their functions within pneumatic power and control systems. This course includes both lecture and laboratory work.

Prerequisite: TAFP 150

TAFP 260 Fluid Power Systems- Advanced 4 Credit Hours

Continues the exploration of the principles of fluid power as they apply to industrial systems. Various hydraulic components are presented and studied in greater depth with respect to their functions within fluid power systems. This course includes both lecture and laboratory work.

Prerequisite: TAFP 150

TAFP 270 Fluid Power Systems: Circuit Design/ Troubleshooting 4 Credit Hours

Explores the principles of fluid power design and troubleshooting as they apply to industrial systems. Various hydraulic circuits are presented and studied with respect to their functions, efficiencies, and troubleshooting guidelines within fluid power systems. This course includes both lecture and laboratory work.

Prerequisite: TAFP 150

TAFP 280 Applied Electrohydraulics 3 Credit Hours

Introduces basic electrohydraulic fundamentals, components, and procedures relative to troubleshooting, maintenance, and set-up of proportional and servo valves. The theory and practice of electrohydraulics are taught with hands-on laboratory experience emphasized.

Prerequisite: TAFP 150

TAGD 110 Basic Shape and Size Interpretation 3 Credit Hours

Designed to introduce the concepts of shape and size description of normal surfaced, inclined (single-angle) surfaced, and cylindrical objects. Students use traditional and computer-based drafting techniques. This course covers projection of three-dimensional objects into two-dimensional representations and also the reverse process. Sketching and modeling of objects is covered.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAGD 120 Advanced Graphic Interpretation 3 Credit Hours

Designed to introduce the concepts of size and shape description of oblique surfaced objects. Students are introduced to sectioning and processes used in the manufacturing environment. Geometric and traditional tolerancing is studied. The work is accomplished using traditional and computer-based drafting techniques.

Prerequisite: TAGD 110

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAGD 130 Assembly Detailing 2 Credit Hours

Designed to introduce the concepts of detailing of assembly drawings, including modeling of complex shapes and pictorial drawings of details. The students draw individual parts in their proper orientation. The work is accomplished using traditional and computer-based drafting techniques.

Prerequisites: TAGD 120

TAGD 140 Compound Angles and Advanced Projection 3 Credit Hours

Focuses on the mastery of solid trigonometric principles as they apply to the industrial workplace. Topics include solution of solid trigonometry problems using graphic and analytical solutions and problem-solving techniques.

Prerequisites: TAMA 200 and TAGD 120

TAGD 150 Tool, Jig, and Fixture Design 2 Credit Hours

Focuses on the mastery of tool-design principles as they apply to the industrial workplace. Topics include tolerances, fits, principles of tool design, template jigs and fixtures, plate and channel jigs, and materials joining fixtures. Economical design principles are discussed, and projects requiring team approaches are used.

Prerequisites: TAGD 130 and TAGD 140

TAGD 155 Gage, Cam Layout and Fixture Design 2 Credit Hours

Focuses on the mastery of gage design principles as they apply to the industrial workplace. Topics include gage design theory, computer-aided manufacturing, cam layout procedures, and fixturing. Projects requiring team approaches are used.

Prerequisite: TAGD 150

TAGD 160 Press Working Fundamentals 2 Credit Hours

Designed to familiarize the apprentice with basic metal deformation theory, presses and ancillary equipment, die construction, and die component identification. The student is introduced to the various die types and draws the various detail components using both traditional and computer-aided drafting.

Prerequisite: TAGD 130

TAGD 165 Cutting and Forming Dies 3 Credit Hours

Designed to introduce the apprentice to basic die design criteria and methods. The student is introduced to the various die types and draws the various die assemblies using both traditional and computer-aided drafting.

Prerequisites: TAGD 160

TAGD 171 Descriptive Geometry: Lines and Planes 3 Credit Hours

Designed to familiarize the apprentice with basic descriptive geometry theory and practice. The student uses orthographic principles to find true views of lines and planes.

Prerequisites: TAGD 120

Note: The summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAGD 172 Descriptive Geometry: Planes, Solids, and Developments 2 Credit Hours

Designed to familiarize the apprentice with basic descriptive geometry theory and practice. The student uses orthographic principles to find true views of planes and solids and their intersections.

Prerequisites: TAGD 171

TAGD 280 Panel Tipping 3 Credit Hours

Designed to develop the ability to convert vehicle body position drawings to required die positions in various die operations. In addition, the student learns various concepts involving strip stock development and part clearance-interference conditions. Problems include practical application of descriptive geometry.

Prerequisites: TAGD 172

TAIM 100 Industrial Materials 3 Credit Hours

Prepares students for the advance of technology beyond metallurgy in the structure of modern materials and substances. This course includes knowledgeable and practical applications of new materials as well as traditional ones. Topics include extraction of metals, identification of ferrous and non-ferrous metals, non-metals (e.g. plastics, elastomers, ceramics, wood, and paper), mechanical and physical properties of materials, non-destructive testing procedures, crystalline and crystalline structures of materials, materials forming operations, and heat treatment theory and practice.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMA 110 Industrial Applications of Basic Math Principles 2 Credit Hours

Utilizes industrial shop problems to help students relate math to job situations. Topics include addition, subtraction, multiplication, and division of whole and mixed numbers and common and decimal fractions; percentages, averages, and estimates; graphs, tables, and statistical measure; powers and roots; linear, angular, and circular measure; surface area, volume, and cubic measure; ratios and proportion; and metrics and metric conversion.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMA 120 Industrial Applications of Algebraic Principles 3 Credit Hours

Focuses on mastery of the basic algebraic principles as they relate to the industrial environment. Topics include symbols, positive and negative numbers, equations, exponents, roots, and formulas. Practical shop problems are solved.

Prerequisite: TAMA 110

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMA 130 Industrial Applications of Geometric Principles 2 Credit Hours

Covers the fundamental principles of plane geometry with emphasis on application to the industrial environment. Angular, circular, linear, area, and volume measurement are explored in relation to the types of geometric figures and configurations found in industry.

Prerequisites: TAMA 120

TAMA 200 Industrial Application of Trigonometric Principles 3 Credit Hours

Focuses on the mastery of trigonometric principles as they apply to the industrial workplace. Topics include trigonometric functions, solution of right triangles, solution of oblique triangles, and problem-solving techniques.

Prerequisite: TAMA 130

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMJ 110 Materials Joining and Fabrication Fundamentals 3 Credit Hours

Covers adhesion and cohesion fundamentals, equipment, and procedures relative to shielded metal arc welding, oxy-fuel soldering and brazing, gas metal arc welding, oxy-fuel cutting, resistance spot welding, torch plastic welding, and PVC pipe joining. Topics include oxy-fuel cutting, soldering and brazing theory and practice, AC and DC welding equipment and applications, flat and horizontal welding techniques, arc welding electrodes, and gas metal arc welding principles and practices. Theory and practice of resistance spot welding, torch plastic welding, and plastic pipe joining are covered. This course is an 85% hands-on laboratory experience.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMJ 112 Creative Metals I 3 Credit Hours

An introductory course in welding and metal forming. The focus is on the safety, the introduction of metal forming with Oxy/Fuel torch and Plasma Arc cutting, and the metal joining processes of Oxy/Fuel welding, SMAW stick welding, GMAW wire feed welding, and GTAW arc welding. The safety and use of shop tools will also be covered.

TAMJ 115 Materials Joining and Fabrication: Advanced Technique 2 Credit Hours

Extends skill development of shielded metal arc and gas metal arc welding, and gas and electric arc cutting. This course continues to build on the structure of adhesion, cohesion, cutting theory, and the transfer of knowledge to shop applications for people who will use these processes in their work. It is an 85 % hands-on laboratory experience.

Prerequisites: TAMJ 110

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMJ 116 Creative Metals II 3 Credit Hours

An advanced course in welding and metal forming. The focus is on safety, the advanced techniques of metal forming with Oxy/Fuel torch and Plasma Arc cutting, the metal joining processes of Oxy/Fuel welding, SMAW stick welding, GMAW wire feed welding, and GTAW arc welding, and how to use these techniques in a creative way.

Prerequisites: TAMJ 112

TAMJ 120 Materials Joining and Fabrication: GTAW/GMAW Techniques 2 Credit Hours

Covers the theoretical knowledge as well as manipulative skills needed to utilize inert arc welding equipment. Topics include inert arc welding equipment; gas tungsten arc welding (GTAW); gas metal arc welding (GMAW); special welding processes; mechanical testing of welds; metal surfacing; and welding in flat, horizontal, and vertical positions. This course is a 90% hands-on laboratory experience.

Prerequisites: TAMJ 110

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMJ 125 MJ & F: ASME Pipe and Pressure Vessel Welding 2 Credit Hours

Provides, in a preparatory fashion, the theoretical knowledge and the practice for skill development for people interested in becoming welders qualified by the American Society of Mechanical Engineers (ASME). Topics include procedures in setup, welding, electrodes, and the ASME test. This is a 95% hands-on laboratory course.

Prerequisite: TAMJ 115

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMJ 145 MJ & F: Advanced Gas Torch Techniques 2 Credit Hours

An advanced course designed to increase oxy-fuel gas torch techniques and procedures used in welding, brazing, and soldering. Topics include preparation of gray iron castings with process procedures for welding and brazing, welding of wire rope/cable, silver brazing of stainless steel, and oxy-acetylene welding of thin wall/ small diameter steel pipe and pressure vessels. This course is a 95% hands-on experience.

Prerequisite: TAMJ 115

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMJ 230 MJ & F: ASME Pipe and Pressure Vessel Certification 2 Credit Hours

Designed for people experienced in all-position shielded metal arc welding who wish to acquire American Society of Mechanical Engineers (ASME) qualification papers. All welding test procedures conform to the ASME standards. Submitting test specimens to the local materials laboratory, an optional segment of the course, requires an additional fee.

Prerequisite: TAMJ 125

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMJ 235 M J & F: GTAW and GMAW Certification 2 Credit Hours

Prepares students to become certified in all-position Gas Tungsten Arc Welding (GTAW) and/or Gas Metal Arc Welding (GMAW) in accordance with the standards of the American Society of Mechanical Engineers (ASME) or the American Welding Society (AWS). Submitting test specimens to a licensed local materials laboratory is optional and requires an additional fee. This is a 95% hands-on laboratory course.

Prerequisites: TAMJ 120 and TAMJ 125

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMJ 240 MJ & F: Tool and Die Welding 3 Credit Hours

A study of cast iron and alloy steels used in the tool and die industry, the effects of the alloys on tools and dies, and successful use of the welding process. Skill development in welding and repair of these cast irons and steels incorporate SMAW, GMAW, and GTAW processes. This is a 70% hands-on laboratory course.

Prerequisites: TAMJ 120

TAMN 100 Shop Tools and Techniques 3 Credit Hours

Introduces the basic tools and safety and technical information required by the skilled trades. Topics covered include non-precision and precision measurement tools and methods, layout tools and techniques, hand and bench tools, drills and drilling machines, principles of metal cutting and metal cutting saws, and pedestal grinders. Manufacturing processes are discussed.

Prerequisites: TAMA 110 and TAGD 110

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMN 120 Machine Tool Applications 2 Credit Hours

Presents the mechanisms, operation, tooling, and accessories of the lathe and milling machine in a lecture/demonstration format. Topics covered include precision measurement and precision measuring devices, basic machine tool operations, the theory of metal cutting, cutting tools and cutting tool materials, and cutting fluids. Safety, as it relates to the shop environment, is stressed throughout the course.

Prerequisite: TAMA 120

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMN 130 Advanced Manufacturing Processes 2 Credit Hours

Explains the use of conventional abrasives and super abrasives, as well as traditional grinding machines. Advanced milling applications are covered utilizing the horizontal boring mill. The application of basic and advanced cutting tool materials is covered in depth. Some of the more popular non-traditional processes are also explained,

including electrical discharge machining and wire cutting; electro-chemical, abrasive flow, ultrasonic, and abrasive water jet machining; electromagnetic, electro spark, and powder metallurgy forming; and various laser applications. Additional topics include rapid prototype development and robotics/automation. Students use various software in the computer laboratory related to the above topics.

Prerequisite: TAMN 120

TAMN 220 Advanced Computer Numerical Control Techniques 2 Credit Hours

Covers the fundamentals of computer numerical control (CNC) with emphasis on generic application to both vertical and horizontal milling machines. A review of the fundamentals of numerical control and programmer math is provided. Off-line computerized CNC software enables students to program CNC operations involving linear, circular, and helical interpolation. Canned cycles, auto routines, and various preparatory functions are used in programming. These programs are then utilized to machine functional work pieces on a fully operational CNC trainer.

Prerequisite: TAMA 200 and TAMN 200

TAMT 110 Mechanical Power Transmission 2 Credit Hours

Provides specialized instruction and discussion concerning installation and maintenance of mechanical transmission systems. Areas to be covered include bearings, couplings, belts, chains, shafts, pulleys, and speed reducers used in the modern factory by mechanical trades.

Prerequisites: TAMA 120

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMT 115 Maintenance Trades Print Reading 3 Credit Hours

Designed to meet the needs of apprentices and trainees in industrial plant maintenance trades. Topics include shape description; conventions and symbols; size description; notes and instruction associated with manufacturers' and maintenance-related drawings, including castings, weldments, and machined parts; electrical/electronic schematic and ladder diagrams; piping and fluid power-related drawings and schematics; structural and architectural drawings; and sheet metal and plant layout.

Prerequisites: TAGD 110

TAMT 123 Maintenance Print Reading: Structural Steel and Conveyors 2 Credit Hours

Responds to a request by skilled trades for a course focusing on making a basic shop drawing of structural steel shapes and print reading of conveyor structures. This course provides an introduction to steel detail drawings and print reading techniques as they relate to conveyors.

Prerequisites: TAMA 120 and TAGD 110

TAMT 126 Maintenance Print Reading: Print Layout 2 Credit Hours

Introduces the techniques and procedures of plant layout and material handling. The student is led through the analysis and development of information to produce a plant layout and to develop

print reading skills with emphasis on reading industrial equipment drawings. Students practice making simple plant layout drawings for the production of a part using basic drafting skills.

Prerequisite: TAGD 110

TAMT 200 Predictive Maintenance - Shaft Alignment **2 Credit Hours**

Provides specialized instruction in the practices and equipment used in shaft alignment, the end-to-end and parallel alignments of machines. Also studied are machine failures due to rotating shaft misalignment and vibration created from shaft center lines not being in the same plane. Areas covered include inefficiencies and increased wear due to misalignment, shaft alignment methods, soft foot, thermal growth, graphing methods, and the use of computers for math calculations. Rim and Face, Reverse Dial Indicator, and Visible Laser equipment is used. This course is a 40% hands-on laboratory experience.

Prerequisites: TAMT 110 and TAMA 130

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAMT 210 Predictive Maintenance - Vibration Analysis **2 Credit Hours**

Provides specialized instruction in understanding machinery, vibration in rotating equipment, the most cost-effective method to reduce maintenance costs and extend machinery life. Through demonstrations and case histories, students develop a method of thinking required to sort through various symptoms to determine the root cause of vibration.

Prerequisites: TAMT 110 and TAMA 130

TAMT 220 Advanced Rigging **2 Credit Hours**

Provides a study of safe rigging practices and equipment used by mechanical trades people. Topics of study include fiber and wire rope, block and tackle, lift and rigging chain, proof test, safe working load, design factor, sling geometry, fittings, and lifting and moving equipment. This course is a 40% hands-on laboratory experience.

Prerequisite: TAMA 130

TAMT 260 Gearing **2 Credit Hours**

Covers the calculation of standard screw threads such as American National, United States V, Metric, Acme, and Worm. Standard notations and formulas for spur gears, bevel gears, worm and worm wheels, and helical gears are also covered. This course also explains replacement of spur gears with helical gears, the use of idler gears, and calculations for plain and differential indexing.

Prerequisites: TAMA 200

TAPI 105 Introduction to Industrial Instrumentation and Pneumatic Controls **3 Credit Hours**

Covers the basic principles and techniques used in the measuring and controlling of an industrial process; measuring, tuning, and calibration of pneumatic instrumentation and controls. The student will study pressure, temperature level, flow, and analytic control systems. Fundamental control techniques including open loop and closed loop control, three modes of control, cascade, adaptive, feed

forward and feed back. Fundamental methods of calibration and repair of pneumatic controllers, transducers, transmitters, and control valves are covered in laboratory exercises.

Co-requisite: TAPI 120

TAPI 120 Instrumentation Print Reading **2 Credit Hours**

Covers the principal aspects of drawing, reading, and interpreting of standard instrumentation and electrical drawing, diagrams, and schematics used in industry. Emphasis is placed on using ANSI, ISA, SAMA, IEEE standard symbols and standards accepted by the industry. Techniques in using drawings, diagrams, and schematics to troubleshoot and locate equipment are stressed in the course.

TAPP 100 Fundamentals of Plumbing and Pipefitting **3 Credit Hours**

Explains the development of the proper procedures for the sizing, selection, and installation of pipe and fittings. Included are the development of pipe welding templates and hands-on exercises in the bending of tubing and pipe.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAPP 110 Drains, Waste and Vents **2 Credit Hours**

Introduction to the proper selection of materials for the installation and repair of sewer, soil, waste and vent systems. Proper procedures for the design and layout of residential and commercial systems are also covered. The use of blueprints and isometric diagrams are reviewed throughout the course.

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TAPP 120 Heating Systems **2 Credit Hours**

Introduces the principles of steam and hydronic heating systems. Proper sizing and selection of converters, traps and boilers are covered. Applications exercises allow students the opportunity to design and lay out typical systems.

TAPP 250 Plumbing Code **2 Credit Hours**

Introduces the use and application of BOCA Basic Plumbing Code. The student reviews each article for its content and application. Exercises provide real-life situations. The student interprets plans and drawings as they relate to plumbing and pipefitting.

TASM 100 Basic Sheet Metal Layout and Fabrication **3 Credit Hours**

Covers layout, forming, and fabrication of basic sheet metal ductwork fittings and use of hand/power tools and equipment to accomplish this task. Topics include how to fabricate square/round sheet metal ductwork, tapers, transitions, and offsets. Methods of fastening ductwork together and to each other are also explained.

Prerequisites: TAMA 120

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TASM 110 Sheet Metal Blank Development 2 Credit Hours

The theory and practices of sheet metal-blank development by use of the empirical bend allowance formula.

Prerequisites: TASM 100

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TASM 120 Sheet Metal Layout: Radial and Triangulation 2 Credit Hours

Covers the development of geometrical elements of structures, their intersections by the radial line, triangulation methods of sheet metal layout, the drawing of developmental layouts, and the forming of cardboard or sheet metal models.

Prerequisites: TASM 100

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TASM 130 Sheet Metal Layout: Applied Triangulation 2 Credit Hours

Covers the development of geometrical elements of structures by the triangulation method of sheet metal layout. Students encounter practical problems requiring development of stretch-outs and making of cardboard or sheet metal models of transition pieces.

Prerequisite: TASM 120

Note: Summer semester for Skilled Trades and Apprenticeship starts in early May and ends in August. Students should consult the Class Schedule for specific course times and dates.

TCM 131 Introduction to Telecommunication 3 Credit Hours

A survey course investigating the various electronic communication media, as well as the print media, from historical, economic, and social viewpoints.

TCM 132 Film History and Criticism 3 Credit Hours

An introduction to the film medium and the film experience as entertainment, artistic expression, and social communication, through examination of production techniques, critical theories, and historic examples.

Suggested Prerequisite: ENG 131

TCM 151 Digital Audio Editing 1 Credit Hour

An intensive workshop introduction to digital audio editing, using an industry standard software editing program on computers in the Telecommunication audio production labs. Both hardware and software issues will be covered, and several short editing exercises will be completed.

TCM 157 Digital Video Editing 1 Credit Hour

An intensive tutorial introduction to the key operating features and potential of an industry-standard software program in digital video editing, utilizing the facilities of the Telecommunication computer video lab. Both hardware and software issues will be covered, and several short editing exercises will be completed.

TCM 189 WHFR-FM Staff Training 1 Credit Hour

Provides an orientation to the non-commercial, educational radio station licensed to the college. Students learn essential station rules and procedures, operation of equipment, and basic performance skills. This course is open to all students but is required of those who wish to join the staff and assist in the operation of WHFR.

TCM 235 Topics in Film Study 3 Credit Hours

Special study in an area of film study, organized by theme, genre, historical period, or other criteria. This course may be taken twice for credit, six hours maximum, but the topics must be different. Specific topics and any prerequisites are listed in the class schedule.

TCM 241 Media Writing 3 Credit Hours

Offers an analysis of and practice with the forms and formats of mass media script writing: commercial, promotional, public service, interview, instructional, and dramatic.

Prerequisite: ENG 131

TCM 243 Media Performance 3 Credit Hours

Offers study and practice in the skills required for successful communication from behind microphones and in front of cameras, with special attention on announcing, interviewing, and acting.

TCM 251 Audio Production 3 Credit Hours

An introduction to the basic equipment and techniques of professional analog and digital sound recording, mixing, and editing through lecture, demonstration, and the completion of short production assignments typically found in radio broadcasting today from commercials to DJ shows. Though basic concepts will be learned, this course is not intended as experience in multi-track music production.

Required Co-requisite: TCM 151

TCM 257 Video Production I 3 Credit Hours

Introduces the basic concepts and skills of film and video production. The entire production process from script to editing is discussed and experienced with emphasis on key equipment and techniques. Differences between media are assessed and analyzed. Projects include individual and group work, both in the studio and on location.

Co-requisite: TCM 157

TCM 261 Broadcast Journalism 3 Credit Hours

Offers study and experience in broadcast news program production from creation to presentation, utilizing, whenever possible, the HFCC FM radio station and cable television facilities. Reporting and writing skills are developed, along with production and performance skills.

Prerequisites: ENG 131

TCM 294 Internship 3 Credit Hours

Offers on-the-job experience with a telecommunication business, such as a radio or TV station, a cable TV studio, or advertising or public relations office. Minimum requirement of 150 hours of volunteer work. Positions vary from semester to semester. Student

should contact the instructor for counseling and permission at least one month before the semester begins.

Prerequisite: Permission of the instructor

TCM 295 Directed Study 3 Credit Hours

Instructor-guided work on a student-initiated project in the Telecommunication field, either scholarly or creative or both.

Prerequisites: Permission of the instructor

WR 090 Supplement to World Religion 1 Credit Hour

A supplemental course designed to be taken concurrently with WR 131. Emphasis is on notetaking, outlining, and textbook study as well as the vocabulary and content of the WR 131 course.

Prerequisites: Concurrent enrollment in WR 131

WR 130 Introduction to the Study of Religion 3 Credit Hours

Explores the religious impulse as reflected in non-traditional as well as traditional contexts. Topics include the nature of religious experience, the Divine, the Self, and the dilemmas of freedom and mortality. Contemporary issues reflecting ethical concerns, including liberation movements, the ecological crisis, and peace and justice issues, are examined. Readings are cross-disciplinary, drawing from both the humanities and behavioral sciences.

WR 131 Comparative Religion 3 Credit Hours

Introduces the beliefs, practices, and experiences of the major world religious traditions. In addition to examining the particulars of each faith, this course emphasizes current perspectives in religious studies that serve to clarify the nature and functions of religion as a force shaping the increasingly pluralistic modern world.

WR 232 Western Religions: Judaism, Christianity and Islam 3 Credit Hours

Students will explore the differences and commonalities among Judaism, Christianity and Islam. This class will help to sensitize students to the diverse ways that Western religious traditions pursue the basic questions of ultimate reality. The course will define religion, explore its function and purpose, and identify the origins of Western religious motifs still very much in evidence in the twentieth century.

WR 233 Eastern Religions 3 Credit Hours

This course introduces the beliefs, practices and experiences of major Eastern religions. This academic study of religion explores Eastern religious philosophies as a whole complex worldview, as well as investigates the unique beliefs and practices of several Eastern religions. This is accomplished by examining historical roots, developmental growth as well as modern versions of major Eastern religions enabling the student to understand the perspective of Eastern religious philosophies.

WR 240 Myths and Symbols: Deciphering the Messages of Sacred Traditions 3 Credit Hours

This course introduces the academic study of religious myths. This is accomplished by examining spiritual and religious perspectives of cultures as sources of myths. Symbols, themes and plots are analyzed, enabling the student to identify common characteristics and patterns in myths originating in various cultures and religions throughout human history, while offering students the opportunity to resonate with the messages of myths.

We Can Help You

HFCC Has High-Quality Education

Mission

We of Henry Ford Community College are dedicated to the education and enrichment of our students and community. As a comprehensive community college with a diverse student population, we value teaching and learning. To prepare our students for a rapidly changing world and workplace, we are committed to providing knowledge, communication skills, and cultural opportunities. We foster critical thinking, creativity, integrity, and self-esteem.

Ours is a tradition of building futures. We measure our success by the success of our students in a democratic, diverse, and increasingly technological nation.

Purpose

Henry Ford Community College is a comprehensive, public, non-residential community college which meets the diversified post-secondary educational needs of the community by:

- 1 Providing the first and second years of college-level education for students who wish to transfer to other educational institutions.
- 2 Providing one- to two-year career programs for students preparing for employment.
- 3 Providing courses and programs for the general education and for the social, cultural, and personal development of individuals.
- 4 Providing courses and programs for those individuals who need or desire additional technical knowledge and skills, job upgrading, or retraining.
- 5 Providing opportunities both for students needing or desiring more advanced intellectual challenges commensurate with their abilities and for students needing or desiring to improve basic skills.
- 6 Providing counseling, guidance, and evaluation services for current students and for individuals considering further education and training.
- 7 Providing educationally-related services such as speakers, resource personnel, resource materials, the use of College facilities, and special institutes or programs to organizations and individuals within the community.

- 8 Providing ongoing research, development, and evaluation to improve curriculum and teaching methods.
- 9 Providing the above without regard to age, sex, race, national origin, religion, marital status, or handicap while stressing the importance of students becoming effective members of society and active participants in the democratic way of life.

Accreditation

Henry Ford Community College is accredited by The Higher Learning Commission, a Commission of the North Central Association of Colleges and Schools, 30 North LaSalle St., Suite 2400, Chicago, IL 60602-2504. Phone: **312-263-0456**. Web Address: www.ncahigherlearningcommission.org HFCC is also accredited by the Michigan Commission on College Accreditation.

In addition to general institutional accreditation, the Associate of Applied Science degree program in Nursing is approved by the Michigan Board of Nursing and accredited by the National League for Nursing, Accrediting Commission, 61 Broadway-33rd Floor, New York, NY 10016. Phone: **212-812-0390**. Web Address: www.nlnac.org.

The Automotive Technology program is certified by the National Institute for Automotive Service Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF) Board. The Automotive Service (ASSET) program is fully certified by the National Institute for Automotive Service Excellence (ASE), the National Automotive Technicians Education Foundation (NATEF) Board and is fully accredited in all Ford Motor Company STST credentialing areas. NATEF, 101 Blue Seal Drive, S.E., Suite 101, Leesburg, VA 20175. Phone: **703-669-6650**, www.natef.org.

The Culinary Arts program is fully accredited by the Accrediting Commission of the American Culinary Federation (180 Center Place Way, St. Augustine, FL 32095, **1-800-624-9458**, www.acfchefs.org). The Hospitality Studies programs are accredited by the Educational Foundation of the National Restaurant Association, 175 W. Jackson Blvd., Suite 1500, Chicago, IL 60604-2814. Phone: **1-800-765-2122**.

The Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (CRB-AAMAE), CAAHEP, 1360 Park Street, Clearwater, FL 33756. Phone: **727-210-2350**.

The Paramedic program has been awarded the highest level of approval through the Michigan Department of Community Health, Bureau of Health Policy, Planning Access EMS & Trauma Systems Section, 525 W. Ottawa St., Lansing, MI 48909. Phone: **517-241-3025**.

The Pharmacy Technician program is fully accredited through the American Society of Health-System Pharmacists, 7272 Wisconsin Avenue, Bethesda, Maryland 20814. Phone: **301-657-3000**.

The Physical Therapist Assistant program is fully accredited through the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 N. Fairfax St., Alexandria, VA 22314. Phone: **703-706-3245**.

The Radiographer program is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Dr., Suite 2850, Chicago, IL 60606-3182. Phone: **312-704-5300**, www.jrcert.org.

The Respiratory Therapist program is accredited through the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Committee on Accreditation for Respiratory Care (CoARC), 1248 Harwood Rd., Bedford, TX 76021. Phone: **817-283-2835**.

The Surgical Technologist program is accredited through the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Accreditation Review Committee on Education in Surgical Technology (ARC-ST), 6 West Dry Creek Circle, Suite 210, Littleton, CO 80120-8031. Phone: **303-694-9262**.

The College is a member of the Michigan Community College Association and the American Association of Community Colleges. Approval by the recognized accreditation agencies assures the student that works in the institution will be recognized by other reputable colleges and universities.

Prospective students may request documentation verifying the College's accreditation. Those who wish to review such documentation for vocational programs should contact the Office of the Vice President of Academic Affairs for Career and Technical Programs. Those who wish to review such documentation for academic programs should contact the Office of the Vice President of Academic Affairs for Arts and Sciences.

Points of Pride

Henry Ford II Honors Graduate Named to USA Today All-USA Academic Team

HFCC Henry Ford II Honors Program graduate, Esther Kelley, was selected as one of 20 members of the 2006 USA Today All-USA Community College Academic First Team. Kelley was selected from over 1,500 candidates and received a \$2,500 scholarship and national publicity in USA Today. This is the second time in three years an HFCC student has been selected for the team.

HFCC Student Clubs Raise Record Amount of Money for Charity

Team HFCC participated in the Relay for Life 2007 to raise funds for the American Cancer Society to support cancer research and programs, provide support for cancer survivors, and remember those who lost their battle with cancer. Over 75 students participated in the project and learned about leadership, teamwork and community service. The team raised \$3,224 this year, and has raised over \$13,000 in the last six years.

HFCC Awarded Achieving the Dream Grant

Henry Ford Community College was chosen as one of six Michigan Community Colleges to receive the Achieving the Dream Grant. Achieving the Dream is a multiyear national initiative to help more community college students succeed. The initiative is particularly concerned about student groups that traditionally have faced significant barriers to success. HFCC was awarded the \$50,000 grant from the Kresge Foundation and joins 82 institutions in 15 states. The grant will provide HFCC with the opportunity to network and share best practices with colleges across the country and we will now be eligible to apply for implementation grants worth up to \$400,000 over a four-year period.

Henry Ford II Honors Student Earns Guistwhite Award

HFCC Henry Ford II Honors student Hannah Kelley was selected as a Guistwhite Scholar of the Phi Theta Kappa Honor Society. Kelley is one of only 20 students to be selected from over 500 applications for this singular honor and the first from HFCC.

Faculty Members Help Establish High School Graduation Standards

HFCC Faculty members Pamela Sayre and Hal Friedman served on the high school social studies standards committee for American History and Geography (Friedman) and World History and Geography (Sayre) from January - August 2007. The committee established the Michigan High School graduation standards for Social Studies.

Mirror News Staff Receives Michigan Community College Press Association Awards

The staff of the Mirror News attended the annual Michigan Community College Press Association (MCCPA) Press Day Conference in Spring 2007. The staff received awards in the following categories: News Story, Personality Profile, Column/Commentary, Sports News Photo, Student-Created Ad, Front Page Design, Inside Page Layout and Overall Design.

Industrial Drafting Students Get Hands-On Experience

HFCC Industrial Drafting students James Bogart and Lebree Jones helped to build displays at the Model-T Automotive Heritage Complex (T-Plex) in Detroit. The T-Plex is becoming an interpretive center for the Model-T and early industry and innovation.

HFCC Partners with Henry Ford Health System and Dearborn Public Schools

Henry Ford Early College was successfully launched in Fall 2007. The program is a collaboration between HFCC, Dearborn Public Schools, and Henry Ford Health System. The Early College is a five-year program designed to prepare students for one of five health careers. At the end of five years, students will receive a high school diploma and significant credit toward an Associate of Applied Science degree in pharmacy technology, physical therapy assistance, radiography, respiratory therapy, or surgical technology. The Early College opened with approximately 40 ninth-graders; a grade will be added in each of the successive four years. During the ninth and tenth grades, students will be enrolled in high school classes, with emphasis on math and science. They will gradually be introduced to dual enrollment college classes, and their schedules in their 12th and 13th years will be almost exclusively HFCC coursework and clinicals.

English Language Institute Director is First CC President of College English Association

In April 2007, Ed Demerly, English instructor and co-director of the English Language Institute at HFCC became president of the College English Association. The CEA is a national organization which includes English teachers from community colleges, colleges, and universities all over the United States as well as over a dozen foreign countries. At its last annual conference in New Orleans, more than 400 papers were presented. Mr. Demerly is the CEA's first president from a community college in the organization's 68-year history.

Architecture/Construction Technology Student Receives Grainger Scholarship

Rola Majed, Architecture/Construction Technology student received a \$2,000 scholarship from Grainger Tools to cover books and tuition. At the time of graduation, she will also receive \$1,000 in tools from Grainger.

Student Research Papers Win Honors at LAND Conference

HFCC Honors Program students represented the college well in the 2007 Liberal Arts Network for Development (LAND) Student Conference. LAND is an organization dedicated to promoting the humanities in Michigan's colleges. First-prize papers are published in the organization's annual journal. Kelly Beagan, Aline Iovleva, and Jessica Sawyers, were finalists in the biological sciences category for their research papers "Genetically Modified Crops: Growth Rates of GM v. Non-GM Soybeans," and "Investigation of Genetically Modified Consumer Products". Their papers will be presented to the 18th Annual Argonne Symposium for Undergraduates in Science, Engineering and Mathematics. Rania Aoun won first prize in the health sciences category for her paper "Broken Heart Syndrome". Her paper will be included in a laboratory manual *Symbiosis*. David Neasz was a finalist in the philosophy category for his paper "Analysis of Individuality in Nietzsche".

Physics Instructor Publishes Work and Chosen to Develop Educational Materials related to European Space Agency Mission

Michael LoPresto, Astronomy and Physics Instructor had two papers published in *The Physics Teacher*, entitled "A Simplified Theoretical Treatment and Simulated Experimental Calculation of the Roche Limit" (September 2006) and "Experimenting with Guitar Strings" (November 2006). HFCC Astronomy Instructors Michael C. LoPresto and Steven R. Murrell presented a poster entitled "*Seven Years and Counting in the Student-Centered Classroom*" at the *Cosmos in the Classroom-2007 Symposium* at Pomona College in Claremont, CA, in August. Mike LoPresto's attendance at the symposium was sponsored by an educational grant from the *Planck Mission* (a satellite that will be launched in 2008 by the European Space Agency to study the cosmic background radiation). LoPresto has been selected as one of six community college instructors in the country to participate in the development of educational materials for teaching cosmology in introductory astronomy based on data that will be gathered by the mission.

Hospitality Students Demonstrate Culinary Skills for State Senate

The HFCC Hospitality Students catered lunch for the Michigan State Senate Luncheon in March 2007. The HFCC Culinary Arts program is nationally accredited through the American Culinary Federation. In addition, HFCC's Hospitality Studies program is accredited by the Educational Foundation of the National Restaurant Association.

Phi Theta Kappa Recognized Internationally

Dr. Nabeel Abraham, HFCC Instructor and the Alpha Xi Mu Chapter of HFCC's Phi Theta Kappa Honor Society received a special commendation during the Michigan Regional Convention. The commendation recognized the chapter's successful attainment of goals as presented in the Society's Five Star Chapter Development Program. The Chapter was awarded the Five Star designation for promoting at least two events in each of the four Hallmarks that the Society is built on, Fellowship, Scholarship, Leadership and Service. This distinction will also be recognized at the international level. Phi Theta Kappa also received a Bronze Pinnacle award for obtaining more than a 10% increase in membership.

The group also placed in the Michigan Regional Competition. They received third place in the Yearbook Competition for documenting their activities for the year and third place in Better World Books Book Drive for collecting books sent to third world countries.

Student Support Services

Assessment Center

The Assessment Center is located on the main floor of the Learning Resources Center, LRC-117, adjacent to the University Transfer, Advising, and Career Counseling Center. The Assessment Center provides all students with English, Math and Chemistry placement testing, and orientation online. Placement testing can be taken on a walk-in basis Monday through Thursday from 8 a.m. – 6:30 p.m. and Friday from 8 a.m. – 4:30 p.m. For more information, please contact the Assessment Center at 313-317-6503 or visit www.hfcc.edu/courseplacement.

Assisted Learning Services

The Assisted Learning Services (ALS) office is located in the Learning Resources Center, first floor, LRC-125. The following services are offered:

Tutorial

This free service is available to all students who are experiencing difficulty in a class. To request tutoring, students must complete a Tutorial Request Form, available in the ALS office, have the instructor sign it, and return it to the ALS office. Students will then be notified of the days, times, and location of the tutorial service.

Accommodations

Students who have a documented disability may be eligible for support services. These services include:

- extended test time
- reader for tests
- writer for tests
- classroom adaptations
- note taker
- use of a tape recorder
- a sign language interpreter

In order to receive any accommodation, the student must make an appointment with the ALS counselor and provide documentation about the disability. Students can call 313-845-9617 to schedule an appointment.

The ALS office is open Monday, Thursday, and Friday from 8 a.m. – 4:30 p.m. and Tuesday and Wednesday from 8 a.m. – 6:30 p.m. For further information call 313-845-9617 or visit our Web site www.hfcc.edu/als.

Child Development Center

The Child Development Center is a licensed early childhood program for children to 12 years. The Center is operated in a partnership with the Community Education Department of Dearborn Public Schools. Developmental Preschool and Montessori Preschool programs are available during the day.

The services of the Center are available to:

- HFCC students
- HFCC staff members
- the community at large

The Center accommodates children:

- all-day
- part-time
- evening

Children participate in a learning environment while attending the Center. The Center is open Monday through Thursday from 7 a.m. – 10 p.m. and Friday from 7 a.m. – 6 p.m. during the Fall and Winter semesters. Various summer programs are also available on campus and at other Dearborn School locations. Current fees and other information can be found in the current class schedule, by calling 313-317-6527 or visit www.hfcc.edu/children.

Cooperative Education

The **Cooperative Education Program**, or “co-op,” is an excellent opportunity for students to receive academic credit for paid work experience in their field of study. Students work full- or part-time in on-campus or off-campus positions directly related to their educational and career goals.

Co-op is an academic partnership in which the college and the employer join to provide the student with a method of learning which integrates work experience and classroom instruction. Students are employed in practical, paid positions directly related to their educational and career goals. Through the integration of academic study and work experience, students enhance their academic knowledge, personal development, and professional preparation.

Students who participate in co-op will:

- enhance their marketability for a permanent job after graduation
- gain valuable work experience and technical expertise
- receive academic credit toward graduation (in most curricula)
- earn money to defray college expenses
- develop self-confidence, responsibility and professional competence
- integrate work experience with classroom instruction

The opportunity to participate in cooperative education is dependent on the availability of appropriate jobs in business and industry.

Eligibility Requirements

Students must meet eligibility requirements to participate in the co-op program. These include:

- completion of 50% of core course work (requirement varies by course of study)
- minimum 2.5 grade point average in core course work

- minimum cumulative grade point average of 2.0

Students from the following programs may be eligible for participation in the co-op program:

Business/Economics Division

- Accounting
- Administrative & Information Management*
- Business
- Business Administration
- Computer Software Applications
- Legal Assistant
- Management
- Office Administration

Health Careers Division

- Medical Insurance Specialist

Technology Division

- Architecture/Construction Technology*
- Automotive Technology
- Computer Information Systems
- Electrical/Robotics Technology*
- Hospitality Studies*
- HVAC
- Industrial Drafting & CAD Technology
- Manufacturing Productivity Systems
- Multi-Skilled Facility Maintenance Technology
- Power/Building Engineer

Art Department

- Graphic Design

**Students in this program must participate in co-op as a graduation requirement.*

Technology and Graphic Design students who are interested in Co-op should visit the Co-op Office in the Technology Building, Room T-112, or contact Nancy Stupsker at **313-845-6359**.

Business students seeking **on-campus positions** should visit the Co-op Office in the Liberal Arts Building, L-329, or contact Kathy Daniels at **313-845-9703**.

Business and Health Career students seeking **off-campus positions** should visit the Co-op Office in the Liberal Arts Building, L-329 or contact Mary Brill at **313-317-1710**.

Focus on WoMEen Program



Focus on WoMEen/Focus on ME programs and services are designed to help both women and men students maximize their opportunities at Henry Ford Community College and achieve their educational goals. FOW offers counseling,

support groups, seminars, special events and fundraisers for the Student Emergency Fund.

In addition, a vocational education grant is available through FOW to supplement the Pell grant in paying for tuition, books and/or childcare for qualified students enrolled in approved vocational programs. The Carl D. Perkins grant serves eligible students with unmet financial need in six “special populations:” single parents, homemakers, students enrolled in programs non-traditional for their gender, individuals with a disability, limited English proficiency, and economically disadvantaged. See us for details or an application.

“Back-to-School” appointments and career counseling are available for prospective students who have concerns about entering or reentering college. Peggy Holcomb, FOW Program Director, is a Licensed Professional Counselor. Her direct number is **313-845-9757**.

Focus on WoMEen is located in room 125 of the Learning Resources Center (near Assisted Learning Services). The hours are 8 a.m. - 4:30 p.m. Monday through Friday (open Tuesday and Wednesday until 6:30 p.m.). Hours are limited during the summer. For assistance or further information, please visit the office, e-mail fow@hfcc.edu (Web site: www.hfcc.edu/fow) or call **313-845-9629**. All students are welcome.

Health Insurance for Students

Emergency care in case of illness or injury is provided by the College. Students needing emergency hospital care are sent by local ambulance to nearby hospitals. Ambulance service and medical care are at the student’s expense.

Hospitalization insurance for sickness and accidents is available at a reduced cost to any student attending day or night classes regardless of the number of semester hours the student is taking. The deadline for obtaining insurance is one month prior to the first day of enrollment each semester. The policy protects the student twenty-four hours a day for twelve months. Athletic activities are included in the coverage, except for interscholastic sports. Claims are paid regardless of other health and accident insurance carried by the student or family.

Insurance applications are available at the Welcome Center North in the Learning Resources Center throughout the year.

Henry Ford II Honors Program

HFCC students may be eligible for the College’s Henry Ford II Honors Program, a structured, academically rigorous program of core courses in English composition and the humanities. The program prepares students to gain admission to transfer institutions of their choice, while allowing them to excel in critical thinking and research skills.

During the first year, Honors students are matched with a faculty mentor who will work with them one-on-one

throughout the program. Students also enroll in a unique Honors Colloquium and Honors English classes, and attend a Transfer Workshop to help prepare for the process of transferring to another institution of higher learning.

In the second year, students work on in-depth research projects under the guidance of faculty through the innovative Honors Directed Studies. In this setting, highly motivated Honors faculty members engage students one-on-one as they research topics covering various academic disciplines. Students are encouraged to select topics that can be presented, published, exhibited, performed, or broadcasted. Second-year students also enroll in the capstone course, Honors 251–Great Works, where they discuss and debate some of the great books and ideas of the Western canon.

For more information or to obtain an application form, contact Nabeel Abraham, Ph.D., Henry Ford II Honors Program Director, Learning Technology Building, Room 150, at 313-845-6460 or by e-mail at nabraham@hfcc.edu.

Job Placement

The HFCC Job Placement Office provides students and recent graduates with assistance in searching for employment, including assisting pending or recent graduates of career education programs in finding entry-level positions.

Job search assistance includes:

- referrals to available positions;
- furnishing your resume to potential employers;
- opportunities to interview with potential employers on campus;
- networking and similar contacts with employers.

The Job Placement Office posts listings of part- and full-time employment opportunities on the Job Placement Office's Web site at hfcc.edu/careers and on bulletin boards located in the Health Careers Education Center, Liberal Arts Building, Technology Building and the Dearborn Heights Center.

Students or graduates who require job search assistance can register with the Job Placement Office, T-112, Technology Building. Office hours are 8:30 a.m. – 4 p.m., Monday through Friday.

Learning Laboratory

The Learning Laboratory provides academic support for students in their reading, writing, and math classes. Students also may use the lab to resolve reading, writing, and mathematical problems they may be experiencing in their other course work or in preparation for the Nursing Entrance Test. The Learning Lab delivers instruction through one-on-one tutoring, computer programs, and additional support materials such as review sheets available at the Lab or its Web site.

Those students wishing a more concentrated tutorial program in reading or writing may sign up for ENG 083 (a one-credit

reading course), ENG 084 (a two-credit reading course), or ENG 086 (a one-credit writing course). These courses include an individual diagnosis of problems and weekly conferences with an instructor.

During fall and winter semesters the Learning Laboratory is open Monday through Thursday from 8:00 a.m. – 8:40 p.m., Friday from 8:00 a.m. – 4:30 p.m. and Saturday from 9:40 a.m. – 1:40 p.m. For more information, please contact the Learning Lab at 313-845-9643, or see <http://hfccclab.info>.

Partners Plus

In an effort to support under-represented students, Henry Ford Community College and the University of Michigan–Dearborn formed a partnership in 1993 to help provide a seamless transfer process for HFCC students to the University of Michigan–Dearborn. The Partners Plus program provides students with detailed academic advising on specific University of Michigan–Dearborn degree programs, professional development workshops, annual retreats with an award ceremony, mentoring, job opportunities, and in some cases financial assistance. Partners Plus serves more than 400 students each academic year and has successfully transferred many HFCC students into four year degree programs.

See how you can better achieve your educational goal. Contact Partners Plus at 313-845-9690 or by e-mail partnersplus@hfcc.edu and visit www.partnersplus.umd.umich.edu.

Paying For College

No student should be prohibited from entering college because of a lack of money. The College, in cooperation with federal and state agencies and private sources, makes various combinations of grants, loans, on-campus employment, and scholarships available to students.

The Financial Aid Office awards financial assistance to students on the basis of need as determined through an analysis of their family profiles.

The major consideration in determining a student's award is financial need. Financial need is the difference between the cost of education and the amount of money an applicant and the family can provide from their income and assets. The following are basic tools for determining a student's eligibility for assistance.

The student must complete the Free Application for Federal Student Aid (FAFSA) in order to apply for these types of aid:

- Bureau of Indian Affairs Scholarships
- Federal Work Study Program
- Federal Pell Grant
- William D. Ford Federal Direct Subsidized and Unsubsidized Loans
- Federal Supplemental Educational Opportunity Grant
- Federal Direct Plus Loan Program

- Michigan Adult Part-time Grant
- Michigan Work Study
- Michigan Educational Opportunity Grant
- Michigan Competitive Scholarship
- Michigan Rehabilitation Services
- Academic Competitiveness Grant.

Students are encouraged to apply over the Web at www.fafsa.ed.gov. Students may use the computer terminals in the Financial Aid Office for that purpose and in the Student Services Resource Room LRC-030.

When prompted, the student needs to allow their information to be released to HFCC; HFCC's school code is 002270.

Students whose files are complete before April 1 each year are given first consideration for financial aid for the following year, which consists of the summer, fall, winter and spring semesters at HFCC.

Some students' files are selected for verification. Those students will not receive financial aid until after all requested information has been submitted to the Financial Aid Office within sixty days of the end of the term or by August 31, whichever comes first.

The Financial Aid Office awards only those with high school diplomas or GEDs.

Awards of aid, because they are based on need, may be as low as \$100 or as high as the amount required to pay for the student's tuition, fees, room, board, books, transportation, and miscellaneous expenses while attending Henry Ford Community College.

All programs are subject to change without notice

Students should read the HFCC financial aid brochure and the Student Guide, a U.S. Department of Education publication, for a detailed explanation of all programs, requirements, and federal refund policies.

Federal Programs Based on Financial Need

ACADEMIC COMPETITIVENESS GRANT provides assistance to full-time students who have graduated after 1/1/2005, are Pell eligible and have completed a rigorous program of study as outlined by the U.S. Department of Education.

BUREAU OF INDIAN AFFAIRS SCHOLARSHIPS are available to needy students who are at least one-fourth American Indian and are from a tribe within the United States. Interested students should contact the Michigan Inter-Tribal Education Association, Keweenaw Bay Tribal Center, Baraga, Michigan 49908 for an application.

The FEDERAL WORK STUDY PROGRAM enables students with financial need to earn a substantial part of their educational costs through working either on or off campus in offices and laboratories.

The FEDERAL PELL GRANT PROGRAM makes grants available to students. These grants are considered to be the floor of financial aid packages. After this award has been allotted to a student, other financial aid may be given.

FEDERAL DIRECT PLUS LOANS are for parent borrowers. This loan has a fixed interest rate. The interest accrues while the student is in school.

FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS assist students with the greatest financial need.

The WILLIAM D. FORD FEDERAL DIRECT SUBSIDIZED LOAN PROGRAM is available to students attending on at least a half-time basis. No interest accumulates until six months after termination of studies.

WILLIAM D. FORD FEDERAL DIRECT UNSUBSIDIZED LOANS are available to all students attending at least half time who are not eligible for a subsidized loan or who have limited eligibility for a subsidized loan.

State of Michigan Programs

The MICHIGAN ADULT PART-TIME GRANT PROGRAM is available to independent students who are enrolled part-time, have financial need, and are undergraduates.

The MICHIGAN COMPETITIVE SCHOLARSHIP PROGRAM provides financial assistance for students demonstrating both financial need and high academic potential. Students should take the ACT test while they are in high school. Based on the results of this examination and financial need as determined by the Free Application for Federal Student Aid, students may receive scholarships for their tuition and fees, not to exceed \$1,300.

The MICHIGAN EDUCATIONAL OPPORTUNITY GRANT is available to students who are Michigan residents.

MICHIGAN MERIT AWARD is a scholarship for students who do well on the MEAP test. The amount of the one-time scholarship is \$2,500. A combination of the MEAP and other tests also make the student eligible. For further information, contact www.MeritAward.state.mi.us.

The MICHIGAN NURSING SCHOLARSHIP is for students who are enrolled in the Nursing program. The scholarship is awarded based on the agreement of the student to work in an eligible direct care nursing position in the state for a year if the student received an award based on full-time attendance. If the student does not do so, the scholarship becomes a loan with a four percent interest rate. There are various other considerations which can be found on the Web site: www.michigan.gov/mistudentaid.

MICHIGAN PROMISE SCHOLARSHIP is available to students graduating in 2007 and after. Michigan students with qualifying scores on the State Assessment Test may receive up to \$1,000 per academic year for each of their

first two years of college enrollment and up to \$2,000 after completion of two years of postsecondary education with at least a 2.5 GPA. Michigan students who do not receive qualifying scores on the State Assessment Test may receive up to \$4,000 after completion of two years of postsecondary education with at least a 2.5 GPA. For further information, contact www.michigan.gov/mistudentaid.

MICHIGAN REHABILITATION SERVICES provides assistance for the vocational training and education of individuals with physical or mental disabilities. Emphasis is placed on serving the severely disabled applicant. Financial assistance for training programs is based on the student's financial need. The applicant should contact the nearest Michigan Rehabilitation Service Office.

The MICHIGAN TUITION INCENTIVE PROGRAM (TIP) is for students from families who have received Medicaid for the prior 24 months. They should contact the Michigan Department of Social Services for more information before graduating from high school or receiving the GED. Information can be obtained by calling **1-800-243-2TIP**.

MICHIGAN WAR ORPHANS ASSISTANCE is a waiver of tuition and fees for students attending Michigan tax-supported institutions. The applicant must be the child of a wartime veteran who died or was disabled due to service-connected causes, must be between the ages of 16 and 22, and must have been a resident of Michigan for 12 months. Interested students should contact Michigan Veterans Trust Fund, 3500 North Logan, Lansing, MI 48913.

The MICHIGAN WORK STUDY PROGRAM is an employment program subsidized by the state.

The NURSE SCHOLARSHIP FUND is for students in good standing in the nursing program. Apply by May 1 in the Nursing Office.

SINGLE PARENT/DISPLACED HOMEMAKER AND SEX EQUITY GRANTS are vocational education grants for men and women that supply funds for single parents, displaced homemakers, homemakers, and persons wanting careers not traditionally associated with their sex, e.g., nursing for males and electronics for females. Interested students should contact the Focus on Women Program at **313-845-9629**.

Institutional Aid

ART DEPARTMENT TUITION GRANTS are available to four graduates from Dearborn's five high schools for summer studies in Basic Drawing and Design. Prospective applicants should contact their high school counselors.

The BOARD OF TRUSTEES SCHOLARSHIP is available to two graduates from each of Dearborn's high schools. These scholarships are awarded on the recommendation of the high school faculty. The scholarship covers the amount of tuition for 62 credit hours and must be used within three years of graduation from high school.

THE HENRY FORD II HONORS PROGRAM offers full scholarships for academically superior students. New students must have graduated from high school with at least a 3.5 grade-point average or an ACT score of 24 or higher. Presently enrolled HFCC students must have completed at least 12 hours of courses numbered 100 or above prior to application with at least a 3.5 grade-point average. Interested students should contact the Director of the Henry Ford II Honors Program prior to the March 31 application deadline.

The INDIAN TUITION WAIVER is available to those who are one quarter North American Indian. The student must provide proof of blood quantum and Michigan residency.

SENIOR CITIZENS TUITION GRANTS are available to residents of the Dearborn School District who are over the age of sixty.

DEPARTMENTAL SCHOLARSHIPS are available through these areas: Dance, Telecommunication, Music and Theater. Interested students should contact appropriate department or office.

Other Sources of Aid

Students may wish to review other sources of information on scholarships. The Henry Ford Community College Library has several source books. The HFCC Web Site has updated information on scholarships. Visit www.hfcc.edu/scholarships.

Miscellaneous scholarships are posted on the bulletin board outside the Financial Aid Office and on the first floor of the Learning Resources Center, outside room 113. Students can also use the Web to explore additional scholarships at www.finaid.org.

University Transfer, Advising, and Career Counseling Center

The University Transfer, Advising, and Career Counseling Center is located in the Learning Resources Center, first floor, LRC-117. The following services are offered:

University Transfer

This service assists students with the selection of courses taught at HFCC which will transfer to other colleges and universities. The following resources are available:

- curriculum transfer guides for Michigan colleges and universities
- articulation agreement guides for students following specific programs at HFCC
- equivalency guides, which are alphabetical listings of HFCC classes and their transferability to other colleges and universities

Advising

This service provides advice to students regarding the implementation of their educational goals. Counselors advise students on:

- selection of courses related to an educational program curriculum/degree
- selection of an appropriate schedule/times for classes
- time management or balance of number of courses with life style
- study skills planning and development

Career Counseling

This service assists students in the lifelong process of choosing, planning, and preparing for appropriate careers. The counselors who provide this service are Licensed Professional Counselors (LPC) by the State of Michigan, with a minimum of a master’s degree in guidance and counseling. Career planning services include:

- selection of a career path and a plan to implement this path through formal education, training and practical experience
- assessment of interests, values, and skills through standardized assessments and self-assessment
- assistance and support during career/life transitions
- change of self-defeating behaviors
- stress/anxiety reduction
- coping with change

The University Transfer, Advising, and Career Counseling Center, in the Learning Resources Center, is open Monday through Thursday from 8 a.m. – 6:30 p.m. and 8 a.m. – 4:30 p.m. on Friday.

For counselor availability or more information, please contact the University Transfer, Advising, and Career Counseling Center at 313-845-9611 or 313-845-9612 or visit www.hfcc.edu/counsel.

regional, and national levels:

Men

- baseball
- basketball
- golf

Women

- basketball
- softball
- volleyball

The Michigan Community College Athletic Association and the National Junior College Athletic Association regulate athletic competition and set eligibility standards for all member colleges.

Intramural

The major purpose of a college intramural program is to provide an opportunity for participation in recreational activities for all students. All currently enrolled students are encouraged to participate.

Intramural sports contribute to health, fitness, strength, and endurance, as well as to the development of wholesome recreational skills and constructive attitudes toward recreation, health, and social relationships that carry into adult life.

For more information call 313-845-9647 or visit www.hfcc.edu/sports.

Campus Life, Student Activities and Community Services

Athletics



Intercollegiate

Henry Ford Community College is a member of the Michigan Community College Athletic Association (Eastern Collegiate Conference). The nickname is the Hawks. Varsity teams participate in the following sports at the conference, state,

Center for Lifelong Learning

Less like school...More like fun!

It’s all about YOU at the Center for Lifelong Learning (CL2) where we meet the educational need of adults of all ages in fun, convenient, non-traditional formats, including **online**.

Check out the hundreds of high-quality, non-credit personal enrichment and professional development classes we offer throughout the year. Whether you’re interested in exploring the arts, improving your health and fitness, learning unique cooking techniques, or keeping abreast of financial trends (to name just a few), you’re sure to find classes that appeal to you.

If you’re interested in launching a new career or seeking professional development for career advancement, consider taking CL2 classes in property assessment, real estate, business and management, computer skills, and more. Most of them are offered for continuing education units (CEUs).

To read descriptions of all CL2 classes or actually register for one of them, visit www.hfcc.edu/CL2. You can also call us at 313-317-1500 or toll-free at 1-877-855-5252, or stop by our conveniently located office at the Dearborn Heights Center, 22586 Ann Arbor Trail, Dearborn Heights, MI 48127.

College Store

The College Store carries textbooks, computer software, supplies, clothing, and miscellaneous items. Staff members are available to answer questions and give assistance. The College Store accepts cash, personal checks, VISA/MC and Discover, as well as HFCC Gift Certificates and financial aid. Students using financial aid, loans, or scholarships for College Store purchases must present a current student schedule or award letter and picture ID for each purchase. Orders are also accepted online at collegestore.hfcc.edu.

Store Hours

Fall and Winter Semesters

Monday-Thursday 8 a.m. – 6:30 p.m.

Friday 8 a.m. – 4:30 p.m.

Spring/Summer Hours

Monday-Thursday 8 – 6:30 p.m.

College Store Return Procedure

(Contact College Store for complete details.)

Should it be necessary to make an adjustment, the following conditions must be met:

- 1 Students must have their cash register receipts. Purchases made with a charge card will be issued a charge credit. Refunds of merchandise/books originally purchased with a check may require a 10-day waiting period.
- 2 Regardless of the date purchased, students have until the last day of the second week of classes to make a return on new or used textbooks. Books from classes dropped after the first two weeks are not eligible for return. For a full refund on new textbooks, books must be in perfect condition (as determined by a staff member) - free from any writing, stains, markings, or damage to the cover or binding.
- 3 Textbook sales are final after the end of the second week of classes.
- 4 Refunds on supplies or clothing will be made only if the item is returned unused, within one week of purchase. Blister-packed items and boxed items must be returned in their original package with the packaging in resalable condition.

Book Buy Back Procedure

Book buy back is held only during the week of final exams for fall and winter semesters. Spring/summer term buy back dates vary. The College Store does not purchase books from students at any other time. Not all books can be bought back due to overstocks and edition and title changes. Workbooks are not purchased during buy back.

For more information, please contact the College Store at 313-845-9603 or visit collegestore.hfcc.edu.

Corporate Training Division

Established in 1986 as the College's economic development unit, the Corporate Training Division expands workforce skills, retrains employees in new work fields or new technologies, and supports economic development through the provision of educational services to business and industry. The division responds to business and industry requests by designing learner-centered educational offerings that are affordable, flexible, and customer-specific. These work-based educational programs are financed by contract with the employer or through private or public sources.

Training can be offered in credit or non-credit forms, or through seminars granting continuing educational units (CEU's). Work and learning skills assessment and the development of multi-agency learner support systems are some of the comprehensive services available through our office. Classes are taught at either College or company facilities. The use of work specific tools and equipment is encouraged in training and education projects. Corporate Training also co-manages an advanced CAD/CAM/CAE training facility.

Employers are invited to contact the Corporate Training Division at 313-845-9670 or visit www.hfcc.edu/corporatetraining. Contact the division to see how it can support your employee development goals. The division can help you meet the learning and work skill goals of your organization.

Culture and Community

When it comes to cultural enrichment, the best choices are at Henry Ford Community College. HFCC students can attend or participate in the many excellent art exhibitions, plays, concerts, and dance performances on campus, or become involved in the college's diverse student clubs and organizations. And the surrounding community offers even greater educational and leisure opportunities.

On campus, choose from clubs that match your hobbies, cultural heritage, or religious or social interests. Through these activities, hundreds of HFCC students promote education, discussion, cultural awareness and service opportunities every year. Among the many clubs at HFCC are the African-American Association, Community Service Club, Future Teachers Association, Math Club, Philosophy Club, Phi Theta Kappa, Science Association, Society of Manufacturing Engineers, Student Nurses Association, and Women Tech Club.

The Council of American Cultures sponsors tours, films, guest speakers, and presentations on culture, religion, and political systems from all over the world. The annual Globefest is a highlight featuring dance, music, performances and food from many cultures.

HFCC also features the award-winning student radio station WHFR-FM 89.3 and *The Mirror News* student newspaper,

both of which promote cultural events and provide endless opportunities for students to become part of the thriving campus community.

The Student Bulletin offers HFCC students even more information about local and campus events, as well as volunteer opportunities for activities like the annual Dr. Martin Luther King, Jr. Community Service Day.

HFCC students can enjoy the cultural opportunities in the nearby city of Dearborn, one of the area's most diverse communities. Check out the ensemble of social and dining establishments, or visit The Henry Ford, featuring the renowned Henry Ford Museum and Greenfield Village.

Just minutes away, Dearborn's Ford Community and Performing Arts Center offers an eclectic range of events, including classic rock, pop, symphony and theatrical performances. The center also offers activities for every taste, including an indoor aquatics area, outdoor fishing pond, jogging track, café, baseball and soccer fields, and cultural arts exhibits.

The choices for cultural enrichment become almost limitless when students drive a short distance to the City of Detroit and the surrounding areas. The choices match everyone's tastes, from cultural attractions such as the Detroit Institute of Arts, the Fox Theater, and the Max M. Fisher Music Center to world-class sporting events such as Detroit Pistons basketball and Detroit Red Wings hockey, and to unique dining experiences such as the Hard Rock Café.

English Language Institute (ELI)

The English Language Institute curriculum, through year-round instruction, helps to expedite the learning and language development of foreign students by offering them five (four during spring/summer terms) four-hour days of intensive language study or a two-and-a-half hour evening session, four days a week. The program helps second language speakers of English increase their English language proficiency for academic and professional purposes. The Institute helps students increase the test scores they need for admission to colleges, professional schools, business schools, law schools, and medical schools.

The ELI offers credit and non-credit courses that range from beginning to upper-level developmental reading, writing, and listening. However, students must be proficient in their native language. TOEFL preparation, pronunciation and conversation, and assisted tutoring classes are also offered.

The ELI also offers ELI 010-Pharmacy College Admission Test preparation with a focus only on the verbal portion of the test and ELI 012, a developmental course designed to improve the English business communication skills of non-native speakers.

The ELI is located on the first floor of the Liberal Arts Building, L-142, HFCC's main campus. Daytime office hours are 8 a.m. – 4:30 p.m. Monday through Friday, and evening hours are 6 p.m. –

9 p.m. Monday through Thursday. For information call 313-317-1556 or go to the Web at www.hfcc.edu/eli.

All students in the Language Institute qualify for a Certificate of Attendance awarded for completion of all required hours of study and a Certificate of Achievement to verify academic achievement at each level of study completed.

Fifty-One O One Restaurant



For an innovative dining experience, the best choice is HFCC's Fifty-One O One restaurant, an integral part of the College's Hospitality Studies program. Completely operated by the program's students and staff, this restaurant - conveniently located in the Student and Culinary Arts Center - allows hospitality students to perfect their craft, while guests enjoy the fruits of these educational labors.

Students working in Fifty-One O One are tomorrow's hotel and restaurant managers, chefs, dining room personnel, and food service industry professionals. As part of their studies, they rotate through the various stations in the kitchen and dining room.

Meanwhile, guests choose from a full range of menu items, including appetizers, specialty salads and sandwiches, entrees, daily specials and desserts, all of which are prepared in various Culinary Arts classes.

The choices are abundant, with savory specials like chicken paprikash, seafood crepes, turkey Marsala, and vegetable noodle florentine. It's an unusually delicious educational experience for both students and guests.

The Fifty-One O One is open during the fall and winter semesters. Lunch is served on Tuesdays, Wednesdays and Thursdays. Dinner is served on Wednesday evening. During the spring semester the program offers various international buffets. In addition, throughout the year the program offers special events such as an Oktoberfest buffet, St. Patrick's Day buffet, bake sales, and a scholarship dinner. Call for reservations, 313-206-5101. For more information, visit www.hfcc.edu/5101.

Food Service



From hamburgers and fries to lasagna and ribs dinners, you'll never go hungry at HFCC. The airy Pavilion in the Student

and Culinary Arts Center is open for student dining, studying and socializing whenever classes are in session. The adjoining Skylight Café is open Monday through Thursday 7:30 a.m. - 7:00 p.m. and Fridays 7:30 a.m. - 2:00 p.m. during the Fall and Winter semesters. During the Spring and Summer semesters the Skylight Café is open 7:00 a.m. - 2:00 p.m. Monday through Thursday. Stop in for a stroll through the Skylight Café Food Court and choose your cuisine: soups, salads, entrees, custom-made sandwiches and burgers, artisan pizzas, delectable desserts and your favorite beverages are available throughout the day. The café's conscientious staff strives to provide extraordinary fare that will tingle your taste buds. Plus the Pavilion is a wireless zone - you can use a laptop to surf the web while you enjoy your favorite foods.

Inside the Skylight Café Food Court, you'll find:

- Corner Deli
- Maggie's Specials
- Main Course
- Boulevard Grill
- Magic Oven
- Sweet Endings

At our beverage center, you can pour a cup of Starbucks coffee, fresh juice, or fountain soda. Our coolers are stocked with fruit, bottled water, tea, and a variety of soft drinks. Adjacent to the café and throughout campus are vending machines for refreshments on the run. For further information, call **313-845-9648**.

Henry Ford Early College

Henry Ford Early College is a five-year combination of high school and college focused on health careers. The curriculum combines high school classes with HFCC college courses enabling the student to graduate with a high school diploma and potentially an Associate of Applied Science degree in the Pharmacy Technician, Physical Therapist Assistant, Radiographer, Respiratory Therapist, or Surgical Technologist programs. The college classes are taken under the auspices of dual enrollment at no additional cost to the student. The Early College is open to any Wayne County high school student with an interest in the health occupations.

Henry Ford Early College is a collaboration between HFCC, Dearborn Public Schools, and Henry Ford Health System and utilizes the campuses of both Henry Ford Community College and Henry Ford Health System. The ninth grade curriculum consists of all high school classes, with emphasis on math and science. Students will gradually be introduced college classes, and their schedules in 12th and 13th grades will be almost exclusively HFCC coursework and clinical rotations. Applications for Henry Ford Early College can be obtained by calling **313-317-1518**.

Library

The Fred K. Eshleman Library is located in the south half of the Learning Resources Center. This modern facility offers seating

for over 560, including seven group-study rooms. The Web-based catalog allows users to search the Library's collection of over 100,000 items, including 87,000 books, 600 periodical titles, and an extensive collection of government documents. Access to a range of full-text indexes is available at ten reference workstations. Go to www.hfcc.edu/library to access the library's home page.

Check-out is speedy and efficient at the circulation counter. A library card is required and is issued free to library users. Those with questions about book loans should call **313-845-6375**.

The Media Center on the second floor houses 54 PCs. Access to the Internet, e-mail, and a wide variety of software is available. Other media, such as video tapes, audio tapes, slides, CD-ROMS, or laser disks used to support classroom instruction are found here. Only currently registered students may use the Media Center, and a library card is required. Those with questions may call **313-845-6386** or visit www.hfcc.edu/library.

Help is always available from the librarians, in person or by phone at **313-845-6377**.

During the fall and winter semesters the Library is open six days a week for 71 hours. The hours vary during the spring and summer semesters and between semesters. For current Library hours or more information please call **313-845-9606** or visit www.hfcc.edu/library.

Michigan Technical Education Center (M-TEC)

The Michigan Technical Education Center (M-TEC) at HFCC, located at 3601 Schaefer Road, offers state-of-the-art classrooms, conferencing and technical lab facilities to the Wayne and Monroe County regions.

The M-TEC offers in-house program development, training, and evaluation services. This includes WorkKeys services, ACT certifications, an authorized Pearson VUFC Testing Center that provides IT certification tests, and Certified Nursing Assistant testing. With HFCC faculty the M-TEC also offers College Level Examination Placement (CLEP) services.

As a state-of-the-art business training facility, the M-TEC offers a 100+ person capacity auditorium with live video conferencing and video streaming capability; a High Bay area that enables equipment-specific training; multiple meeting/training rooms and computer labs which can be flexibly arranged and configured. M-TEC staff members are on hand to meet each customer's specific needs and create a productive setting for professional development. Hours of building operation are suited to business scheduling and there is free, convenient lighted parking.

Employers are invited to contact the M-TEC at **313-317-6600** or visit www.hfcc.edu/mtec to explore how Henry Ford Community College can meet the skill development needs of their companies.

Performances and Exhibitions

Co-curricular Fine Arts Activities

Henry Ford Community College offers a wide variety of opportunities for students in the fine arts area outside the classroom. These co-curricular activities are designed to enhance and expand the classroom experience to allow students to explore and develop their talents.

Art

The Sisson Art Gallery in the MacKenzie Fine Arts Center is home to several exhibitions throughout the year, showcasing not only thought-provoking works by professional artists from around the country, but the creativity of HFCC art faculty and the works of HFCC's most talented student artists, painters, graphic designers, sculptors and interior designers.

Dance

Dance students perform in their own dance concerts at HFCC as well as in the college's musical theater productions staged by the music and theater areas. In addition to classes in tap, modern dance and jazz, HFCC dance students have the opportunity to participate in the Full Circle Dance Company, which provides intensive training and performance opportunities.

Music

There are several outstanding vocal and instrumental groups at HFCC. The bands and choirs perform on campus and at local concert venues throughout the academic year. Many HFCC ensembles have also had the opportunity to participate in concert tours in the United States, Canada, and Europe. The HFCC music program has released several CDs, including recordings of every annual President's Collage concert since 1997.

Theater

HFCC's Theater program strives to offer students a wide range of opportunities, from acting, directing and writing to behind-the-scenes technical production, including 3-D virtual imaging special effects. A variety of plays are staged throughout the year, including children's theater productions, musicals, classic dramas and original works by faculty and students.

For Performing Arts auditions and announcements, contact the directors:

Theater:

George Popovich, 313-845-6478

Dance:

Diane Mancinelli, 313-845-6314

Music (vocal):

Kevin Dewey, 313-845-6474

Music (instrumental):

Rick Goward, 313-845-9699

Student Activities and Clubs

Many student clubs and activities are offered on the HFCC campus for student involvement. There are academic, cultural, faith-based, honor society, political/social activism, and recreational clubs. The Student Activities Office (SAO) assists students with club formation, event planning, fund-raising ideas, and the promotion of events. SAO holds regular meetings to inform clubs of opportunities and College policies and procedures. Students are encouraged to form new clubs or take part in existing clubs. Several requirements must be met before a student group is recognized as a registered HFCC student club. The Student Activities Office provides assistance to students who are interested in forming a club.

These are the current HFCC Student Clubs:

- Accounting Club
- African American Association
- All Around Art Association
- Arab Student Union
- Astronomy Club
- Campus Crusade for Christ
- Community Service Club
- Criminal Justice Club
- Diversity Club
- Film Club
- Future Teachers Association
- HFCC Dance Team
- HFCC Team Ceramics Club
- Ice Carving Club
- International Relations Organization
- (IMAN) Islamic Monitor Action Network
- Legal Assistant Association Network
- Math Club
- Mirror News Student Newspaper
- Multicultural Club
- Muslim Student Association
- One Step Ahead
- Palestine's Voice Organization
- Phi Theta Kappa (Alpha Xi Mu)
- Philosophy Club
- Science Association
- Society of Manufacturing Engineers
- Student Environmental Association
- Student Nurses Association
- Students United for Peace and Justice
- Web Design and Development Club
- Women-Tech Club

- Yemen Student Association

See the current list and find out more information about each club at www.hfcc.edu/clubs.

The Student Clubs are organized by the Student Activities Office. The contacts are:

Cassandra Fluker, Student Activities Officer/*The Mirror News* Faculty Liaison crfluker@hfcc.edu

Michele Featherston, Student Activities Secretary
mfeather@hfcc.edu 313-845-9865 Fax: 313-317-6551

Student Activities Office

The mission of the Student Activities Office (SAO) is to complement formal classroom instruction at Henry Ford Community College and to enhance the overall educational experience of students. The office is based on the philosophy that co-curricular involvement offers students the opportunity to develop leadership skills, communication skills, techniques of organization, an understanding of self, as well as an understanding of others.

Utilizing the services and programs that are available at Henry Ford Community College, students become more knowledgeable about their environment and will begin to fully develop their potential.

For more information, please contact the Student Activities Office at 313-845-9865 or visit www.hfcc.edu/sa.

In addition to support for student clubs, the Student Activities Office conducts the following activities and events.

Student Bulletin

The Student Bulletin is a SAO publication that is designed to inform the HFCC campus community about current events, student clubs, and volunteer opportunities. For more information, contact the Student Bulletin Editor, Michele Featherston, at 313-845-9865.

Voter's Registration

SAO provides on-campus Voter's Registration and conducts periodic Voter's Registration Drives. Forms are available at the Student Activities Office, Welcome Centers, Office of Financial Aid, and the Registrar's Office. SAO provides the service of mailing completed Voter's Registration forms to city election clerks.

Dr. Martin Luther King Jr. Community Service Day

The Student Activities Office coordinates volunteer activities to commemorate the birthday of Dr. Martin Luther King, Jr.

Students, faculty, and staff members are encouraged to participate. Various activities such as renovation, educational, and social projects are available. This is a day of community service, reflection, and education.

Special Events and Activities

The Student Activities Office works with students, faculty, and staff to plan and implement special events and activities at the College. These events and activities provide socialization, educational information, and promote involvement at HFCC.

Volunteer Opportunities

The Student Activities Office provides information on volunteer activities, on-campus as well as in the community. Many worthwhile opportunities are available.

Student Newspaper

The Mirror News is a student-run newspaper that is published bi-weekly during the fall and winter semesters. The paper provides an opportunity for students who are interested in writing, editing, photography, desktop publishing, advertising, and business management. *The Mirror News* publishes information on all aspects of the College community, from classes to cultural events, as well as creative works and editorials. The student Editor-in-Chief recruits the newspaper's staff each semester. Currently enrolled students are encouraged to join. *The Mirror News* can be reached at 313-845-9639.

WHFR-FM 89.3

WHFR-FM 89.3 is more than just HFCC's award-winning broadcast radio station. It's the hub of telecommunications, where students gain real-world experience at an independent, noncommercial station.

These are not textbook lessons. Instead, students learn about radio equipment and production standards while putting together radio shows. Not surprisingly, *The Detroit News* named WHFR the "Best Campus Radio Station" in its "Michigan's Best 2003" poll.

Beyond campus, the station serves residents of Dearborn and surrounding communities with an eclectic mix of music rarely heard on Detroit-area radio stations. The WHFR playlist offers an unusual blend of Alternative/Modern Rock, Big Band, Blues, Hip Hop, Jazz, Space Rock, Urban and World music. The station plays more than 60 hours of classical music, including programs received weekly through a satellite feed from Public Radio International (PRI).

Students learn the importance of community-focused programming at WHFR. The station hosts a weekly public affairs show and several music shows that highlight new releases, independent labels, and local artists. Staff members also participate in initiatives such as the annual charity-bowling event, which pits WHFR disc jockeys against competitors from other schools to raise money for local organizations. Visit whfr.hfcc.edu for more information.

Special Opportunities for High School Students

Dual Enrollment

The Dual Enrollment Program allows a high school student to enroll in HFCC courses, then apply the credit earned towards their high school diploma, college degree, or both. Dual Enrollment classes are paid for by the student's school district or charter school. Eligible classes include any college course(s) that the school district will allow the student to take.

Hundreds of students take advantage of Dual Enrollment at HFCC every year. Dual Enrollment students have great academic success. A recent HFCC study showed that Dual Enrollment students averaged nearly a 3.5 grade-point average in their college classes.

To take classes through Dual Enrollment, students follow an easy process. Please see page 4-5 for complete information.

Advancement Plus

The Advancement Plus Program allows high school students to enroll in HFCC courses, then apply the credit earned towards their high school diploma, college degree, or both. Advancement Plus tuition and fees are paid for by the student's parent or guardian.

Advancement Plus has allowed students to obtain enough credits to equal the first year or more of college. In some cases, students may graduate from high school and enter college as sophomores instead of freshmen.

To take classes through Advancement Plus, students follow an easy process. Please see page 4-5 for complete information.

Henry Ford II Honors Program

The Henry Ford II Honors Program offers qualified students a challenging academic program where students and faculty form a learning community. Students take core courses in English composition, science and the humanities, and develop advanced skills in independent research and critical thinking.

Henry Ford II Honors students also attend the Transfer Workshop, a comprehensive program that reviews what public and private institutions look for in transfer applicants and outlines how students can increase their chances of admission to the transfer institution of their choice. Students are also matched with a faculty mentor who will provide personal guidance in applying to transfer institutions and locating available transfer scholarships.

Program graduates have achieved immense success, earning admission and full scholarships to the University of Michigan, Michigan State University, Wayne State University, Eastern Michigan University, University of Detroit-Mercy, New York University, The State University of New York and many other prestigious universities across the country.

High school students interested in the Henry Ford II Honors Program should have a 3.5 cumulative grade-point-average in high school or an ACT score of 24 or higher.

For more information or to obtain an application form, contact Nabeel Abraham, Ph.D., Henry Ford II Honors Program Director, Learning Technology Center, Room 150, at 313-845-6460 or by e-mail at nabraham@hfcc.edu. Visit www.hfcc.edu/honors for more information.

Advanced Placement/CLEP

HFCC accepts credit from Advanced Placement or CLEP examinations. Transfer students from other colleges who have taken Advanced Placement (AP) or College-Level Examination Program (CLEP) tests may be awarded credit at Henry Ford Community College.

Eligibility for AP/CLEP credit will be determined upon receipt of a transfer student's transcript. Henry Ford Community College will evaluate the course work, post credit equivalents as transfer credit on the student's HFCC transcript, and mail the student the results of the evaluation.

The scores required for AP credit are listed on page 247. CLEP credit is listed on the next page.

Career Pathways

Today's high school students can choose from more than 12,000 careers, according to the U.S. Bureau of Labor Statistics. That much choice can become confusing. Fortunately for HFCC students, the College makes the transition from high school to college easy.

The Career Pathways System can help you make the adjustment to college and to find a career. Career Pathways is six broad groupings of careers that share similar characteristics and whose employment requirements call for common interests, strengths, and competencies.

- **Arts and Communications:** Careers related to the humanities as well as the performing, visual, literary, and media arts.
- **Business, Management, Marketing, and Technology:** Careers related to accounting, business administration, finance, information processing, marketing, and all other aspects of business.
- **Engineering/Manufacturing and Industrial Technology:** Careers related to technologies necessary to design, develop, install, or maintain physical systems.
- **Health Sciences:** Careers related to the promotion of health and the treatment of injuries, conditions, and diseases.
- **Human Services:** Careers in child care, civil service, education, hospitality, and the social services.
- **Natural Resources and Agriscience:** Careers related to natural resources, agriculture, and the environment.

Using the Career Pathways System, HFCC students assess

their interests and aptitudes, and then choose an appropriate Career Pathway that incorporates these qualities. Through the specific courses in their degree program, students then gain a greater context of how their chosen career area fits into one of the six broad industry sectors, which eases the transition from college to the world of work.

For more information, visit www.hfcc.edu/careerpathways.

Tech Prep

Tech Prep is a federally funded grant program that helps connect high school students and their educators to HFCC. Through this program, students from Wayne and Monroe counties are eligible to earn free college credit at HFCC while still in high school.

The program is designed for students who have an interest in career fields that require at least a two-year college education; who would like to gain skills that increase their employability by pursuing a vocational certificate or apprenticeship program, and who are enrolled in a general education program.

Tech Prep courses benefit students by

- teaching them technical skills that will help them navigate the rapidly evolving worlds of business and industry.
- honing the ability to work as team members and share productive ideas with others.
- reducing their need for introductory course work at the community college level.
- preparing them for trade and apprenticeship positions.
- helping to bridge the gap between their current education/training and future professional demands.

Scholarships

To help finance their HFCC degree, incoming students can apply for private scholarships made possible by generous alumni, friends of the College, local businesses, faculty, staff, and the Board of Trustees. Such awards are available for a variety of programs and support students from diverse backgrounds and interests. A complete list is available at www.hfcc.edu/scholarships or see page 284.

Additionally, a listing of scholarships offered to students of HFCC by external organizations can be found by following the link on the website.

Special Opportunities for Transfer Students from Other Colleges

Henry Ford Community College welcomes transfer students from other colleges. Thousands of students transfer to HFCC because

- HFCC is much more affordable than four-year colleges.
- high-quality HFCC certificate and associate's degree programs help students find employment.
- they desire to achieve an academic credential, such as a certificate or associate's degree, much faster than a bachelor's degree at a four-year college.
- they need to take courses to satisfy degree requirements at a four-year college.
- they had poor academic performance at a four-year college.

Whatever the reason for transferring, Henry Ford Community College provides what all students need to succeed.

Advanced Placement/CLEP

HFCC accepts credit from Advanced Placement or CLEP examinations. Transfer students from other colleges who have taken Advanced Placement (AP) or College-Level Examination Program (CLEP) tests may be awarded credit at Henry Ford Community College.

Eligibility for AP/CLEP credit will be determined upon receipt of a transfer student's transcript. Henry Ford Community College will evaluate the course work, post credit equivalents as transfer credit on the student's HFCC transcript, and mail the student the results of the evaluation.

The scores required for AP credit are listed on page 248. CLEP credit is listed on the next page.

Henry Ford II Honors Program

The Henry Ford II Honors Program offers qualified transfer students a challenging academic program where students and faculty form a learning community. Students take core courses in English composition, science and the humanities, and develop advanced skills in independent research and critical thinking.

Henry Ford II Honors students also attend the Transfer Workshop, a comprehensive program that reviews what public and private institutions look for in transfer applicants and outlines how students can increase their chances of admission to the transfer institution of their choice. Students are also matched with a faculty mentor, who will provide personal guidance in applying to transfer institutions and locating available transfer scholarships.

Program graduates have achieved immense success, earning admission and full scholarships to the University of Michigan, Michigan State University, Wayne State University, Eastern Michigan University, University of Detroit-Mercy, New York

HENRY FORD COMMUNITY COLLEGE
Admissions, Registration, and Records
COLLEGE LEVEL EXAMINATION PROGRAM
(CLEP)

CLEP EXAMINATION	MINIMUM SCORE	HFCC COURSE EQUIVALENT	CREDIT HOURS
Composition & Literature			
English Composition	47	ENG 131	3
Foreign Language			
College French (Level 1)	41	FRE 131	4
College German (Level 1)	41	GER 131	4
College Spanish (Level 1)	41	SPN 131	4
Mathematics			
Pre-Calculus	50	MATH 175	5
Calculus	50	MATH 180	5
Social Sciences and History			
American Government	50	POLS 131	3
American History I	50	HIST 151	3
American History II	50	HIST 152	3
Introductory Psychology	50	PSY 131	3
Human Growth and Development	50	PSY 253	3
Introductory Sociology	50	SOC 131	3
Principles of Accounting	50	BAC 131	4
Western Civilization	50	HIST 111	3
Western Civilization II	50	HIST 112	3

University, The State University of New York and many other prestigious universities across the country.

To become eligible for admission to the Henry Ford II Honors Program, current HFCC students must have completed 12 or more hours in 100-level or higher courses as a full-time student or 15 hours in 100-level or higher courses as a part-time student prior to application, and must be taking at least six credit hours per semester. Applications are accepted at any time, but students transferring from high school or other colleges must apply first to Henry Ford Community College before applying to the Henry Ford II Honors Program.

For more information or to obtain an application form, contact Nabeel Abraham, Ph.D., Honors Program Director, A-150, Learning Technology Center, at 313-845-6460 or by e-mail at nabraham@hfcc.edu.

Scholarships

To help finance their HFCC degree, transfer students can apply for private scholarships made possible by generous alumni, friends of the College, local businesses, faculty, staff, and the Board of Trustees. Such awards are available for a variety of programs and support students from diverse backgrounds and interests. A complete list is available at www.hfcc.edu/scholarships or see page 284.

Special Opportunities for Nontraditional Students

Students returning to college after an absence may be thinking about how they will balance education plans with personal and professional commitments. HFCC helps to make this transition as smooth as possible by offering classes during the day, evening, weekends and online to give students maximum flexibility.

The College also offers a wide variety of valuable student support services that address the specific needs of returning students.

- **Assisted Learning Services:** Assisted Learning Services assists physically challenged, learning disabled, or academically disadvantaged students at Henry Ford Community College to overcome barriers to education through supportive services. In addition, the Assisted Learning Services Department also provides tutoring services to the general student population.

- **Child Development Center:** Family commitments can often interfere with a school schedule. At HFCC, students can enroll their children (ages 3 through 12) in our state-licensed Child Development Center, which offers day and evening care.

- **Counseling Services:** A successful college career requires a comprehensive support network that addresses short-term educational goals, career plans and the inevitable personal issues that arise. At the University Transfer, Advising and Career Counseling Center, experienced counselors are ready to help students understand the transfer process, plan schedules, set career development goals, and cope with the potential anxiety of balancing college, work and home life.

- **Focus on WoMen:** Like the University Transfer, Advising,

and Career Counseling Center, the Focus on WoMEn program offers both women and men extensive resources, including personal, academic and career counseling; financial assistance programs for students who meet specific requirements; and seminars to help students in personal and academic areas.

For a full listing of support services available to all HFCC students, please see the Student Support Services section on page 234.

Online Learning

HFCC offers high-quality online classes in many of its academic programs. These courses provide convenience and flexibility to busy students, often allowing them to complete a degree faster.

Students taking online courses use the UCompass Educator Course Management System. Here are frequently asked questions about online classes at HFCC:

What is UCompass Educator?

UCompass Educator is HFCC's online course management system. Only students enrolled in online courses or courses that use UCompass Educator as a supplement to traditional

classroom instruction have access to UCompass. Your UCompass account is available on the first day classes begin on campus. The Web address to access your UCompass course is <http://henryford.ucompass.com>.

How do I know if I'm ready for an online course?

You must have a basic working knowledge of your computer, the Internet and word processing applications. Take the survey at <http://henryford.ucompass.com>. Click "Is Online Learning for You?" to assess your skills.

What equipment do I need to take an online course?

Minimal requirements include:

- PC computer system with a minimum 65 megabytes RAM and a color monitor
- Microsoft Windows 98 or higher, XP or Windows NT
- Macintosh equivalents would be OS 9.1 or higher
- CD-ROM or CD/DVD
- 56k or higher modem, DSL or cable modem
- Internet Service Provider (ISP) and personal e-mail account
- Web Browser; Internet Explorer 5.0+, Netscape Navigator 4.7+, Mozilla Firefox
- A word processing application

There may be other requirements specific to individual courses.

COURSES AND CREDIT HOURS ACCEPTED BY HENRY FORD COMMUNITY COLLEGE

Through the College Entrance Examination Board Advanced Placement Program

AP SUBJECT	SCORE REQUIRED	CREDITS	EQUIVALENT HFCC COURSES
ART	3 or above	3 semester hours	ART 121, 122, 123, 124, 125, 126, 127, 128, 129 or 130
BIOLOGY	3 or above	4 semester hours	BIO 131
CHEMISTRY	3 or above 5	4 or 5 semester hours 10 semester hours	CHEM 131 or CHEM 141 CHEM 141 and CHEM 142
COMPUTER	3 4 or 5	3 semester hours 6 semester hours	CIS 100 CIS 125
ENGLISH LANG/COMP or LIT COMP	3 or above	3 semester hours	ENG 131
FRENCH	3 4 or 5	4 semester hours 8 semester hours	FRE 131 FRE 131 and FRE 132
GERMAN	3 4 or 5	4 semester hours 8 semester hours	GER 131 GER 131 and GER 132
SPANISH	3 4 or 5	4 semester hours 8 semester hours	SPN 131 SPN 131 and SPN 132
AMERICAN HISTORY	3 or above	3 semester hours	HIST 151 or HIST 152
MATH (AB)	3 or above	5 semester hours	MATH 180
MATH (BC)	3 or above	10 semester hours	MATH 180 and MATH 183
MUSIC Appreciation Literature	3 or above	2 semester hours 3 semester hours	MUS 131 MUS 132
MUSIC Theory Sight Singing	3 or above 3 or above	4 semester hours 2 semester hours	MUS 135 MUS 141
POLITICAL SCIENCE U.S. Government & Politics	3 or above	3 semester hours	POLS 131
PSYCHOLOGY Introduction to Psychology	3 or above	3 semester hours	PSY 131

Visit <http://henryford.ucompass.com> and click “Computer Requirements” to identify the components of your computer and determine its readiness. Links for the latest upgrades are available on this site.

How do I find out about which online classes are being offered?

Online course offerings continue to expand each semester. See the *Schedule of Classes* or the HFCC Web site at www.hfcc.edu for current course offerings.

The Schedule of Classes indicates that my course is 95% (or another percentage) online. What does that mean?

The percent indicates how much of the class is online. For example, a class that is 95% online might require students to come to campus for a midterm and a final exam. A class that is 50%-75% online may require students to come to campus every other week. Please contact the instructor for additional specific information.

OK, I’m registered for an online course. What should I do now?

Contact your instructor via e-mail as soon as you have registered for your online course. Your instructor will then send you information about your course. *It is your responsibility to contact your instructor via e-mail as soon as you have registered for your online course. For basic introductory information about your online course see “Getting Started” on the UCompass login page: <http://henryford.ucompass.com>*

How do I contact my instructor?

Use the e-mail address provided under the course listing in the Schedule of Classes, or from www.hfcc.edu, click the “For Faculty & Staff” link, and then click the “Faculty & Staff Directory” link.

How do I get to my online course?

Your UCompass online course is located at <http://henryford.ucompass.com>, or from the HFCC Web site, www.hfcc.edu, click the “Current Students” link, then the UCompass link on the left-page menu. Sometimes instructors use sites other than UCompass for their online materials. If your course does not utilize the UCompass Educator System, your instructor will tell you how to access your course.

What is my UCompass Educator ID?

Your UCompass ID is the same as your WebAdvisor ID.

What is my UCompass Educator password?

Your UCompass password is the four-digit month and date of your birth, i.e. June 5 = 0605.

How do I change my UCompass Educator Password?

The Novell network (see page 13) and UCompass use exactly the same account and password. When you change the Novell network password, the UCompass password changes as well. To change your Novell network and UCompass password, follow these instructions:

For more information on changing your Novell Network and UCompass password, visit <https://dvc.hfcc.net/helpdesk/000367.htm>.

- 1 Point your browser at <http://myportal.hfcc.edu>.
- 2 You will get a Security Error message. Click “OK” to accept the certificate.
- 3 Put your account and password into the Portal login screen and click “Login.”
- 4 Scroll down the portal main page until you see the “Change Your Novell Password” section.
- 5 Type in your Current Password and the New Password (twice) and click “OK.” Follow the prompts and make certain you carefully read any messages or instructions that appear.

Where do I go for help with UCompass Educator?

- 1 For help with your UCompass login or password contact the HFCC Helpdesk: helpdesk@hfcc.edu or 313-845-6345.
- 2 For help with UCompass operations, contact the HFCC Office of Instructional Technology. Phone: 313-845-9663, extension 4, 5 or 6. E-mail: support@henryford.ucompass.com
- 3 For help with the content of your UCompass course, contact your instructor.

Information & Policies

Academic Integrity

Policy on Academic Integrity (Cheating)

Henry Ford Community College considers academic dishonesty to be a serious offense. It is the policy of the College that determination of and appropriate action in respect to academic dishonesty by a student shall be a matter of individual judgment by the instructor. The instructor may administer a penalty up to and including failure in the particular course. It is the professional obligation of the faculty to enforce academic integrity in their courses. Instructors (or their designees) reserve the right to require picture identification for test taking, graded papers or projects, or other appropriate purposes. A student cannot drop a class if failing for reasons of academic dishonesty.

Academic dishonesty is any activity intended to improve a student's grade fraudulently.* It includes, but is not limited to, the following:

- 1 Unauthorized acquisition of tests or alteration of grades (such as the stealing of tests, test keys, or grade books from faculty offices or elsewhere, or the purchasing of tests or grade books).
- 2 Unauthorized use of notes, books, or other prohibited materials during an examination.
- 3 Open cheating on an examination (such as copying from another student's paper).
- 4 Permitting another person to take a test in the student's place or receiving unauthorized assistance with any work for which academic credit is received.
- 5 Providing unauthorized assistance with any work for which academic credit is received.
- 6 Revision of graded work in an attempt to receive additional credit fraudulently.
- 7 Plagiarism (using another person's work without acknowledgment).
- 8 Use of cell and video phones to cheat.
- 9 Any other conduct intended to obtain academic credit fraudulently or dishonestly.

If an instructor fails a student in a course for academic dishonesty, the instructor must immediately notify in writing the student and the registrar of the infraction, retaining copies of both notifications.

The registrar maintains a record of all such violations. If a student fails two classes as a result of academic dishonesty, he or she is dismissed from the College for two academic years. In addition, a notation of the reason for academic dismissal is placed on the student's transcript. The notation may be expunged at the discretion

of the appropriate vice president if the student petitions for its removal after at least two years have elapsed since the disciplinary action.

If a student believes that the accusation is false, he or she may appeal through the Student Complaint Procedure. If the appeal reaches the Student Complaint Board, the Board may consider only whether the charge is justified. The Board may not set aside or change the penalty given by the instructor unless the charge of academic dishonesty is set aside.

**Any action that violates the Student Conduct Policy and Due Process Procedure is also subject to review under that policy.*

Academic Policies

Academic Forgiveness Policy

The purpose of academic forgiveness at Henry Ford Community College is to allow a student who has not performed well academically to have a maximum of twelve hours of E grades removed from his or her grade-point average.

To apply for academic forgiveness, a currently enrolled student must file an application in the Office of Admissions, Registration and Records. Guidelines for the policy are as to, the following:

- 1 Five or more years must elapse between the academic forgiveness and the last failing grade for which forgiveness is requested.
- 2 The student must have earned at Henry Ford Community College at least six credit hours in courses numbered 100 or above and have a cumulative grade-point average of at least 2.00 since the failing grades were received.
- 3 Open cheating on an examination (such as copying from another student's paper).
- 4 Forgiven grades, to a maximum of twelve credit hours, will no longer be calculated into the student's grade-point average.
- 5 Forgiven grades remain on the transcript and a special notation is added explaining academic forgiveness.
- 6 Academic forgiveness can be granted only once to any student.
- 7 Academic forgiveness, when granted, applies to Henry Ford Community College courses. There is no guarantee, expressed or implied, that the academic forgiveness will be recognized by any other college or university.

Advanced Standing – Career Education

Entry into a program of study with advanced standing permits the selection of advanced courses only and does not grant college credit for those basic courses that may be waived. In all cases, the number of credit hours required to earn an associate degree remains as stated in the catalog.

Requests for advanced standing should be directed to the Office of Admissions, Registration and Records or the department or division chairperson at least six weeks prior to the time of enrollment if an advanced class is desired.

Those persons eligible to request advanced standing are:

- A high school graduate who has completed specialized high school preparation in the specific area in which advanced standing is being requested. A minimum overall average of 3.0 is required in the specialized area.
- An individual with extensive business or industrial experience in a particular technology whose experience has been attested to by the individual’s employer.

The department or division chairperson may require the applicant to submit examples of work and take a proficiency examination in the field of specialization.

Upon the granting of advanced standing, the department or division chairperson will provide a statement of eligibility for entrance to the next sequential class.

Auditing a Course

A student who desires to attend a course regularly but does not wish to receive a grade or credit may take the course as an audit. A record will be kept of the course audited.

After enrolling in the course, the student must apply for audit status at the Office of Admissions, Registration and Records during the first two weeks of classes. Change of status from audit to credit or from credit to audit is not permitted after the first week of class.

A student will receive a mark of audit only if the audit status is specified on the final class roster sheet from the Office of Admissions, Registration and Records .

Class Load

Full-time student status is defined as 12 to 17 semester hours of credit. The average full-time student usually carries 15 hours of credit. Students are limited to 18 hours unless special permission is granted by the director of Admissions, Registration and Records or one of the Vice President/Deans. Students are expected to carry at least a 3.0 average with a minimum of 12 hours already completed at Henry Ford Community College in order to petition to carry more than 18 semester hours.

Students in most academic courses are expected to spend the equivalent of two hours of preparation for each hour of class.

Students who are on college parallel programs should choose their college courses carefully, preferably in consultation with a counselor, so that credits will not be lost in the transfer. Transfer equivalent sheets are available in the University Transfer, Advising and Career Counseling Center for most programs in Michigan colleges.

Dean’s List

Students earning twelve credits or more in a semester and maintaining at least a 3.50 grade-point average will be included on the semester’s Dean’s list.

After completion of 12 credits at HFCC, students attending part-time are eligible for the Dean’s List if they complete at least 6 credits and maintain a 3.5 GPA. (Note: All course work must be at the non-developmental level).

Incomplete Work

A student may receive an “Incomplete” grade if some part of the course work remains unfinished, provided the student’s standing in the course has been satisfactory. A student performing unsatisfactorily in a course may have a final mark of “E” recorded if some part of the course work remains unfinished. A student who receives an “Incomplete” must make up all class work by the mid-semester date of the following semester. If the work is not made up, the “Incomplete” grade will be changed to DR.

Marking System

You will be able to access your grades using one of the following options:

ON THE INTERNET: To check grades on the Internet, you will need to access www.hfcc.edu, and then click on “Current Students,” and then click on “Grades.”

USING TREG: Students can call **313-317-4100** and follow the prompt for grades.

The following grades, shown here with their values in honor points per semester hour of credit, are used:

- A = 4 points Superior achievement as demonstrated by the ability to master materials of the course.
- B = 3 points Highly satisfactory work in the required areas of the course.
- C = 2 points Proficiency in most of the course requirements.
- D = 1 point Some proficiency in the course requirements, accompanied by unacceptable deficiencies. The student is neither fully qualified to take an advanced course nor to continue the sequence.
- E = 0 points Course requirements not met.
- I = 0 points Incomplete.

- DR = 0 points Dropped without prejudice.
- S = 0 points Satisfactory completion of course requirements. The College considers an S grade to be the equivalent of a C grade or better.
- U = 0 points Unsatisfactory completion of course requirements.
- R = 0 points Repeated course
- AU = 0 points Audit.
- NG = 0 points No grade reported.

Official Evaluation of Credits

All transfer students, as part of their admission to the College, have their previous college course work evaluated. College credit evaluated as transferable to Henry Ford Community College will be posted to the student's official academic record. Each transfer student is notified regarding the disposition of his or her transfer credit.

Courses that have been completed with a C (2.00) grade or better at institutions accredited by one of the six regional accrediting associations in the United States will be accepted on a credit-hour basis. Courses submitted for transfer must be of college-level work. Credit for developmental courses will not be given. Grades and honor-point averages are not transferable.

Credits from non-accredited institutions may be granted by the Director of Admissions, Records and Registration upon the recommendation of the appropriate division or department.

Probation and Dismissal Policy

A student whose cumulative grade-point average is below the following levels is placed on academic probation:

- | | | |
|------|-----|---|
| 1.50 | for | 5-11 credits attempted |
| 1.75 | for | 12-19 credits attempted |
| 1.85 | for | 20-28 credits attempted |
| 2.00 | for | 29-and more credits attempted - also subject to dismissal |

Students are notified of their probationary status by letter directing them to meet with a counselor, who assists them in developing an appropriate educational plan before being permitted to register for the next semester.

Based on their assessment of each student's needs, counselors may require enrollment in specific developmental courses before releasing students to register. Students may appeal such counselors' decisions, in writing, to the Scholastic Review Board.

Returning probationary students who have not enrolled for one or more semesters are permitted to register only after meeting with a counselor.

Students on probation who have attempted more than 28

hours are dismissed from the College for one full semester (fall or winter) unless they maintain a per semester grade-point average of 2.0 or above. Students on probation, who are placed on academic dismissal, if currently attending classes, are permitted to complete the semester but cannot pre-enroll for the following semester. Dismissals may be appealed, in writing, to the Scholastic Review Board. Students are notified in writing of appeal procedures.

Students' appeal letters may be directed to the Scholastic Review Board in care of the Office of Admissions, Records and Registration. Students who are not on academic probation but whose cumulative grade-point average is below 2.0 are sent a letter encouraging them to see a counselor.

Repeated Courses

A course taken at HFCC for which a grade has been recorded may be repeated if currently offered. The higher or last grade earned becomes the officially recorded grade reflected in the student's cumulative grade point average. On the transcript the symbol "R" will be denoted next to the original grade earned to indicate that the course has been repeated. Contact the Office of Registration and Records if the "R" symbol does not appear next to the lower grade earned.

Transcripts of Credit

An official transcript of credits attempted may be requested by the student in writing in the Office of Admissions, Records and Registration. Official transcripts are sent directly to a receiving institution and are not issued to the student. A student copy of the transcript may be issued to a student but will not carry the official College seal.

Please refer to the current class schedule for appropriate transcript fees.

Admission Policy and Procedures

Henry Ford Community College welcomes applicants with high school diplomas, General Education Development (GED) certificates, and college credits and/or degrees. Applicants may enroll in one course, a series of courses, or a program leading to a certificate or degree. Whatever the motivation, it is important that the applicant have a successful experience. The following information should be helpful in completing the appropriate application procedure.

Regular admission is permissible as follows:

High School Graduates

U.S. Citizens, Legal Permanent Residents, and individuals who are present in (or who will be admitted to) the United States in a status which allows them to enroll at the College, can be granted regular admission if the applicant has either graduated from a regionally accredited or state-approved U.S. high school or holds a General Education Development (GED) certificate, or has graduated from a non-U.S. high school and demonstrates sufficient proficiency in the English language through passing

the ESL COMPASS Test that the College is satisfied that he or she can function successfully at the College and benefit from the academic program.

Non-High School Graduates

Non-High School Graduates can be granted regular admission provided the applicant has received a score on a basic skills test that the College determines is sufficiently high to place him or her in college-level English composition, and provided his or her high-school cohort class has graduated.

Home-School Applicants

An individual who was home schooled can be granted regular admission if he or she meets both of the following conditions:

- 1 A parent or guardian certifies that the student has completed his or her high school education; and
- 2 A qualified, independent third-party evaluator, either representing the school district in which the student resides or another entity approved by the College, verifies that the student's home school education has met acceptable academic standards.

Other General Requirements

In order to be granted admission, all students must meet the prerequisites and co-requisites required for course enrollment. Additionally, with regard to any applicant, the College must be satisfied that the student is sufficiently mature and responsible that he or she can function successfully at the College and benefit from the academic program. This generally means that the student is at or beyond 12th grade age.

The President and his or her designees are authorized to inspect and verify all admission applications, transcripts, records, documents, and other credentials that may be submitted by student applicants in order to ascertain their accuracy, completeness, and authenticity. The College can reject or dismiss any individual whose application contains any misrepresentation, omission or incorrect statement of fact, or who the College believes poses a risk to the health or safety of themselves, other students, faculty or staff.

Application Procedures

- 1 All degree- or certificate-seeking students attending Henry Ford Community College for the first time must obtain and complete an application for admission and pay the application fee, which is non-refundable. Applications are available in area high schools, by calling the College's Welcome Center at 1-800-585-HFCC or visit www.hfcc.edu/apply.
- 2 Applicants who are high school graduates or recipients of the General Education Development (GED) certificate must submit their educational records. Those records will be used to assist in the advising process. An individual whose high school class has

graduated may apply for admission without a high school diploma or GED if the College determines that his or her score on a basic skills test is high enough to exempt him or her from developmental work in reading and writing. Applicants with sufficiently high scores will be allowed to enroll in any classes offered by the College, provided they satisfy the course prerequisites.

- 3 Current high school seniors need to submit transcripts, which will be used to assist in the advising process.
- 4 Students who have attended other colleges or universities should have official copies of their transcripts sent to the Office of Admissions, Records and Registration, Henry Ford Community College, 5101 Evergreen, Dearborn, MI 48128. The official transcripts will be evaluated for transferable college credit.
- 5 Applicants who have graduated from a non-U.S. high school must submit officially translated documents demonstrating to the College's satisfaction that the applicant has earned at least the equivalent of a U.S. high school diploma. Such applicants must also present documents or transcripts which demonstrate to the College's satisfaction average or above-average grades. Students from countries where English is not the primary language will need to demonstrate proficiency in the English language that the College is satisfied that they can function successfully at the College and benefit from the academic program. Translated documents and transcripts should be sent to the Office for International Students, Henry Ford Community College, 5101 Evergreen, Dearborn, MI 48128-1495.

Special and Provisional Admission

Non-Degree-Seeking Students

Students may be admitted to the College by Special Admission for Non-Degree-Seeking Students in order to take a course for enrichment or personal development but not to pursue a degree or certificate. Students eligible for Special Admission include those who are high school graduates, hold GED certificates, or have attended another college. Students admitted under this category must satisfy all prerequisites for courses they take, and they are not eligible for financial aid. If, after completing fifteen (15) semester hours of credit, the non-degree student wishes to seek a degree from Henry Ford Community College, he or she may be required to submit educational documents for review and evaluation to verify academic status. Courses taken under a non-degree status may or may not be acceptable for meeting program or degree requirements.

Guest Students

A guest student is one who currently attends another college

or university and wishes to take one or more courses at Henry Ford Community College. The guest student must submit an authorized guest application from his or her home institution.

Dual Enrollment Students

Henry Ford Community College is a participant in the Dual Enrollment Program, in which students attend both high school and college courses. Students must submit a special Dual Enrollment Application for each semester in which they plan to enroll in both Henry Ford Community College courses and courses in high school. The application, which is available at the high school, must be signed by his or her high school counselor or principal. The signature of a parent is not required from an applicant who can demonstrate emancipated legal status. Dual Enrollment students desiring placement in Mathematics, Chemistry or English courses are required to take appropriate placement tests. There is no application fee. Tuition and fees are paid by the school district in which the Dual Enrollment student resides.

Advancement Plus Students

Henry Ford Community College offers the Advancement Plus Program for academically qualified high school students. This program provides a parallel route for high school students to enhance their present curriculum, enrich their academic experience, and earn college credit while attending high school. The Advanced Placement Program is intended for enrollment in college-level courses numbered 100 and above.

The Advancement Plus Program is available to all students who are identified by their high school counselors or principals as having above-average academic status. The counselors or principals, in cooperation with the students, develop the students' program of study. To qualify for the Advancement Plus Program, a student needs to complete an Advancement Plus application, available at the high school, and obtain the required signatures.

Tuition and fees are paid by the student's parent/guardian.

Home-schooled students need the approval of the HFCC Counseling Director. Interested students may contact the Director at 313-845-9612.

Advancement Plus students desiring placement in Mathematics, Chemistry or English are required to take the appropriate placement tests.

International Students

The College is authorized by the Department of Homeland Security to issue the Certificate of Eligibility for Non-Immigrant (F-1) Students, also known as the I-20 Form. The College's admission of international students will be governed by all applicable state and federal regulations. International students must complete their financial arrangements before coming to the United States.

Department of Homeland Security regulations limit employment of students holding an F-1 visa. The College will

issue an I-20 Form only to students who can demonstrate the financial ability to meet college and living expenses. International students who obtain the F-1 visa and have sufficient finances may be granted regular admission to the College.

The following information must be provided:

- 1 Completed Henry Ford Community College application.
- 2 Completed Henry Ford Community College Supplementary Student Information Form.
- 3 Official translated transcript(s) from all previous colleges or universities attended.
- 4 A notarized copy and translation (if not in English) of secondary school records, examinations, and certificates. (Above average scores are necessary).
- 5 A score of 550 on the TOEFL (Test of English as a Foreign Language), 80 on the MELAB (Michigan English Language Assessment Battery), or a satisfactory score on the Henry Ford Community College ESL (English as a Second Language) Placement Test. (Applicants educated in Canada, England, Scotland, Wales, Ireland, Australia, or New Zealand need not submit the above test scores). However, upon arrival at Henry Ford Community College, all degree-seeking students are required to take the appropriate assessment tests.
- 6 Proof of financial responsibility by submitting one of the following documents:
 - a. Notarized Affidavit of Support (I-134) and bank statement
The above information should be directed to the International Office.
 - b. Government sponsor
The above information should be directed to the International Office.

Non-U.S. High School Graduates

Applicants who have graduated from non-U.S. high schools are required to demonstrate sufficient proficiency in the English language that the College is satisfied that they can function successfully at the College and benefit from the academic program. Such proficiency can be demonstrated by taking and achieving a score deemed sufficient by the College on the English as a Second Language (ESL) Placement Test. After submitting translated documents showing acceptable grades and the equivalent of a U.S. high school diploma, the applicant may receive an authorization to take the ESL Placement Test by calling the Assessment Office at 313-845-6399. Graduates of non-U. S. high schools where English is the primary language such as Canada, England, Scotland, Wales, Ireland, Australia, and New Zealand, may

be required to take the ASSET or COMPASS Basic Skills Placement Test in lieu of the ESL Test.

Dearborn Senior Citizen Students

Dearborn Public School District residents who meet course prerequisites and who are age 60 and older are eligible to take credit courses at the College tuition-free provided they pay uniform fees and specified course fees. Interested individuals should visit the Enrollment Development Office or call 313-845-6397 to express their interest in the program.

Credit for Prior College-Level Learning Policy

This policy has been designed to address the needs of our non-traditional students who may have acquired prior college-level learning and/or skills outside the traditional classroom without having earned college credit.

A student can receive college credit for prior learning that is equivalent to college-level learning (at the 100-level and above) in specific HFCC courses under the following conditions:

- Total credit for prior college-level learning plus total transfer credit shall not exceed 40 credit hours.
- Only a department/division may identify which, if any, of their courses will be allowed to have credit for prior college-level learning granted.
- No department/division will be required to grant credit for any course under this proposal.
- If program admission, accreditation or licensure issues preclude credit for prior college-level learning, credit will not be awarded for that program.
- As with transfer of credits from other colleges, credit for prior college-level learning will be granted with no grade and no impact on GPA.

Candidate Requirements:

- Student must be degree and/or certificate seeking
- A degree seeking student must take course placement tests as part of the College admissions process.
- A department/division can exempt pre-requisite(s) when deemed appropriate.

Acceptable Prior Learning Credit:

Prior learning may be evaluated through departmental exams or a portfolio evaluation.

- **Departmental Exams** — Exams must demonstrate that the student has met the applicable, measurable course objectives as identified on the approved course master.
- **Portfolio Evaluation** — Students will prepare a portfolio that documents their mastery of the subject matter as identified on the course master.

Supporting documentation may include: verification of accomplishment (prizes or awards), testimonies of competence (letters, job performance reviews), learning products (essays, work samples, art products, performances, etc.), certifications (business, industry, or professional organizations), recognized by profession or rank, licensure or other direct evidence (publications, test scores, membership requirements, syllabi/learning objectives, job descriptions).

Any appropriate documentation, skill, certifications and/or knowledge acquired by the student and submitted for consideration will be evaluated by the appropriate department faculty. Each decision made by the faculty to grant credit for prior college-level learning must be approved by the associate dean, who will forward the approval to the Office of Admissions, Registration and Records for posting.

Evaluation of Prior College Level Learning:

- Any department/division that grants credit for prior college-level learning will identify eligible courses in writing and develop a written procedure for evaluating student learning for the course. The procedure must be approved by the division, appropriate educational council, and the College Council to ensure it adequately addresses the course objectives as identified on the course master.
- The College will provide a mechanism for assisting students in developing a portfolio that meets the requirements of the department for a particular course.
- Courses for which credit for prior college-level learning will be granted will be identified in the College Catalog.
- Course masters will be updated to indicate that credit for prior college level learning can be granted for that course and how the learning will be evaluated.

Dropped Classes Repeat Policy

Students are allowed to transfer in courses completed at other colleges for which they originally received a grade of DR from Henry Ford Community College. When transferring courses from another institution, the original HFCC grade remains on the student's transcript.

Dropping/Adding Classes

Changes in a student's class schedule may be made in the Office of Admissions, Registration and Records after the student has officially enrolled in any course. Membership in a class does not cease until the student has officially dropped the class.

Schedule adjustments may be made during the add and drop period up until the 10% date without academic penalty. The student's transcript will not record any such changes made before the 10% date. A student may officially drop a class

without penalty until 60% of the class is completed. A DR will be recorded on the student's transcript. If a student stops attending a class without officially withdrawing from the class, the instructor may record either an E or DR grade.

Students considering withdrawing from classes during the semester are encouraged to first consult with a College counselor and/or Financial Aid if appropriate.

A student cannot drop a class if failing for reasons of academic dishonesty.

Equal Opportunity Policy

Henry Ford Community College is an equal opportunity institution.

Students who have complaints of an equal opportunity nature (discrimination or harassment on the basis of age, race, ethnicity, gender, sexual orientation, creed, ancestry, disability, height, weight, national origin, religion, or marital status) shall consult the Vice President of Student Affairs, who will provide a copy of the Discrimination and Harassment Complaint Procedure and review with the student an appropriate procedure to follow.

Fees

Course Fees

Course fees are charged for supplemental material used in some classes and for rent and maintenance of specialized laboratory equipment. The fees charged are published in the Schedule of Classes each semester. Course fees are paid at the time of enrollment.

Application Fee

An application fee is charged to all individuals who apply for admission to a degree-seeking program at Henry Ford Community College. The fee is currently \$30 and is subject to change without notice. Students applying for a nondegree program are not charged an application fee.

Registration Fee

A mandatory registration fee is charged to all individuals who register at Henry Ford Community College. This fee is intended to offset partially the cost of registration. Students who register for classes and neglect to pay this fee are invoiced. Students who pay the fee are not given a refund of this fee even if they receive a full refund of other fees.

Student Identification

For the purpose of College identification, students should retain their paid class schedule issued at the time of enrollment.

Class Offerings

The College makes every attempt to offer an adequate number of class sections each semester. However, students

may find some classes filled to maximum enrollment. Classes with inadequate registration may be cancelled. The College reserves the right to make changes to semester schedule or program without notice.

Graduation Expenses

Students wishing to earn an Associate Degree from Henry Ford Community College are responsible for a graduation application fee. Please refer to the current Schedule of Classes for the applicable fee. Participation in the graduation ceremony requires the purchase of a cap and gown from the College Store.

Tuition Expenses

A student living at home should expect to incur expenses for tuition, service fee, registration fee, laboratory fees, and books. Tuition expenses may be found in the current Schedule of Classes.

NOTE: ALL TUITION FEES AND EXPENSES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

General Regulations

Admissions with Advanced Standing

A student intending to enter from another college or university must submit an application and official transcript of all college work completed along with the application fee.

After the official transcripts have been received, the Office of Admissions, Registration and Records will evaluate them for advanced standing and notify the student of the courses and credits accepted. Courses accepted for transfer must have been completed with at least a C (2.00) grade.

Until complete transcripts have been received indicating that the transfer student is in good standing, he or she may be admitted on a provisional basis.

Alcoholic Beverages and Illegal Drugs

As a public institution, Henry Ford Community College operates under the guidelines of Federal Public Act 101-226, entitled Drug Free Schools and Campuses, passed in 1990. This law states that students must be informed of the College's rules and sanctions relative to drugs and must be informed of health risks related to the use of drugs and of counseling assistance available at the College.

College Rules

Use, possession, or distribution of alcoholic beverages and drugs is forbidden on campus. Persons appearing on campus while under the influence of alcoholic beverages, narcotics, and other dangerous drugs, except as expressly permitted by law, will be subject to disciplinary and/or legal action.

Possession, consumption, sale, or purchase of any controlled substance which is illegal under state or federal law is prohibited on the campus of Henry Ford Community College.

College Sanctions

Disciplinary action may consist of payment of fines, verbal reprimand, restitution of damages, restriction of privileges, disciplinary probation, suspension, dismissal, and/or notation on the student's record of dismissal or suspension.

Information is available in the University Transfer, Advising, and Career Counseling Center located in the Learning Resources Center. Anyone with questions should call 313-845-9611 or 845-9612.

Athletic Aid Disclosure

The Athletics Department has information on the number of students; categorized by race and gender; the number of students by race and gender that receive athletically related aid; the completion/graduation rate and drop out rate; and completion/graduation and transfer rates for students receiving athletically-related aid. The department also has information on the amounts of revenues derived from and expenses made on behalf of intercollegiate athletics activities. Information is available giving participation figures, coaching and staff information, revenue, and financial support for College teams.

Attendance

No system of "cuts" operates at Henry Ford Community College. Students are expected to attend all the sessions of the classes for which they are enrolled. Penalties may be imposed, at the discretion of the individual instructor, whenever the quality of the student's work has been affected by absence or tardiness.

Students, as a matter of courtesy, should explain the reason for an absence to their instructors. Lack of attendance may affect the student's final grade.

Absences in connection with participation in authorized college activities must be considered in the total picture of absences for all purposes, and it is the responsibility of the student to make up work missed.

Students are required to be present at the final examination. In case of absence, it is the student's responsibility to contact the instructor in regard to makeup.

Campus Attire

Students are expected to use good judgment, good taste, and decency with regard to their selection of dress.

Computer Systems Use Policy

Henry Ford Community College's computers, peripherals, software, networks, supplies, e-mail systems, and Internet connections ("HFCC's Systems") are intended to carry out the legitimate operational functions of HFCC and not for purposes unrelated to college business. It is not the intent or purpose of this policy to dampen or restrict freedom of inquiry or freedom of criticism.

HFCC prohibits the removal, relocation, or alteration of equipment or software without written authorization.

It is the policy of HFCC to prohibit the use of HFCC's Systems for purposes of

- harassment of persons or organizations on or off campus for any reason;
- sending or receiving material of a profane, pornographic, or threatening nature;
- sabotage, misuse, or abuse of equipment, software, or data on or off campus, including unauthorized alteration of HFCC's Systems and computer files through the willful or negligent introduction of viruses or by mechanical or electronic tampering;
- unauthorized production or reproduction of programs, or multiple copies of material in any form for the purpose of resale or redistribution in violation of the intellectual property rights of HFCC or any other person;
- plagiarizing, altering, or tampering with the work of others;
- gaming, solicitation, or any activity deemed illegal or contrary to HFCC policies;
- theft of intellectual or other property, including copyright infringement;
- intentionally preventing an electronic communication from being received by the intended recipient without authorization from the originating sender;
- intentionally causing an electronic communication to be viewable or heard by persons other than the named recipient without authorization from the originating sender, or the named recipient, except where the recipient of electronic communications reports a violation of this policy.

It is the desire of HFCC to ensure that HFCC Systems are put to the best and most efficient use. HFCC therefore requires that

- students, faculty, and staff receive appropriate training in hardware, software, and networks use, or demonstrate acceptable levels of proficiency prior to access;
- students, faculty, and staff be mindful of the time spent (as in "surfing the net" or "chatting") on HFCC's Systems, or material consumed (such as having large or vague searches printed);
- students, faculty, and staff exercise reasonable care in protecting their log-on names and passwords, and not permit unauthorized persons to access HFCC's Systems;
- students, faculty, and staff should not use HFCC's Systems to store messages and files because it would place an undue burden on limited system resources.

Users of HFCC's Systems are reminded that e-mail is like any other form of written communication. It is subject to the same legal restrictions and potential liabilities as a paper document. E-mail may be subpoenaed, and is subject to the "Freedom of Information Act." In view of this,

HFCC's Systems should not be considered appropriate for transmission of confidential or proprietary information. From the standpoint of the creator of a message, the message should be viewed as "business correspondence" or as an academic paper which has a likelihood of becoming a published document. HFCC does not monitor or permanently store messages. However, unlike a written document that can entirely be erased or destroyed by the writer, user deletion of messages renders electronic space in the system available for other messages but does not immediately erase the messages from the system. Therefore, users of HFCC's Systems should not expect privacy. Nevertheless, it is incumbent upon all users of HFCC's Systems to treat misdirected e-mail communications with reasonable care to avoid undue disclosure of the messages of others.

Penalties for violation of this policy will vary depending on the nature and degree of the specific violation. Penalties range from reprimand through expulsion for students or termination for employees in accordance with the provisions of any College Collective Bargaining Agreement, to the extent such Agreement applies to the employees. If violations of law are involved, users may incur civil liability to HFCC or third parties, and may also be subject to prosecution.

This policy incorporates, by reference, other HFCC policies and/or procedures related to computers and intellectual property, including the written guidelines and materials that were provided at the time the privilege of access to HFCC's Systems was granted to each user.

Evening, Weekend, and Online Classes

Evening, weekend, and online classes paralleling those offered during the day are available in most fields of study as well as specialized courses designed to meet the needs of the community.

General Policy on Institutional Response to AIDS

Henry Ford Community College is committed to providing quality educational opportunities in an environment that is safe and conducive to learning for students and employees. Thus, all confirmed cases of Acquired Immune Deficiency Syndrome (AIDS), AIDS-Related Complex (ARC), or a positive Human Immuno-deficiency Virus (HIV) infection will be addressed on an individual basis for both students and employees, while maintaining the dignity and rights of the individual and the College community.

Health Insurance Portability and Accountability Act of 1996 (HIPAA)

Henry Ford Community College (the College) sponsors group health plans. Members of the District's workforce may have access to the individually identifiable health information of plan participants on behalf of the plans themselves or on behalf of the College, for administrative functions of the plans.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) and implementing regulations restrict the College's ability to use and disclose protected health information (PHI).

Protected Health Information.

Protected health information means information that is created or received by the plans and relates to the past, present, or future physical or mental health or condition of a participant; the provision of health care to a participant; or the past, present, or future payment for the provision of health care to a participant; and that which identifies the participant or for which there is a reasonable basis to believe the information can be used to identify the participant. Protected health information includes information of persons living or deceased.

It is the College's policy to comply fully with HIPAA's requirements. To that end, all members of the College's workforce who have access to PHI must comply with this Privacy Policy. For purposes of this Policy, the College's workforce includes individuals who would be considered part of the workforce under HIPAA, such as employees, volunteers, trainees, and other persons whose work performance is under the direct control of the College, whether or not they are paid by the College. The term "employee" includes all of these types of workers.

No third-party rights (including but not limited to rights of plan participants, beneficiaries, covered dependents, or business associates) are intended to be created by this Policy. The College reserves the right to amend or change this Policy at any time (even retroactively) without notice. To the extent this Policy establishes requirements and obligations above and beyond those required by HIPAA, the Policy shall be aspirational and shall not be binding upon the College. This Policy does not address requirements under other federal laws or under state laws.

The complete policy is available at the HFCC Human Resources Office.

Parking Regulations

Students are responsible for observing all campus parking rules and regulations. Failure to adhere to these regulations may result in their cars being ticketed and towed away or other disciplinary action.

Privacy Practices for Any Media Access to Student Educational Records

Pursuant to the Family Educational Rights and Privacy Act of 1974 (FERPA), as amended, any person who is or has been in attendance at Henry Ford Community College shall have the right to inspect and review any and all educational records directly related to that person after a request for access to such records has been made in accordance with the approved College procedure for such access. Requests to review general College educational records are to be made at the Admissions,

Registration, and Records Office. Requests for information regarding records maintained by a department should be made to the departmental director.

Specifically, the student has the right to

- 1 inspect all of his or her education records maintained by Henry Ford Community College;
- 2 prevent the disclosure of personally identifiable information to third parties unless exempted by the Act;
- 3 request an amendment to any educational record;
- 4 request a hearing to present evidence that a record should be amended;
- 5 file a complaint with the FERPA Office, Department of Education, 400 Maryland Avenue S.W., Washington, D.C. 20202, regarding Henry Ford Community College failing to comply;
- 6 obtain from the Admissions, Registration, and Records Office a copy of the Henry Ford Community College policy regarding FERPA.

Educational records are those records that are directly related to a student and maintained by an education agency or by a party acting for the agency or institution. The term does not include records of instructional, supervisory, and administrative personnel and educational personnel ancillary to those persons that are kept in the sole possession of the maker of the record, and are not accessible or revealed to any other person, except a temporary substitute for the maker of the record.

Privacy Practices (for students and employees)

HFCC Privacy Practices satisfy, but are not limited to, the following government laws, acts, and guidelines:

- Carl D. Perkins Vocational and Technical Education Act - Source: Section 113 and the Workforce Investment Act of 1998, Section 122
- Family Education Rights and Privacy Act (FERPA) - Source: Federal Register, Vol. 53, No. 69, April 11, 1988
- Health Insurance Portability and Accountability Act of 1996 (HIPAA)
- Michigan Social Security Privacy Act – Source: Michigan Act 454 of 2004
- Solomon Amendment – Source: Federal law 10 USC Sec. 983

Privacy is a primary concern of Henry Ford Community College.

The College’s goal is to provide the highest level of service, confidentiality, and security.

HFCC Privacy Practices cover all personally identifiable information collected and stored by the College.

Personnel Files (Operations, Policy 3000)

It is necessary for the orderly operation of the College to prepare a personnel information system for the retention of appropriate papers bearing upon an employee’s duties and responsibilities to the College and the College’s responsibilities to the employee.

The Board of Trustees requires that sufficient records exist to ensure an employee’s qualifications for the job held; compliance with federal, state, and local benefit programs; conformance with College rules; and evidence of completed evaluation. Such records will be kept in compliance with laws of the State of Michigan.

The Director of Human Resources maintains an employee personnel information system.

A single central file shall be maintained, and subsidiary records shall be maintained for ease in data gathering only. These records shall be maintained or destroyed consistent with the federal and state laws.

A copying cost may be charged for each copy given to the employee upon his or her written request at the rate determined by the College.

In accordance with Michigan law, the employee shall have access to his or her file upon request.

Personnel records shall not be available to Board members, except as necessary to conduct disciplinary hearings, and shall be available to school administrators as may be required in the performance of their jobs.

Personnel wishing to review their own records shall

- 1 request access in writing
- 2 review the record in the presence of the administrator designated to maintain said records or designee
- 3 make no alteration or addition to the record nor remove any material there from

Personal Information

All requests for information by HFCC are made with the goal of providing better service.

HFCC will not give or sell any personal information to any outside agency or company for any use (e.g., marketing or solicitation), with the exception of Solomon Act requests (see below).

HFCC internal practices help protect privacy by limiting employee access to personal information. The College will not keep a permanent record of credit card information.

Beginning May 2002, the College began keeping the most recently supplied e-mail address as part of student and employee files. This is in response to students requesting information via e-mail.

Social Security Number Privacy

It may be necessary for HFCC to use a student's or employee's social security number. Uses include employee tax reporting and student federal financial aid. In accordance with the Michigan Social Security Privacy Act, HFCC respects student and employee privacy and will keep all social security numbers confidential to the extent practicable in accordance with this policy and the law.

Only HFCC employees who have job duties that require use of social security numbers will have access to them. Since all students and employees are issued a unique HFCC (HANK) ID number, HFCC employees never use social security numbers to identify students or employees unless permitted by law. Although students and employees may voluntarily identify themselves by their social security numbers, HFCC prefers the use of the HANK ID number. HFCC prints social security numbers only when required by regulations. Should it be necessary to dispose of any document containing a social security number, that document will be shredded prior to disposal.

HFCC prohibits the unlawful disclosure of social security numbers. Any employee found to be in violation of this rule will be subject to discipline up to and including discharge.

Perkins Act

In order to improve the instruction offered at HFCC and to meet the requirements of the Carl D. Perkins Vocational and Technical Education Act, Section 113 and the Workforce Investment Act of 1998, Section 122, HFCC will use student social security numbers to compile summary reports. At no time will the student's personal information be released for other purposes.

Section 113 of the Carl D. Perkins and Technical Education Act, 20 USC 2323, and Section 122 of the Workforce Investment Act of 1998, 29 USC 2842, requires HFCC and the State of Michigan to assess the effectiveness of vocational and technical education programs aimed at training, placement, and retention of students in employment. Although these laws require that performance reports be based on wage record information, neither law requires students to give their social security numbers to the College.

HFCC may use student social security numbers in order to gain access to individual wage records and compile required WIA and Perkins Act reports. These reports will assist the College to improve vocational and technical education programs. By improving programs, the College will be better able to serve both employers and employees. Student wage record information is confidentially maintained, based on social security number, by the State of Michigan.

Neither the College nor the State of Michigan will disclose student SSN or wage record data to any unauthorized person or entity unless legally permitted to do so. Any personally identifying wage record data will be destroyed by the

College as soon as all required statistical analyses have been performed, or when the information is no longer needed, whichever date comes first.

Solomon Amendment

The Solomon Amendment is part of the federal law that requires public education institutions to release student names and addresses to the United States military upon request. HFCC risks loss of student federal financial aid for failure to respond to these requests.

HFCC Online Student and Employee systems

MyHFCC WebAdvisor and Online Forms

When using MyHFCC WebAdvisor or filling out online forms at HFCC, students will be asked to provide personal information such as name, address, telephone number, and HANK ID number. Each WebAdvisor function and online form has mandatory fields that represent the minimum information needed to complete a transaction. Alternative methods of service, such as touch-tone registration and on-campus help are available to students who may be uncomfortable providing this information over the internet.

HFCC's Secure Internet Site

MyHFCC WebAdvisor and all online forms are designed to give students and employees control over the privacy of their information. HFCC offers industry-standard security measures available through internet browsers called Secure Sockets Layer (SSL) encryption.

For positive identification, MyHFCC WebAdvisor and all websites containing online forms are registered with site identification authorities to enable internet browsers to confirm the HFCC Web Server's identity before any transmission is sent. With this technology, the identity of the HFCC site is automatically confirmed behind the scenes prior to the transmission of any form. In addition, if data does not properly reach HFCC, the internet browser will notify the sender (prior to sending any personal information) that the potential receiving site looks suspicious and should be avoided.

Data encryption is available for security-enabled internet browsers. Information sent by students to the College is encrypted, making it extremely difficult to read even if it is wrongfully intercepted.

Cookies

A cookie is a software application that is stored on an individual's computer hard drive. HFCC uses cookie technology to gather information about which pages of the HFCC website are used most often for the purpose of improving service to website visitors. HFCC does not use cookie technology to learn the identity of visitors. Website usage patterns are kept confidential and HFCC does not share or sell any of the information.

Student Right to Know & Campus Security Act

The College publishes annually a brochure titled “Guide to Campus Safety Services.” This brochure, available at Campus Safety Offices, includes information about safety procedures on campus, data on instances of crime on campus, the student conduct code, and directions for reporting emergencies. Information is also available in a separate publication regarding the graduation rates of the College’s students. That publication is available in the Vice President of Student Affairs Office.

Veteran Services

Services for military veterans include personal counseling; assistance in filing for V.A. educational benefits; and information regarding a wide range of veteran benefits, such as disability compensation, vocational rehabilitation, tutorial assistance, benefits for dependents of veterans, and general information relating to current and pending veteran legislation. Veterans desiring assistance should contact the Office of Admissions, Registration and Records at 313-845-6403.

Graduation

Applying for Graduation

Graduation applications are accepted until the last day of the term a student anticipates completing degree or certificate requirements. Students that miss this deadline will be considered for graduation in the next term in which they apply for graduation regardless of the need to take classes. However, it is in the student’s best interest to monitor progress towards graduation by following this timeline:

- As a new student or when changing their educational goal, meet with a counselor/academic advisor to set their educational goal and select the corresponding academic program (degree and/or certificate) at HFCC.
- Use the Program Evaluation feature in myHFCC WebAdvisor to monitor progress towards completion of the academic program.
- Apply for graduation when registering for the last term in which the academic program will be complete.

Graduation Applications are available in the Office of Admission, Registration and Records or online at: http://www.hfcc.edu/current_students/graduation_requirement.asp

There is a graduation application fee.

Commencement

Commencement is the ceremony attended by graduates to receive recognition of their accomplishments. HFCC holds one commencement ceremony each year in May. Students who have applied for graduation by FEBRUARY 1, will be mailed an invitation to participate in the May ceremony. All other graduates will be invited to attend the next May commencement.

Program Evaluation/Degree Audit

After completing the Graduation Application each student will receive a Program Evaluation (Degree Audit) review from the Office of Admissions, Registration and Records via U.S. Mail. This Program Evaluation is the same as the one found in the student’s MyHFCC WebAdvisor account. Students are encouraged to use this WebAdvisor feature throughout their time at the College.

Students who do not meet graduation requirements in the term they apply will be reviewed for graduation in the next two subsequent terms. After this students must reapply for graduation and pay the graduation application fee again. If a student receives a graduation denial letter, an appeal may be made to the Office of Admissions, Registration and Records.

Graduation With Honors

Students with a cumulative grade-point average of 3.90-4.00 graduate SUMMA CUM LAUDE.

Students with a cumulative grade-point average of 3.70-3.89 graduate MAGNA CUM LAUDE.

Students with a cumulative grade-point average of 3.50-3.69 graduate CUM LAUDE.

The HFCC Guarantees

The Henry Ford Community College Guarantees for transfer credit of academic and career courses, job competency and tuition freeze are listed below.

Transfer Credit Guarantee

Henry Ford Community College will refund the tuition of any HFCC graduate for any course passed at HFCC with at least a C grade* if that earned course credit does not transfer to a college or university within two years of having taken the course. Such classes must be listed as transferable on the transfer institution’s official curriculum guide sheets on file in the office of the HFCC University Transfer, Advising, and Career Counseling Center.

**A grade of C minus may not qualify. Also, developmental courses do not generally transfer.*

Placement of Occupational Graduates Guarantee

Any graduate of an associate degree program in occupational studies judged by his or her employer as lacking in technical job skills normally expected of a job-entry-level employee will be provided further skill training of up to 16 semester credit hours by HFCC without charge.**

***See Special Conditions listed below.*

Occupational Studies-Special Conditions

The Degree

The graduate must have earned an associate degree beginning June 1986 or thereafter in a college-recognized specialty area

(i.e., Computer Information Systems, Hospitality Studies, Administrative and Information Management), as evidenced by the area of concentration designated on the student's transcript.

The Employment

The employment must be full-time and the job must be certified by the Job Placement office as directly related to the graduate's program of study.

The initial date of employment of the graduate must be within one year of the commencement date. The Guarantee does not apply to graduates initially hired 30 days prior to the commencement date.

The employer must certify in writing that the employee is lacking the job-entry-level skills identified in writing at the time of initial employment, and must specify the area(s) of skills deficiency within 90 days of the graduate's initial employment.

Affective behaviors such as attitude, judgment, and interpersonal relations will be considered "technical job skills" for purposes of the guarantee provided that formal instruction in appropriate affective behaviors is included within the specialty area.

Retraining

Skill retraining will be limited to 16 credit hours and to enrollment in courses regularly offered by HFCC.

The skill retraining must be completed in one academic year.

The employer, the graduate, and College counselor, with the advice of appropriate teaching faculty, will develop an educational plan which specifies the courses constituting the 16 credit hours of further retraining.

The graduate must meet all prerequisites, co-requisites, and other admission requirements for "retraining courses."

The failure, withdrawal, or audit of a "retraining" course or courses is creditable to the 16 credit hour limit.

The graduate or the employer will bear the cost of books, supplies, uniforms, transportation, insurance, and other related costs. The College will waive tuition and fees.

Tuition Freeze Guarantee

Henry Ford Community College guarantees that tuition rates will be frozen for students who graduate from HFCC within four years. Any tuition increase levied by the College during those four years will be refunded to the student upon graduation.

To qualify for the tuition freeze program, a student must complete all course work at HFCC, graduate within four successive years of enrollment, and apply for a tuition rebate after graduation. Students who receive financial aid, except for loans, are not eligible for the program.

General Guidelines

- 1 A student must earn his or her degree within four successive years of initial enrollment at HFCC.
- 2 Any refund is based solely on the amount of tuition increase imposed after the initial semester of a student's four successive years at HFCC.
- 3 A tuition refund cannot be claimed for any semester during which a student received financial aid, except for loans, or direct sponsorship for tuition.
- 4 All course work for a degree must be completed at HFCC. Transfer students do not qualify.
- 5 The refund applies only to the first 60 to 62 credit hours needed to complete a degree program.
- 6 Only one refund per student is allowed.
- 7 Application for a refund must be made within one year of the student's graduation date.

Further information regarding the Tuition Freeze Guarantee may be obtained in the Office of Admissions, Registration and Records.

Late Registration in Developmental Classes

The College is concerned about student success and has found that late registration in developmental sections results in a high drop and failure rate. Therefore, for any section with a course number that begins with zero, for example, ENG 078, the registration and add period will end the day before the section starts.

Residency Regulations

For tuition purposes, a resident student is one who has resided continuously in the Dearborn Public School District for at least six months immediately preceding the first day of classes, with the following exceptions:

- 1 The legal residence of an unmarried minor is that of the parent or legal guardian regardless of where the student may be living.
- 2 An international student on any status other than permanent immigrant is not a resident regardless of where the student may be living.

Students may be asked for two items of documentation to prove residency before completing each enrollment and may be asked for further documentation at any time while in attendance. Acceptable items of documentation are any of the following:

- valid driver's license
- automobile registration
- insurance certification

- voter's registration
- lease agreement
- tax receipt
- income tax statement
- Michigan identification card

If a student has been mistakenly enrolled as a resident, the student will be required to pay all tuition that should have been computed according to non-resident status. Any student fraudulently enrolling as a resident is also subject to any of the following:

- a late payment penalty
- suspension from classes
- permanent dismissal

Smoke-Free Campus

All HFCC buildings are completely smoke-free.

Student Complaint Policy

During their course of study at Henry Ford Community College, students may encounter problems requiring review by academic and administrative personnel. It is the policy of Henry Ford Community College to provide an equitable system for the speedy and amicable resolution of problems between students and College faculty and administrators.

Complaints against faculty may include issues such as final course grades, classroom assignments, and various services. Complaints against administrators may include matters such as policies, regulations, and services.

Due process is dependent upon timeliness. A formal complaint which is not initiated by the end of the semester succeeding the semester in which the issue arose will be dismissed. Once the formal complaint process is initiated, the four stages of the complaint process should be completed within twenty academic working days for each stage (spring and summer terms and regularly scheduled College recesses may be exempt depending upon the availability of the persons involved). These guidelines apply to all student complaints covered by this policy.

Certain types of complaints require the student to file grievances with specialized decision-making bodies. The College publishes these and makes them available to students. However, such specialized policies and procedures shall not be interpreted so as to deny a student due process under the Student Complaint Policy. Also, this policy shall not be construed or applied so as to restrict academic freedom.

Copies of the Student Complaint Policy and Procedures are available in any of the vice presidents' offices.

Student Conduct Policy and Due Process Procedure

Preamble

Henry Ford Community College is a comprehensive community college dedicated to maintaining a teaching-learning environment that fosters critical thinking, creativity, personal integrity, and self-esteem. We value the diversity of our educational community and of the communities we serve. The purpose of this document is to define a collegiate standard of behavior and to explain the actions to be taken if a student disregards this standard.

Rights and Responsibilities

Students have the rights and accept the responsibilities of participating in an educational environment when they enroll at HFCC. Each student is expected to respect the rights of others and to help create an environment where diversity of people and ideas is valued. A collegiate community should be free from intimidation, discrimination, and harassment, as well as safe from violence. Students are also expected to know and obey federal and state laws and local ordinances, as well as be responsible for following College policies.

Students at HFCC have the same rights under the constitutions of our nation and state as other citizens. These rights include freedom of expression, press, religion, and assembly. Freedom of expression, for example, includes the expression of reasoned dissent and the voicing of unpopular views. With every freedom goes the responsibility of according the same right to others. All students have the right to be treated fairly and to have access to College policies. Students are entitled to appropriate due process should they be accused of behavior that is in violation of laws or College policy.

I. General

- 1 The purpose of this policy, Student Conduct Policy and Due Process Procedure, is to help protect the safety and well-being of the campus community and to assist the College in providing an environment that supports the educational process. The responsibility for maintaining such an environment is shared by all members of the College community.
- 2 This policy deals with non-academic behavior, such as criminal behavior and disorderly conduct. Academic behavior, such as cheating, is dealt with in the Student Handbook and the Faculty Handbook.
- 3 The Student Conduct Policy may be amended with the approval of the College Organization. The Due Process Procedure may be amended with the approval of the Senate, the Vice President of Student Affairs, and the President of the College.

- 4 The College's Board of Trustees retains the ultimate right to make and enforce rules relating to student conduct and discipline.

II. Student Code of Conduct

- 1 Students at HFCC are expected to show respect for order, law, the personal rights of others, and the educational mission of the College, as well as to maintain standards of personal integrity.
- 2 Behavior or situations that violate these standards include, but are not limited to
 - Interference with normal College or College-sponsored activities including, but not limited to: interference with teaching, College administration, and College Board meetings;
 - Failure to comply with the directions of College personnel, including Campus Safety, or with the orders of any College board, such as the Student Council Advisory Board and the Student Newspaper Board;
 - Violation of legal standards of decency;
 - Discriminating against or harassing an individual or group in any College related activity, opportunity or organization on the basis of race, color, ethnicity, gender, religion, sexual orientation, creed, national origin, ancestry, age, disability, height, weight, or marital status, or retaliating against any such individual or group for having complained about such behavior;
 - Disrupting a class, a class related activity, or a College sponsored or related event;
 - Physical assault;
 - Stalking;
 - Threats of injury or harm;
 - Arson;
 - Theft;
 - Gambling;
 - Damage to College, student, faculty, or employee property;
 - Computer or technology abuse or tampering;
 - Possession of firearms or dangerous weapons;
 - Possession, use, manufacture, sale of, or being under the influence of alcohol or any controlled substance, without a physician's prescription, or possessing drug paraphernalia while on campus.

The complete text of this policy is available in the Office of the Vice President of Student Affairs, 430A Administrative Services and Conference Center.

Tuition Refund Policy

Refunds on tuition and fees (except the registration fee) may be obtained on any or all classes dropped according to the following schedule:

100%	Before Classes Begin
100%	1st Week of Classes
50%	2nd Week of Classes

After the second week, a refund is permitted by exception only and application is made through the Office of the Director of Admissions, Registration and Records by the student. Courses of other than fifteen weeks have varying refund schedules. Further information may be obtained in the Office of the Director of Admissions, Registration and Records.

No tuition refunds are given after the end of the second week of classes and no exceptions are made for students who enter late. Courses of other than fifteen-week duration have differing refund schedules. Details may be obtained in the Office of Admissions, Registration and Records.

Spring/Summer Refund Policy

Registration fees are the same during the spring/summer session as during the regular college year.

A week of spring/summer session classes is the equivalent in class time of two weeks of a regular semester. Therefore, spring/summer session refunds of tuition, lab fees, and the service fees will be prorated as follows:

100% through the first week of spring/summer classes. The registration fee is nonrefundable.

No tuition refunds are given after the end of the refund period, and no exceptions will be made for students who enter late. Courses of other than 7.5-week or twelve-week duration have differing refund schedules. Details may be obtained in the Office of Admissions, Registration and Records.

People & Places

HFCC Area Code is 313

College Office Locations, Phone and Web Sites

President and Executive Officers

Gail C. Mee

President
Room 415, fourth floor, Andrew A. Mazzara Administrative
Services Conference Center
845-9218 gmee@hfcc.edu

Reginald Gerlica

Vice President of Academic Affairs for Arts and Sciences
Room 424, fourth floor, Andrew A. Mazzara Administrative
Services Conference Center
845-9605 rgerlica@hfcc.edu

William Barber

Vice President of Academic Affairs for Career and Technical
Programs
Room 434, fourth floor, Andrew A. Mazzara Administrative
Services Conference Center
845-9607 wbarber@hfcc.edu

Marjorie Swan

Vice President/Controller
Room 420, fourth floor, Andrew A. Mazzara Administrative
Services Conference Center
845-9601 mswan@hfcc.edu

Elizabeth A. Davis

Director, Human Resources
Room 314, third floor, Andrew A. Mazzara Administrative
Services Conference Center
845-9820 eadavis@hfcc.edu

Lisa Jones-Harris

Vice President of Student Affairs
Room 430, fourth floor, Andrew A. Mazzara Administrative
Services Conference Center
845-9610 ljones-harris@hfcc.edu

Academic Affairs for Arts and Sciences

Room 424, fourth floor, Andrew A. Mazzara Administrative
Services Conference Center
Reginald Gerlica, Vice President of Academic Affairs for Arts
and Sciences
845-9605 rgerlica@hfcc.edu

Center for Lifelong Learning

Dearborn Heights Center
22586 Ann Arbor Trail
Dearborn Heights, MI 48127
Ann Prenger, Director
317-1500 amprenger@hfcc.edu
www.hfcc.edu/cl2

English and World Languages

Room 208, second floor, Liberal Arts Building
Christine Briggs, Associate Dean
845-6458 cbriggs@hfcc.edu

English Language Institute

Room 142, Liberal Arts Building
Mary Assel, Instructor
317-1556 massel@hfcc.edu
www.hfcc.edu/eli

Ed Demerly

Instructor
317-1556 edemerly@hfcc.edu
www.hfcc.edu/eli

Fine Arts & Fitness

Room 128, Fine Arts Center
James Nelson, Associate Dean
845-6316 jnelson@hfcc.edu

Henry Ford II Honors Program

Room 150, Learning Technology Center
Nabeel Abraham, Instructor
845-6460 nabraham@hfcc.edu
www.hfcc.edu/honors

Instructional Technology

Room 004, Learning Technology Center
Vivian Beaty, Instructor
845-9633 vbeaty@hfcc.edu

Learning Laboratory

Room 205, second floor, Learning Resource Center
845-9643

Library

Room 110, Library
845-9606
Barbara Lukasiewicz, Director
845-6379 bluka@hfcc.edu
www.hfcc.edu/library

Mathematics

Room 244, second floor, Liberal Arts Building
Larry Smyrski, Associate Dean
845-6388 lsmyrski@hfcc.edu

Radio Station Advisor

Room 140, Fine Arts Center
Jay Korinek, Faculty Advisor
845-6477

jkorinek@hfcc.edu

Science

Room 107, Science Building
Charles Jacobs, Associate Dean
845-9632

cjacobs@hfcc.edu

Social Science

Room 108, Liberal Arts Building
Kim Schopmeyer, Associate Dean
845-6443

kschop@hfcc.edu

Academic Affairs for Career and Technical Programs

Room 434, fourth floor, Andrew A. Mazzara Administrative Services Conference Center
William Barber, Vice President
845-9607

wbarber@hfcc.edu

Business and Economics

Room 330, third floor, Liberal Arts Building
Elaine Saneske, Associate Dean
845-9645

esaneske@hfcc.edu

Corporate Training

Room 172, Technology Building
Gary Saganski, Director
845-9670

saganski@hfcc.edu

Health Careers

Room 132, Health Careers Education Center
Ronald Bodurka, Associate Dean
845-9877

rbodurka@hfcc.edu

M-TEC

Michigan Technical Education Center (M-TEC)

3601 Schaefer Rd.
Dearborn, MI 48126
Linda West, Director

lawest@hfcc.edu
www.hfcc.edu/mtec

Nursing

Room 122, Health Careers Education Center
Katherine Howe, Associate Dean
845-6366

khowe@hfcc.edu

Technology

Room 115, Technology Building
David Wiltshire, Associate Dean
845-9816

djwiltshire@hfcc.edu

Skilled Trades and Apprenticeship Education

Room 115, Technology Building
Gary Saganski
845-6357

saganski@hfcc.edu

Business and Auxiliary Services

Room 420, fourth floor, Andrew A. Mazzara Administrative Services Conference Center
Marjorie Swan, Vice President/Controller
845-9601

mswan@hfcc.edu

Auxiliary Services

Room 319, third floor, Andrew A. Mazzara Administrative Services Conference Center
Edward Wallish, Coordinator
845-6309

edw@hfcc.edu

Buildings & Grounds

Room 107, Facilities Management Building
T. Allen Gigliotti, Director
845-9602

tagigliotti@hfcc.edu

Campus Safety

Room 151, Learning Technology Center
Gary McBain, Coordinator
845-9770

gmbain@hfcc.edu

Child Development Center

Room 114, Child Development Center
Janice Cataldo, Instructor
317-6527

jcataldo@hfcc.edu
www.hfcc.edu/children

College Store

Pamela Hall, Manager
845-6410

phall@hfcc.edu
www.hfcc.edu/collegestore

Data & Voice Communication

Room 215, second floor, Andrew A. Mazzara Administrative Services and Conference Center
Sandro Silvestri, Director
845-9769

sandro@hfcc.edu

Financial Services

Room 019, lower level, Learning Resources Center
David Cunningham, Director
317-4106

dccunningham@hfcc.edu

Food Service

Student and Culinary Arts Center
Bruce Wall, Manager
845-9648

bwall@hfcc.edu

Media Services

Room 5, lower level, Fine Arts Center
Henry Morgan, Coordinator
845-9627 hmorgan@hfcc.edu

Publicity

Room 330, third floor, Andrew A. Mazzara Administrative Services Conference Center
Susan H. Brown, Manager
845-9628 sueb@hfcc.edu

Purchasing

Room 113, Facilities Management Building
Frederick Steiner, Supervisor
845-9897 fred@hfcc.edu

Systems Coordinator

Room 221, second floor, Andrew A. Mazzara Administrative Services and Conference Center
Al Burrell, Coordinator
845-6491 aburrell@hfcc.edu

Office of Development

Room 326, third floor, Andrew A. Mazzara Administrative Services Conference Center
Cynthia Pepper, Interim Director cpepper@hfcc.edu
845-9620 www.hfcc.edu/scholarships

Human Resources

Room 314, third floor, Andrew A. Mazzara Administrative Services Conference Center
Elizabeth A. Davis, Director
845-9820 eadavis@hfcc.edu

Research and Planning

Instructional Assessment

Room 221, second floor, Andrew A. Mazzara Administrative Services and Conference Center
Becky Chadwick, Coordinator
317-1534 chadwick@hfcc.edu

Institutional Reporting

Room 222, third floor, Andrew A. Mazzara Administrative Services Conference Center
Chris Buczynski, Coordinator
845-1599

Institutional Reporting/Perkins

Room 222, second floor, Andrew A. Mazzara Administrative Services and Conference Center
Leslie Kellogg, Coordinator
317-4028 lkellogg@hfcc.edu

Student Affairs

Room 430, fourth floor, Andrew A. Mazzara Administrative Services Conference Center
Lisa Jones-Harris, Vice President
845-9610 ljones-harris@hfcc.edu

Admissions, Registration and Records

Room 015, lower level, Learning Resource Center
Mark Ulseth, Director mulseth@hfcc.edu
845-6403 www.hfcc.edu/arr

Assisted Learning Services

Room 125, Learning Resource Center
Diane Green, Associate Dean diane@hfcc.edu
845-9617 www.hfcc.edu/sls

Enrollment Development

Room 115, Learning Resource Center
Douglas Freed, Director
845-9710 dfreed@hfcc.edu

Financial Aid

Room 025, lower level, Learning Resource Center
Kevin Culler, Director kjculler@hfcc.edu
845-9616 www.hfcc.edu/fa

Focus on Women

Room 125, Learning Resource Center
Peggy Holcomb, Director pholcomb@hfcc.edu
845-9629 www.hfcc.edu/fow

Placement Office

Room 112, Technology Building
Richard R. Brown, Placement Officer rbrown@hfcc.edu
845-9618 www.hfcc.edu/careers

Student Activities

Room 105, Student and Culinary Arts Center
Cassandra Fluker, Student Activities Officer crfluker@hfcc.edu
845-9838 www.hfcc.edu/sa

Tech Prep

Room 333, third floor, Andrew A. Mazzara Administrative Services Conference Center
Kandy Lazell, Manager klazell@hfcc.edu
845-6361 www.hfcc.edu/techprep

Varsity and Intramural Sports

Room 211, second floor, Athletic Memorial Building
Nancy Bryden, Athletic Director nbryden@hfcc.edu
845-9647 www.hfcc.edu/sports

University Transfer, Advising, and Career Counseling Center

Room 117, Learning Resource Center
 Diane Green, Associate Dean **diane@hfcc.edu**
845-9612 **www.hfcc.edu/counsel**

College Phone Number and Web Site

Toll-free number **1-800-585-HFCC (4322)**
 Web site address: **www.hfcc.edu**

Additional Useful Numbers

Campus Tours
845-6397 **www.hfcc.edu/tour**

FAFSA (Apply for financial aid)

800-433-3243 **www.studentaid.ed.gov**

Federal School Code **002270**

2008 Board of Trustees

Pamela L. Adams, Trustee
 Term expires 12-31-2009

Aimee Blackburn, Trustee
 Term expires 12-31-2008

Darrell Donelson, Trustee
 Term expires 12-31-2009

Sharon L. Dulmage, Trustee
 Term expires 12-31-2008

Joseph A. Guido, Trustee
 Term expires 12-31-2011

Mary Petlichkoff, Trustee
 Term expires 12-31-2011

James H. Schoolmaster, Trustee
 Term expires 12-31-2010

Trustees are elected for four-year terms by registered voters of the School District of the City of Dearborn, which covers Dearborn and a portion of Dearborn Heights. The Board sets general policy and appoints the chief executive officers, the president of the College, and the superintendent of schools. The College is administered separately from the public school system. The Board normally conducts College meetings on the third Monday of every month at 7:30 p.m. in the administrative Services and Conference Center. Board meetings concerned with public school matters normally are conducted on the second and fourth Monday of every month at 7:30 p.m. at 18700 Audette. All meetings are open to the public.

Faculty-Staff Directory

All phone numbers are area code 313.

Taha Abdulkarim, B.S. **845-9895**

Instructor, CISCO
 B.S., Wayne State University.
tabdul@hfcc.edu Room T-211I

Nabeel Abraham, Ph.D. **845-6460**

Instructor, Anthropology
 B.A., Wayne State University; M.A., Ph.D. University of Michigan, Ann Arbor.
nabraham@hfcc.edu Room L-103

Kevin Adams, M.B.A. **845-9693**

Instructor, Business and Economics
 B.A., University of Michigan, Ann Arbor; M.B.A., University of Michigan, Dearborn; Certified Public Accountant (CPA), Juris Doctorate, Michigan State University; Detroit College of Law at Michigan State University.
kadams@hfcc.edu Room L-340

Suresh Ailawadi, M.A. **845-6389**

Instructor, Mathematics
 B.S., M.S., University of Delhi, India; M.A., Wayne State University; M.A., Wayne State University.
sailaw@hfcc.edu Room A-237

Hashim Al-Tawil, Ph.D. **845-6489**

Instructor, Art History
 B.F.A., University of Baghdad; M.A., University of Hartford; Ph.D., University of Iowa.
hal-tawil@hfcc.edu Room F-115

Furat Ali Al-Shemeri, Ph.D. **845-6302**

Instructor, Biology
 B.S., University of Baghdad; Ph.D., University College of Wales, U.K.
aal-shemeri@hfcc.edu Room S-104A

Deborah Alkamano, M.A. **317-6672**

Instructor, English
 B.A., University of Michigan, Ann Arbor; M.A., Wayne State University.
dalkamano@hfcc.edu Room A-212

Martin Anderson, M.F.A. **845-6488**

Instructor, Art
 B.F.A., State University of New York at Buffalo; M.F.A., Ohio University.
mander@hfcc.edu Room F-152

Cassandra Andrews-Fluker, M.S.A.	845-9838	Janice Bartos, M.S.	317-1529
Student Newspaper/Student Activities Officer A.A., Henry Ford Community College; B.G.S., University of Michigan Dearborn; M.S.A., Central Michigan University. crfluker@hfcc.edu	Room C-105A	Instructor, Nursing B.S.N., Wayne State University; M.S., University of Michigan, Ann Arbor. jmbartos@hfcc.edu	Room H-120E
Corinne Asher, M.B.A.	845-9867	Sam Bazzi, M.A.	845-6473
Instructor, Business and Economics B.A., Michigan State University; M.B.A., University of Michigan, Ann Arbor. casher@hfcc.edu	Room L-319A	Instructor, Mathematics B.S., Lebanese University; M.A., Wayne State University. sbazzi@hfcc.edu	Room L-233
Mary Assel, Ph.D.	317-1524	Vivian Beaty, Ph.D.	845-9698
Instructor, ESL, English Language Institute B.A., University of the State of New York; M.A., Ph.D., Wayne State University. massel@hfcc.edu	Room L-302	Instructional Technologist A.S., Medical College of Georgia; B.S., M.Ed., University of Nevada, Las Vegas; M.S., Bloomsburg University; Ph.D., University of Illinois. vbeaty@hfcc.edu	Room A-004A
Richard Bailey, A.D.	845-6498	Nasser Beidoun, M.A.	845-9626
Instructor, English B.A., Eastern Michigan University; M.A., Duke University; A.D., University of Michigan, Ann Arbor. rbailey@hfcc.edu	Room A-214	Instructor, Mathematics B.A., University of Michigan, Dearborn; M.A., Wayne State University. nabeidoun@hfcc.edu	Room L-234
Douglas Balsis, M.A.	845-9754	Carla Bell, M.A.	845-6417
Counselor, University Transfer, Advising, and Career Counseling Center B.S., Central Michigan University; M.A., Eastern Michigan University. dough@hfcc.edu	Room LRC-117K	Instructor, English A.A.S., Oakland Community College; B.S., M.A.T., Oakland University; M.A., Eastern Michigan University. cbell@hfcc.edu	Room L-247
Diana Baran, M.S.A.	317-1583	Sophia Beydoun, M.S.N.	845-9742
Instructor, Business and Economics B.S., Kettering University; M.S.A., Central Michigan University. dbaran@hfcc.edu	Room L-330	Instructor, Nursing A.S., A.D.N., Henry Ford Community College; B.S.N., M.S.N., Madonna University. sbeydoun@hfcc.edu	Room H-120D
William Barber, Ph.D.	845-9607	Cynthia Bida, M.S.	845-9732
Vice President of Academic Affair for Career and Technical Programs B.B.A., University of Michigan, Ann Arbor; M.A., Western Michigan University; Ph.D., Wayne State University. wbarber@hfcc.edu	Room ASC-434	Instructor, Biology A.A.S., Schoolcraft College; B.S., M.S., Eastern Michigan University. cbida@hfcc.edu	Room S-104D
Scott Barnett, M.A.	845-6496	Michele Bietler, M.S.N.	845-9717
Instructor, Mathematics B.S., University of Detroit; M.A., Wayne State University. sebarnett@hfcc.edu	Room A-224	Instructor, Nursing B.S.N., Mercy College; M.S.N., Wayne State University. mbietler@hfcc.edu	Room H-120F
Rodney Barnhart, M.A.	845-6425	Bonnie Bodart, M.S.N.	317-1513
Instructor, History B.A., University of Michigan, Dearborn; M.A., Eastern Michigan University. rrbarnhart@hfcc.edu	Room L-109E	Instructor, Nursing A.A., Wayne County Community College; B.S.N., University of Detroit; M.S.N., University of Phoenix. bbodart@hfcc.edu	Room H-103A

Ronald Bodurka, M.S. Associate Dean, Health Careers B.S., University of Detroit; M.S., University of Michigan, Ann Arbor; Registered Respiratory Therapist (RRT), National Board for Respiratory Care. rbodurka@hfcc.edu	845-9815 Room H-132A	Todd Browning, M.A. Instructor, CISCO B.A., Eastern Michigan University; M.A., Wayne State University. browning@hfcc.edu	845-6365 Room T-211A
Lynn Borczon, M.A. Supervisor, Human Resources A.B., Henry Ford Community College; B.A., Detroit College of Business, M.A. Central Michigan University. lynn@hfcc.edu	845-9664 Room ASC-314	Shannon Bruley, B.A.S. Program Manager, Emergency Medical Services & Fire Sciences A.A., A.S., Henry Ford Community College; B.A.S., Siena Heights University. Licensed Paramedic; Licensed Paramedic Instructor/Coordinator. sbruley@hfcc.edu	317-6582 Room H-133L
Henry Bowers, Ph.D. Instructor, Political Science B.S., Johnson C. Smith University; M.A., University of Detroit; D.P.A., Western Michigan University. hbowers@hfcc.edu	845-9706 Room L-108	Nancy Bryden, M.S. Director, Athletics B.S., M.S., Eastern Michigan University. nbryden@hfcc.edu	845-9647 Room PE-211
Jared Boyd, M.A. Instructor, Business and Economics B.S., University of Florida; M.A., University of Michigan, Ann Arbor. jpboyd@hfcc.edu	845-9697 Room L-304	Alison Buchanan, M.A. Instructor, Psychology, B.A., Wittenberg University; M.A., East Tennessee State University; M.A. Appalachian State University albuchan@hfcc.edu	317-6511 Room L-242
Amanda Boye Instructor, Radiology B.S., Florida Hospital College of Health Sciences, Certified Radiologist, Annapolis Hospital aboyle@hfcc.edu	317-9813 Room H-133A	Daniel Buchanan, M.A. Instructor, Mathematics A.S., Henry Ford Community College; B.S., M.A., University of Michigan, Ann Arbor (Mathematics); M.A., University of Michigan, Ann Arbor (Education). buchanan@hfcc.edu	845-9789 Room L-242
Linda Brandt, M.S. Instructor, Biology B.A., M.S., Indiana University. lbrandt@hfcc.edu	845-9729 Room S-104G	Stacey Buchanan, Ph.D. Instructor, Chemistry B.S., M.A., College of William and Mary; M.S., Ph.D., University of Michigan, Ann Arbor. sabuchanan@hfcc.edu	845-9737 Room S-12A
Christine Briggs, Ph.D. Associate Dean, English B.A., Marygrove College; M.A., Ph.D., University of Detroit. cbriggs@hfcc.edu	845-6458 Room L-208	Chris Buczynski, Ph.D. A.A.S., Henry Ford Community College; B.S., University of Michigan; M.S., Ph.D., University of Houston cbuczynski@hfcc.edu	317-1599 Room ASCC-222
Richard Brown, M.A. Placement Officer, Placement Services B.S., M.A., Western Michigan University. rbrown@hfcc.edu	845-9860 Room T-112B	Thomas Burns, M.S.A. Instructor, Computer Information Systems A.A., Henry Ford Community College; B.B.S., Eastern Michigan University; M.S.A., Central Michigan University. tburns@hfcc.edu	845-6348 Room T-162G
Susan Brown, B.G.S. Manager/Staff Writer, Publicity A.A., Henry Ford Community College; B.G.S., University of Michigan Dearborn. sueb@hfcc.edu	845-9628 Room ASC-330	Allen Burrell, M.S. Systems Coordinator, Data and Voice B.A., Michigan State University; M.S., Walsh College. aburrell@hfcc.edu	845-6491 Room ASC-221

Michael Bush, B.A. Instructor, Trade and Apprentice Education A.S., Henry Ford Community College; B.A., University of Michigan Dearborn. mbush@hfcc.edu	845-6412 Room T-164A	Elizabeth Cohn, M.A. Instructor, English B.S., University of Michigan, Ann Arbor; M.A., University of Virginia. bcohn@hfcc.edu	845-9886 Room T-211F
Janice Caie-Lawrence, M.S.N. Instructor, Nursing B.S.N., M.S.N., Wayne State University. jcaie@hfcc.edu	317-4019 Room H-103E	Gail Conte, M.A. Coordinator, Grants B.A., University of Michigan, Ann Arbor; M.A., Eastern Michigan University. gconte@hfcc.edu	845-6360 Room ASC-324
Deborah Carmichael, M.A. Instructor, English B.A., West Virginia University; M.A., George Mason University; M.A., Eastern Michigan University. dcarmich@hfcc.edu	317-6573 Room A-202	Anthony Conti, M.A. Instructor, Computer Information Systems B.S., Western Michigan University; M.A., Central Michigan University. tconti@hfcc.edu	845-6355 Room T-162F
John Carroll, M.A. Counselor, University Transfer, Advising, and Career Counseling Center B.A., M.A., Eastern Michigan University; Licensed Professional Counselor (LPC); Nationally Certified Counselor (NCC), Certified Hypnotherapist (C.H+). johnc@hfcc.edu	845-9753 Room LRC-117H	Reid Cook, M.Ed. Instructor, Hospitality B.A., Michigan State University; M.Ed., Wayne State University; FMP Certification; IFSEA Certification; Certified Hospitality Educator, American Hotel & Motel Association. rcook@hfcc.edu	845-6392 Room C-163B
Becky Chadwick, M.A. Coordinator, Research and Planning B.A., University of Michigan Dearborn; M.A., University of Michigan, Ann Arbor. bchadwick@hfcc.edu	317-1534 Room ASC-221	Peter Cravens, J.D. Instructor, Criminal Justice B.S., Eastern Michigan University; J.D., Detroit College of Law. pcravens@hfcc.edu	845-6437 Room L-113
Paulette Childress, Ph.D. Instructor, English B.A., M.A., Ph.D., Wayne State University. pchild@hfcc.edu	845-6408 Room A-218	Kevin Culler, M.B.A. Director, Financial Aid B.B.A., Eastern Michigan University; M.B.A., Wayne State University. kjculler@hfcc.edu	845-9755 Room ASC 430
Thomas Claerr, Ph.D. Instructor, Spanish B.A., University of Detroit; M.A., Central Michigan University; M.A., Michigan State University; Ph.D., Ohio State University. tclaerr@hfcc.edu	845-6418 Room L-303	Kathleen Cunningham, M.L.S. Reference Librarian, Library B.A., M.S., Wayne State University. kcunning@hfcc.edu	845-9763 Room LIB-106B
Victoria Cliett, M.A. Instructor, English B.A., M.A., Wayne State University. vcliett@hfcc.edu	845-9682 Room A-233	David Cunningham, Ph.D. Director, Financial Services B.B.A., M.P.A., University of Michigan, Dearborn; Ph.D., Wayne State University. dccunningham@hfcc.edu	317-4106 Room LRC-019E
Adam Cloutier, M.A. Instructor, Mathematics B.S., M.S., Michigan State University alcloutier@hfcc.edu	845-6313 Room A-229	Michael Daher, Ph.D. Instructor, English B.A., University of Notre Dame; M.A., University of Michigan, Ann Arbor; Ph.D., Wayne State University. mdaher@hfcc.edu	845-6457 Room L-243

Henry Ford Community College

Elizabeth A. Davis, J.D. Director, Human Resources B.A., Michigan State University; J.D., The Thomas Cooley Law School. eadavis@hfcc.edu	845-9820 Room ASC-314	Joyce Fisher, M.A. Instructor, English B.A., Eastern Michigan University; M.A., University of Calgary. jfisher@hfcc.edu	845-6459 Room L-209
Jeannine Dawson, M.S. Instructor, Mathematics B.A., Wayne State University; M.S., University of Notre Dame. jdawson@hfcc.edu	845-6450 Room A-225	Kathryn Fitzner, M.A. Instructor, CISCO B.S., Eastern Connecticut State University; M.A., Wayne State University. kfitzner@hfcc.edu	317-1570 Room T-211B
Edwin Demerly, M.A. Instructor, English B.A., M.A., Michigan State University. edemerly@hfcc.edu	845-9659 Room L-207	Nikole Ford, M.A. Manager, Enrollment Development B.A., Michigan State University; M.A., Wayne State University. nkford@hfcc.edu	317-4094 Room LRC-113
G. Kevin Dewey, M.A. Instructor, Music B.A., M.M., Wayne State University. kdewey@hfcc.edu	845-6474 Room F-132	Gail Frederick, M.S.N. Instructor, Nursing B.S.N., Wayne State University; M.S.N., Rush University. gfrederick@hfcc.edu	845-6300 Room H-120B
Kevin Donahue, M.F.A. Instructor, Art B.A., Richmond College; M.F.A., Brooklyn College. kdonahu@hfcc.edu	317-6686 Room F-150	Douglas Freed, M.A. Director, Enrollment Development B.A., University of Michigan, Dearborn; M.A., Wayne State University. dfreed@hfcc.edu	845-9710 Room LRC-115C
Diane Donbrosky, M.S.N. Instructor, Nursing B.S.N., M.S.N., Wayne State University; Diploma in Nursing, St. Vincent Medical Center School of Nursing. ddonbros@hfcc.edu	845-9787 Room H-103H	Hal Friedman, Ph.D. Instructor, History B.S., Eastern Michigan University; M.A., Ph.D., Michigan State University. friedman@hfcc.edu	845-6387 Room L-106
Royetta Ealba, M.B.A. Instructor, Mathematics B.S., M.S., Central Missouri State University; M.B.A., University of Michigan, Ann Arbor. realba@hfcc.edu	845-9686 Room L-236	Brent Fulton, B.S. Instructor, Computer Information Systems B.S., University of Michigan, Flint. brent@hfcc.edu	845-6426 Room T-162I
Barbara Eisterhold, B.A. Accounting Manager, Financial Services B.S.B.A., Aquinas College. bjeisterhold@hfcc.edu	845-9622 Room LRC-019	Eric Gackebach, M.B.A. Instructor, Hospitality A.A.S., Schoolcraft College; B.S.B.A., Central Michigan University; M.B.A., Wayne State University epgackebach@hfcc.edu	845-1572 Room C-163C
James Elmer, A.S. Instructor, Energy Technology A.S., Henry Ford Community College. jlelmer@hfcc.edu	317-4129 Room T-164D	Michael Garms, M.B.A. Instructor, Business and Economics B.S.B.A., Wayne State University; M.B.A., Michigan State University. Certified Public Accountant (CPA). mgarms@hfcc.edu	845-9691 Room L-327
Alan Essenmacher, M.A. Instructor, Electronics A.A., Henry Ford Community College; B.S., M.A., Eastern Michigan University. aessenma@hfcc.edu	845-6330 Room T-211G	Cheryl Garrett, Ph.D. Instructor, Biology B.A., Hiram College; Ph.D., University of Michigan, Ann Arbor. cdgarrett@hfcc.edu	845-9730 Room S-104J

Reginald Gerlica, Ph.D. Vice President of Academic Affairs for Arts and Sciences B.S., Eastern Michigan University; M.A., Ph.D., Reading Specialist, Wayne State University. rgerlica@hfcc.edu	845-9605 Room ASC-424	Joan Green, M.S.N. Instructor, Nursing B.S.N.; M.S.N., Eastern Michigan University jigreen@hfcc.edu	845-6328 Room H-203D
T. Allen Gigliotti, M.B.A. Director, Buildings and Grounds B.S., M.S., Case Western Reserve University; M.B.A., University of Michigan, Dearborn tagigliotti@hfcc.edu	845-9602 Room B-107	Mary Geraldine Grunow, M.A. Instructor, English M.A. (HONS), University of Edinburgh; Diploma of Education, University of Aberdeen. ggrunow@hfcc.edu	845-6421 Room L-245
Janice Gilliland, M.A. Instructor, Mathematics B.S., B.E., University of Western Ontario, M.A., Wayne State University. jlgilliland@hfcc.edu	845-9740 Room L-235	Pamela Hall, B.A. Manager, College Store B.A., Michigan State University. phall@hfcc.edu	845-6410 Room College Store
Steven Glazer, M.F.A. Instructor, Art B.F.A., Eastern Michigan University; M.A., Central Michigan University; M.F.A., Indiana State University. sglazer@hfcc.edu	845-6485 Room F-147	Joyce Hamilton, M.B.A. Instructor, Computer Information Systems B.A., Washburn University; M.B.A., University of Michigan, Dearborn. hamilton@hfcc.edu	845-6356 Room T-162H
Sally Goodwin, M.A. Instructor, Computer Information Systems B.S., University of Michigan, Ann Arbor; M.A., Eastern Michigan University. sgoodwin@hfcc.edu	845-9851 Room T-211C	Robert Hardin, M.B.A. Instructor, Business and Economics B.B.A., M.B.A., University of Michigan, Ann Arbor; C.M.A. Certificate. bobh@hfcc.edu	845-6434 Room L-319B
Jaclyn Grady, B.A. Manager, Financial Aid A.A.S., Monroe County Community College; B.A., Lourdes College. jgrady@hfcc.edu	317-6567 Room LRC-021B	Daniel Harrison, M.A. Reference Librarian, Library A.B., A.M.L.S., University of Michigan, Ann Arbor; M.A., Oakland University. dharrissn@hfcc.edu	845-6376 Room LIB-106C
Katherine Grahl, M.A. Instructor, English A.B., M.A.T.E.S.L., University of Illinois at Urbana - Champaign. kathg@hfcc.edu	845-6327 Room L-241	Kalvin Harvell, M.A. Instructor, Sociology B.S., Grand Valley State University; M.A., Ohio University. kharvell@hfcc.edu	317-1533 Room A-226
Lori Grande-Swiatkowski, M.S.N. Instructor, Nursing A.S., Henry Ford Community College; B.S.N., M.S.N., Wayne State University. ljswiatkowsk@hfcc.edu	845-9738 Room H-120C	William Harvey, M.B.A. Instructor, Business and Economics B.S., M.B.A., University of Detroit; M.S.T., Walsh College; Certified Cost Analyst (CCA); Certified Public Accountant (CPA). wharvey@hfcc.edu	845-9694 Room L-326
Diane Green, M.A. Associate Dean, University Transfer, Advising, and Career Counseling Center B.M., M.A., University of Michigan, Ann Arbor; Licensed Professional Counselor (LPC); Nationally Certified Counselor (NCC); Nationally Certified Career Counselor (NCCC). diane@hfcc.edu	845-9748 Room LRC-117E	Lois Hassan, M.A. Instructor, English B.A., University of Detroit; M.Ed., Wayne State University; M.A., Eastern Michigan University. lhassan@hfcc.edu	845-6405 Room LRC-223
		Jennifer Hathikhanavala, M.A. Instructor, English B.A., Concordia College; M.A., Eastern Michigan University. ajhathikhanavala@hfcc.edu	317-1537 Room LRC-223

Henry Ford Community College

Adam Hazlett, M.A. Instructor, English B.S., Ohio University; M.A., Eastern Michigan University. ahazlett@hfcc.edu	845-6406 Room L-206	Bonnie Jobe, M.A. Instructor, Health & Physical Education B.S., M.A., M.A., Northern Michigan University. bjobe@hfcc.edu	845-6319 Room PE-208
Gary Heinz, M.S. Instructor, Automotive Technology A.S., Delta College, B.S., Ferris State University; M.S., Eastern Michigan University. gheinz@hfcc.edu	845-6350 Room T-162B	Gillian John, M.A. Instructor, Mathematics B.A., M.A., Wayne State University. gajohn@hfcc.edu	317-1520 Room A-228
Lynne Hensel, Ph.D. Assistant to the President for School and University Relations B.A., St. Olaf College; M.S., Ph.D., Michigan State University. lhensel@hfcc.edu	845-9605 Room ASC-424	Matthew Johnson, Ph.D. Instructor, English B.A., M.A., University of Florida; Ph.D., Bowling Green State University. mjohnson@hfcc.edu	317-6681 Room A-222
Michael Hill, M.A. Instructor, English B.A., Eastern Kentucky University; M.A., Eastern Kentucky University mdhill1@hfcc.edu	845-6368 Room LRC-227	Lisa Jones-Harris, Ph.D. Vice President of Student Affairs B.S., M.A., Michigan State University; Ph.D, Marquette University ljonesharris@hfcc.edu	845-9610 Room ASCC-430
Marcia Holbrook, M.A. Instructor, English B.A., M.A., Ohio State University. mholbrook@hfcc.edu	845-9681 Room A-204	Tarek Joseph, Ph.D. Instructor, Geography B.A., University of Toledo; M.A., West Virginia University; Ph.D., Michigan State University. tjoseph@hfcc.edu	845-6402 Room A-221
Peggy Holcomb, M.A. Director, Focus on Women B.G.S., University of Michigan, Ann Arbor; M.A., Eastern Michigan University; Licensed Professional Counselor (LPC). pholcomb@hfcc.edu	845-9757 Room LRC-125	Kandy Kalbfleisch Lazell, M.S. Manager, Tech Prep B.A.A., Central Michigan University; M.S., Ferris State University. klazell@hfcc.edu	845-6361 Room ASC-333
Katherine Howe, M.S.N. Associate Dean, Nursing B.S.N., Ohio State University; M.Ed., North Carolina State University; M.S.N., Wayne State University. khowe@hfcc.edu	845-9661 Room H-120J	Pamela Kaminski, M.A. Instructor, English B.A., M.A.T., University of Michigan, Dearborn. pckaminski@hfcc.edu	845-9683 Room L-239
Patrice Irving, M.S.N. Instructor, Nursing B.S.N., M.S.N., University of Phoenix. pirving@hfcc.edu	317-6534 Room H-103I	Kenneth Kasin, M.A. Instructor, Mathematics B.A., Concordia College; B.A., Moorhead State University; M.A., University of Nebraska-Lincoln. kkasin@hfcc.edu	845-6497 Room L-240
Charles Jacobs, Ph.D. Associate Dean, Science B.S., University of Miami; Ph.D., University of Texas at Austin. cjacobs@hfcc.edu	845-9734 Room S-107	Peter Kearly, Ph.D. Instructor, English B.A., M.A., Ph.D., Wayne State University. pkearly@hfcc.edu	317-6682 Room A-208
Miles Jarvis, M.A. Instructor, Trade and Apprentice Education A.S., Henry Ford Community College; B.A., Siena Heights University; M.S.A., Central Michigan University. mjarvis@hfcc.edu	317-6502 Room T-164B	Daniel Kearney, M.P.A. Instructor, Criminal Justice B.S., Wayne State University; M.P.A., University of Michigan, Ann Arbor. dkearney@hfcc.edu	845-9714 Room L-107

Thomas Kelley, Ph.D. Instructor, Mathematics B.A., M.A., Boston College; Ph.D., Oregon State University. tkelley@hfcc.edu	845-6492 Room A-223	Jay Korinek, M.A. Instructor, Performing Arts B.A., Oakland University; M.A., University of Michigan, Ann Arbor; M.A., Wayne State University. jkorinek@hfcc.edu	845-6477 Room F-140
Leslie Kellogg, B.A. Coordinator, Research and Planning A.A., Henry Ford Community College; B.A., DePaul University. lkellogg@hfcc.edu	317-4028 Room ASC-222	Ed Krol, Ph.D. Instructor, Biology B.S., Ferris State College; M.S., Central Michigan University; Ph.D. Wayne State University. ekrol@hfcc.edu	845-9733 Room S-104C
Judith Kelly, M.S. Instructor, Biology B.A., Montclair State College; M.S., Eastern Michigan University. jkelly@hfcc.edu	845-9728 Room S-104E	Charles Lacey, M.B.A. Instructor, Business and Economics B.S., M.B.A., Wayne State University; P.D.D., University of Michigan Dearborn; M.S.P.A., Walsh College. Certified Public Accountant, Certified Valuation Analyst. clacey@hfcc.edu	845-9657 Room L-319C
Michele Kipisz, M.A. Instructor, Respiratory Therapy A.A.S., Macomb Community College; B.S., University of Detroit; M.A., University of Michigan, Dearborn; RRT, Registered Respiratory Therapist. mkipisz@hfcc.edu	317-6581 Room H-133H	Shari Lambert, M.S.N. Instructor, Nursing B.S.N., University of Detroit Mercy; M.S.N., Medical University of Ohio slambert@hfcc.edu	317-6501 Room H-133D
Brian Kirchner, Ph.D. Instructor, Geology B.A., Earlham College; M.S., University of Pittsburgh; Ph.D., University of Cincinnati. bkirchner@hfcc.edu	317-1527 Room S-8	Patricia Lanzon, M.S. Instructor, Psychology B.S., Eastern Michigan University; M.S., Ed.S., Florida State University. planzon@hfcc.edu	317-1532 Room L-310
Gerald Klein, M.Ed. Instructor, Industrial Drafting A., Macomb Community College; B.S., Western Michigan University; M.Ed., Wayne State University. gklein@hfcc.edu	845-6424 Room T-180A	Gregory Laskowsky, B.S. Instructor, Trade and Apprentice Education A.A., Henry Ford Community College; B.S., Siena Heights University. glaskowsky@hfcc.edu	317-1550 Room T-164D
James Knack, M.A. Instructor, Energy Technology A.A.S., Community College of the Air Force; B.S., Southern Illinois University at Carbondale; M.A., University of Northern Colorado. jknack@hfcc.edu	845-6413 Room T-164H	Thomas Laverty, B.A. Accountant, Financial Services B.A, Siena Heights University. tlaverty@hfcc.edu	845-7143 Room LRC-019
Randall Knight, M.Ed. Instructor, Music B.M., M.Ed., Wayne State University. rknight@hfcc.edu	845-6367 Room F-131	Daniel Lindholm, M.A. Instructor, Trade and Apprentice Education B.S., M.A., Wayne State University. lindholm@hfcc.edu	845-6336 Room T-164G
Dennis Konarski, B.A. Instructor, Hospitality B.A., University of New Haven; A.O.S., Schiller International University dennis@hfcc.edu	845-6390 Room C-163E	Kimberly Lindquist, M.S. B.S., Eastern Michigan University; M.S., The University of Toledo kslindquist@hfcc.edu	845-9741 Room H-203D

Susan Lohmann, M.A. B.A., Western Michigan University; M.A., Eastern Michigan University sclohmann@hfhcc.edu	317-4109 Room D-161E	Anthony Mazurek, M.S. Instructor, Trade and Apprentice A.A., Henry Ford Community College; B.S., Eastern Michigan University; M.S., Boise State University. amazurek@hfhcc.edu	845-6335 Room T-164F
Michael LoPresto, M.S. Instructor, Physics B.S., Edinboro University of Pennsylvania; M.S., University of Michigan, Ann Arbor; M.S., Eastern Michigan University. lopresto@hfhcc.edu	845-9722 Room S-16	Gary McBain, M.S. Coordinator, Campus Safety B.S., Grand Valley State University; M.S., University of Detroit. gmcbain@hfhcc.edu	845-9770 Room A-151E
Barbara Lukasiewicz, M.S. Director, Library B.A., M.S., Wayne State University. bluka@hfhcc.edu	845-6379 Room LIB-110A	John McDonald, M.A. Instructor, English B.A., M.A., University of Michigan, Ann Arbor. jmcdon@hfhcc.edu	845-9790 Room A-201
Deborah Lyons, M.S.N. Instructor, Nursing B.S.N., Madonna University; M.S.N.; Wayne State University. dalyons@hfhcc.edu	845-6394 Room H-120H	Gary McIlroy, Ph.D. Instructor, English B.A., Oakland University; M.A., Ph.D., University of Detroit. gmcilroy@hfhcc.edu	845-6462 Room A-216
David Maier, Ph.D. Instructor, Computer Information Systems B.S., Lawrence Technological University; M.S., Eastern Michigan University; Ph.D., Wayne State University. djmaier@hfhcc.edu	845-9890 Room T-164K	Elaine McKeand, Ph.D. Instructor, English B.A., M.A., Ph.D, University of Michigan, Ann Arbor. emckeand@hfhcc.edu	845-6411 Room A-239
Diane Mancinelli, M.Ed. Instructor, Performing Arts A.A., Henry Ford Community College; B.S., M.Ed., Wayne State University. dmancin@hfhcc.edu	845-6314 Room PE-9	James McLendon, M.F.A. Instructor, Art B.F.A., M.F.A., University of Georgia. mclendon@hfhcc.edu	845-6487 Room F-149
James Martini, M.Ed. Instructor, Energy Technology B.S., Michigan State University; M.Ed., Wayne State University; A.B.D., University of Michigan, Ann Arbor. jmartini@hfhcc.edu	845-6453 Room T-211L	Gail C. Mee, Ed. D. President B.A., Ladycliff College; M.S., State University of New York at New Peltz; Ed D., Columbia University. gmee@hfhcc.edu	845-9650 Room ASC-415
Lisa Masi, B.B.A. Manager: Records, Degree Audit, and Commencement B.B.A., University of Michigan, Dearborn. lmasi@hfhcc.edu	845-6403 Room LRC-013	Bradley Miller, B.A. Asst. Manager/Textbook Buyer, College Store B.A., Michigan State University. bmiller@hfhcc.edu	845-9677 Room College Store
Richard Matthei, M.A. Instructor, Mathematics B.S., DePaul University; M.A., Indiana University; M.Ed., University of Missouri. rmatthei@hfhcc.edu	845-6452 Room L-238	Stanley Moore, M.F.A. Instructor, Performing Arts B.A., M.A., Morehead State University; M.F.A., University of Mississippi. smoore@hfhcc.edu	845-6479 Room F-146
Johnny May, M.S. Safety Specialist, Campus Safety B.S., University of Detroit; M.S., University of Detroit-Mercy; Certified First Aid/CPR, American Red Cross. jmay@hfhcc.edu	845-9856 Room A-151B	Jeffrey Morford, M.A. Instructor, Mathematics B.S., Michigan State University; M.A., University of California - Berkeley. jmorford@hfhcc.edu	317-4046 Room L-235

Henry Morgan, B.F.A. Coordinator, Graphics Center A.A., Henry Ford Community College; B.F.A., Wayne State University. hmorgan@hfcc.edu	845-9627 Room F-5	Gregory Osowski, M.A. Instructor, Criminal Justice B.S., Wayne State University; M.A., University of Detroit. gosowsk@hfcc.edu	845-9859 Room L-109W
Kimberly Moscardelli, M.B.A. Instructor, Computer Information Systems B.S., University of Michigan, Dearborn; M.B.A., University of Phoenix. kimm@hfcc.edu	317-1549 Room T-211-D	Lori Owen, Ph.D. Instructor, Speech/Telecommunications B.A., Western Michigan University; M.A., Michigan State University; Ph.D., Wayne State University. lowen@hfcc.edu	845-6472 Room F-140
Kathleen Murray, M.S.N. Instructor, Nursing A.S., Henry Ford Community College; B.S., Central Michigan University; B.S.N., Miami University; M.S.N., University of Cincinnati. kmurray@hfcc.edu	845-9736 Room H-120A	Michael Palaski, M.S. Instructor, Biology A.A., Macomb Community College; B.S., M.S., Eastern Michigan University. mjpalaski@hfcc.edu	845-9768 Room S-104B
Steven Murrell, M.S. Instructor, Physics B.S., M.S., Eastern Michigan University. smurrell@hfcc.edu	317-1536 Room S-17	Talaat Pasha, M.A. B.A., Zagazig University, Egypt; M.A., Minia University, Egypt tpasha@hfcc.edu	845-6672 Room LTC-202A
Crystal Napier, B.S. Manager, Admissions and Registration B.S., Madonna University. cnapier@hfcc.edu	845-9894 Room LRC-013	Sharon Pearl, B.A. Manager, Financial Aid B.A., University of Michigan, Dearborn. spearl@hfcc.edu	845-9809 Room LRC-025
James Nelson, M.S. Associate Dean, Fine Arts and Fitness B.S., M.S., Eastern Michigan University. jnelson@hfcc.edu	845-6316 Room F-131	Stephen Pedley, M.P.T. Instructor, Physical Therapy B.S., B.S.Ed., Central Michigan University; M.P.T., Oakland University. sepedley@hfcc.edu	317-6576 Room H-133D
Imad Nouri, M.S. Counselor, University Transfer, Advising, and Career Counseling Center B.A., M.S., Wright State University. inouri@hfcc.edu	845-9750 Room LRC-117F	Anthony Perry, Ph.D. Instructor, Political Science B.A., Ph.D., Wayne State University. adperry1@hfcc.edu	845-6383 Room L-301A
James Oliver, Ph.D. Instructor, Psychology B.A., Southern Illinois University; M.S., Ph.D., Purdue University. joliver@hfcc.edu	845-9713 Room L-309	Raymond Polidori, M.A. Instructor, Business and Economics A.A.S., Ferris State College; B.S., M.A., Eastern Michigan University; Michigan Vocational Certification. polidori@hfcc.edu	845-6363 Room L-325
Gerald Olszewski, M.A. Counselor, University Transfer, Advising, and Career Counseling Center B.A., M.A., University of Detroit, Licensed Professional Counselor (LPC); Nationally Certified Counselor (NCC). jerry@hfcc.edu	845-9752 Room LRC-117G	George Popovich, Ph.D. Instructor, Theatre B.A., M.A., California State University; M.A., University of Texas; Ph.D., Ohio State University. popovich@hfcc.edu	845-6478 Room F-127
		Terrence Potvin, M.L.S. Circulation Manager, Library B.A., M.L.S., Wayne State University. tpotvin@hfcc.edu	845-9760 Room LIB-114

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Kathleen Powers, M.P.A. Manager, Enrollment Development B.S.A., M.P.A., University of Michigan, Dearborn. kpowers@hfcc.edu	845-9833 Room LRC-115	James Reppke, M.A. Instructor, English B.S., M.A., Eastern Michigan University; M.A., University of Michigan, Ann Arbor. jreppke@hfcc.edu	845-9672 Room A-231
Ann Prenger, M.P.A. B.A., Oakland University; M.P.A., Golden Gate University. amprenger@hfcc.edu	317-1505 Room D-161C	Chad Richert, M.A. Instructor, Architectural/Construction Technology B.S., University of Colorado; M.A., University of Michigan, Ann Arbor. crichtert@hfcc.edu	317-1515 Room D-164C
Elizabeth Preston, B.S. Specialist, Financial Aid B.S., Central Michigan University. empreston@hfcc.edu	317-1530 Room LRC-025	Kevin Ridge, A.S. Instructor, Trade and Apprentice Education A.S., Henry Ford Community College. karidge@hfcc.edu	317-4136 Room T-163C
Gwendolyn Pringle, Ph.D. Counselor, University Transfer, Advising, and Career Counseling Center B.A., M.A., Ph.D., Michigan State University. Professional Certification through the National Board of Certified Counselors, Inc. Licensed by State of Michigan as a Professional Counselor and Limited Psychologist. gwen@hfcc.edu	845-9751 Room LRC-117J	John Rietz, Ph.D. Instructor, English B.A., M.A., Kent State University; Ph.D., University of Michigan, Ann Arbor. jrietz@hfcc.edu	845-9822 Room L-204
Craig Priskorn, B.A. Instructor, Architectural/Construction Technology B.S., B.A., Architecture, Lawrence Institute of Technology; Licensed Architect, State of Michigan. priskorn@hfcc.edu	317-1516 Room D-164B	Lynn Rivers, Ph.D. Instructor, Biology B.S., M.S., Ph.D., Wayne State University. lrivers@hfcc.edu	845-9735 Room S-104F
Peter Putnam Jr., M.A. Instructor, English B.A., Amherst College; M.A., University of Michigan, Ann Arbor. pputnam@hfcc.edu	845-6416 Room A-239	Richard Rizzo, Ph.D. Instructor, Psychology B.A., Wayne State University; M.A., Eastern Michigan University; Ph.D., Wayne State University. rrizzo@hfcc.edu	845-6444 Room L-310
Eric Rader, Ph.D. Instructor, Political Science B.S., Eastern Michigan University; M.S., Ph.D., Wayne State University. ewrader@hfcc.edu	845-9709 Room A-206	Rhonda Robinson-Cobb, B.S. Accounting Manager, Financial Services B.S., Wayne State University. rcobb@hfcc.edu	845-9766 Room LRC-019
Layla Rahhal-Irabi, M.Ed. Instructor, Chemistry B.S., M.S., American University of Beirut; M.Ed. Wayne State University. lrahhal@hfcc.edu	845-9726 Room S-13A	Jennifer Roderique, M.A. Instructor, English B.A., University of Pittsburgh; M.A., Duquesne University. jlroderique@hfcc.edu	845-6385 Room L-235
Mary Rayhall, M.A. Instructor, Mathematics B.S.Ed., University of Michigan, Ann Arbor; M.A., Eastern Michigan University. mrayhall@hfcc.edu	845-9744 Room A-230	Paul Rodgers, M.A. Instructor, English B.A., M.A., Chicago State University. prodgers@hfcc.edu	317-6673 Room A-220
		Cynthia Roman, Ph.D. Instructor, Nursing B.S.N., Mercy College of Detroit; M.S.N., Ph.D., Wayne State University. caroman1@hfcc.edu	845-6303 Room H-120I

Paul Root, Ph.D. Instructor, Chemistry B.S., Ph.D., University of Windsor. pdroot@hfcc.edu	845-6312 Room S-10	Karen Schoen, B.A. Safety Specialist, Campus Safety A., Henry Ford Community College; B.A., Saginaw Valley State College. kschoen@hfcc.edu	845-9849 Room A-151B
Dorothy Rothgery, M.A. Instructor, Surgical Technology B.S., University of Detroit-Mercy; M.A., Central Michigan University. drothger@hfcc.edu	317-6598 Room H-133K	Kim Schopmeyer, Ph.D. Associate Dean, Social Science B.A., Michigan State University; M.A., Wayne State University; Ph.D., Michigan State University. kschop@hfcc.edu	845-6443 Room L-108
Gary Saganski, M.A. Director, Corporate Training and Skilled Trades and Apprenticeship Ph.B., Monteith College; M.P.A., Wayne State University. saganski@hfcc.edu	845-6357 Room T-172D	Andrea Seavitt, M.A. Instructor, Mathematics B.A., M.A., Wayne State University. aseavitt@hfcc.edu	845-6429 Room A-235
Adnan Salhi, Ed.D. Instructor, English B.A., Lebanese University; M.A., University of Detroit Mercy; Ed.D. Wayne State University. asalhi26271@hfcc.edu	845-6407 Room L-248	William Secrest, M.A. Instructor, History B.A., Michigan State University; M.A., University of Detroit. wsecrest@hfcc.edu	845-6441 Room L-104
Pedro San Antonio, M.A. Instructor, English B.A., Coe College; M.A., University of Michigan, Ann Arbor. psanant@hfcc.edu	317-4010 Room L-205	Timothy Seguin, B.S. Accountant, Financial Services B.S., Wayne State University. tsequin@hfcc.edu	845-9836 Room LRC-019
Elaine Saneske, M.S. Associate Dean, Business and Economics B.A., Cleary College; M.S., Central Michigan University. esaneske@hfcc.edu	845-9704 Room L-328	Susan Shunkwiler, M.S. Instructor, Nursing A.S.N., Henry Ford Community College; B.S.N., Eastern Michigan University; M.S., University of Michigan, Ann Arbor. stshunkwiler@hfcc.edu	845-9731 Room H-103B
Pamela Sayre, M.A. Instructor, History B.A., Wayne State University; M.A., University of Michigan, Ann Arbor. psayre@hfcc.edu	845-6396 Room L-111	Mark Siedlik, M.A. Instructor, Electronics/Robotics B.A., University of Toronto; M.A., Eastern Michigan University. msiedlik@hfcc.edu	845-6353 Room T-211H
Shannon Scanlon, M.B.A. Instructor, Computer Information Systems B.A., Wayne State University; M.B.A., University of Detroit. sscanlon@hfcc.edu	845-6346 Room T-162J	Sandro Silvestri, M.B.A. Director, Administrative Data and Voice A.A.S., Macomb Community College; B.S., Oakland University; M.B.A., University of Detroit. sandro@hfcc.edu	845-9769 Room ASC-215
Cynthia Scheuer, M.S. Instructor, Physical Therapy B.S., Oakland University; M.S., Central Michigan University. cscheuer@hfcc.edu	317-6575 Room H-133I	Lori Slaber, M.A. Instructor, English B.A., University of Denver; M.A., M.A., Florida State University. lslaber@hfcc.edu	845-6499 Room L-202
Ruth Ann Schmitt, M.F.A. Instructor, English B.A., West Virginia University; M.A., Ohio University; M.F.A. Southwest Texas State University. rschmitt1@hfcc.edu	845-6465 Room L-203	Carole Sloan, M.Ed. Instructor, Health & Physical Education B.S., M.Ed., Georgia State University. csloan@hfcc.edu	845-6318 Room PE-7

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Brian Smith, M.A. Instructor, Sociology B.A., M.A., Western Michigan University. bsmith@hfcc.edu	845-9830 Room A-219	Cynthia Stiller, M.A. Instructor, Political Science B.S., Michigan State University; M.P.A., University of Detroit. cstiller@hfcc.edu	845-6494 Room L-112
Diane Smith, M.B.A. Instructor, Business and Economics B.S., Lawrence Technological University; M.B.A., Wayne State University. dsmith1@hfcc.edu	845-9702 Room L-331	Kathleen Stornant, M.S.N. Instructor, Nursing B.S.N., Madonna University; M.S.N., University of Phoenix. kstornant@hfcc.edu	845-9687 Room H103-C
James Smith, Ph.D. Instructor, Physics B.S., Eastern Michigan University; Ph.D., Georgia Institute of Technology. jsmith1@hfcc.edu	845-9727 Room S-15	Nancy Stupsker, M.A. Tech Coop Education Specialist, Technology B.A., M.A., Oakland University; Licensed Professional Counselor. stupsker@hfcc.edu	845-6359 Room T-112
Toinette Smith, M.S. Instructor, Nursing B.S.N., M.S., University of Michigan, Ann Arbor. tssmith1@hfcc.edu	845-6332 Room H-203D	Marjorie Swan, B.B.A. Vice President/Controller A.S., Schoolcraft College, B.B.A., Walsh College. mswan@hfcc.edu	845-9601 Room ASC-420
Lawrence Smyrski, M.A. Associate Dean, Mathematics B.S., M.P.A., University of Michigan, Dearborn; M.A., Wayne State University. lsmyrski@hfcc.edu	845-6388 Room A-229	Debra Szymanski, M.A. Instructor, Respiratory Therapy B.S., University of Detroit; M.A., University of Michigan, Ann Arbor. Registered Respiratory Therapist (RRT). dszyman@hfcc.edu	317-6580 Room H-133F
Martin Hoyt St. John, M.A. Instructor, Industrial Drafting B.A., Western Michigan University; M.A., Wayne State University. Permanent Vocational Teaching Certificate in Drafting, State of Michigan. mstjohn@hfcc.edu	845-6337 Room T-162M	Richard Teeple, M.A. Instructor, Hospitality Chef Instructor, Certified Culinary Educator and Certified Executive Chef from the American Culinary Federation. B.S., Madonna College. Vocational Teaching Certificate; M.A., Eastern Michigan University. rteeple@hfcc.edu	845-6391 Room C-163A
Frederick Steiner, M.B.A. Supervisor, Purchasing A.B., M.B.A., University of Michigan, Ann Arbor; Certified Purchasing Manager (C.P.M.) fred@hfcc.edu	845-9897 Room B-133	Tamanika Terry-Steward, M.A. Instructor, English B.A., University of Washington; M.A., Eastern Michigan University. tterry@hfcc.edu	845-9715 Room A-202
Jolie Stepaniak, Ph.D. Instructor, Biology B.S., Michigan State University, M.P.H., University of Michigan, Ann Arbor; Ph.D., Wayne State University jastepaniak@hfcc.edu	845-9646 Room S-104H	Marilyn Thibodeau, M.S.N. Instructor, Nursing B.S.N., University of Detroit Mercy; M.S.N., Wayne State University. mthibod@hfcc.edu	845-9719 Room H-120G
Scott Still, M.A. Instructor, English A.A., Henry Ford Community College; B.S., M.A., Eastern Michigan University. smstill@hfcc.edu	845-6380 Room L-210	Margaret Thornburg, M.S. Instructor, Psychology B.S., Central Michigan University; M.S., E.D.S., University of Michigan, Ann Arbor. mthorn@hfcc.edu	845-9711 Room L-306

Pamela Thorpe, M.S. Instructor, Nursing B.S., M.S., University of Michigan, Ann Arbor. pthorpe@hfcc.edu	845-6448 Room H-103G	Maxine Wade, B.A. Specialist, Financial Aid B.A., Shaw College mwade@hfcc.edu	845-9669 Office LRC-025
Vanessa Timmons, B.B.A. Specialist, Financial Aid B.B.A., Baker College vtimmons@hfcc.edu	845-9662 Room LRC-025	Thomas Wallenmaier, Ph.D. Instructor, Philosophy B.A., Sacred Heart College; M.A., Marquette University; M.S., University of Detroit; Ph.D., Michigan State University. twallen@hfcc.edu	845-6439 Room F-142
Kevin Trovini, M.A. Instructor, English B.A., University of Notre Dame; M.A., Eastern Michigan University. ktrovini@hfcc.edu	845-9684 Room L317-3	Edward Wallish, B.S. Coordinator, Auxiliary Services A.A., Muskegon Community College; B.S., Ferris State University. edw@hfcc.edu	845-6309 Room ASC-319
Estella Turner-Radtke, Ph.D. Instructor, Biology R.N., Michael Reese Hospital, Chicago, Illinois.; B.S., University of Dayton; M.S.N., Ph.D., Wayne State University. etradtke@hfcc.edu	845-9739 Room S-104M	James Wanless, Ph.D. Instructor, English B.A., Dartmouth College; M.A., Ph.D., Wayne State University. jwanless@hfcc.edu	845-9716 Room L-211
Mark Ulseth, Ed.D. Director, Admissions & Registration A.D.D., B.T.M., Tri-State University; M.B.A., Western Michigan University; Ed.D., University of Nebraska, Lincoln. mulseth@hfcc.edu	845-6403 Room LRC-013F	Maureen Webster, Ph.D. Counselor, University Transfer, Advising, and Career Counseling Center B.S., M.A., Ph.D., University of Michigan, Ann Arbor. Professional Certification; National Board of Certified Counselors (NCC); Licensed Professional Counselor (LPC). maureenw@hfcc.edu	845-6461 Room LRC-125C
Leonard Urban, B.A. Safety Specialist, Campus Safety A.S., Henry Ford Community College; B.A., Michigan State University. lurban@hfcc.edu	845-6400 Room A-151B	Roger Weekes, M.S. Instructor, Trade and Apprentice Education B.S., Jackson State University; M.S., Eastern Michigan University. rrweekes@hfcc.edu	317-1582 Room T-164C
Dale VanDorp, B.S. Instructor, Performing Arts B.S., Eastern Michigan University. dvandorp@hfcc.edu	845-6484 Room F-141	Linda West, M.A. Director, M-TEC B.S., Eastern Michigan University; M.A., Central Michigan University. lawest@hfcc.edu	317-6603 Room M-105C
Tracie Varitek, M.A. Instructor, English B.A., Western Michigan University; M.A., University of Michigan, Dearborn. tlvaritek@hfcc.edu	845-6393 Room L-305	D. Todd Whitaker, Ph.D. Instructor, Chemistry B.S., University of Toronto; Ph.D., Wayne State University. whitaker@hfcc.edu	845-9724 Room S-13
Stewart Vining, M.S. Instructor, Biology A.S., Electronics, Henry Ford Community College; B.G.S., University of Michigan, Dearborn; M.S., Eastern Michigan University. svining@hfcc.edu	845-6449 Room S-104L	Nancy Widman, M.A.L.S. Librarian, Library B.A., Wayne State University; M.A.L.S., University of Michigan, Ann Arbor. nwidman@hfcc.edu	845-9786 Room LIB-106A

David Wiltshire, M.Ed. Associate Dean, Technology B.S., M.Ed., Bowling Green State University. djwiltshire@hfcc.edu	845-9816 Room T-115A
Heide Wisby, B.A. B.A., University of Michigan hwisby@hfcc.edu	845-9688 Room LRC-025
Kenneth Wright, M.A. Instructor, Manufacturing Engineering Technology B.S., M.A., Wayne State University. kwright@hfcc.edu	845-6331 Room T-164E
Sharon Wu, M.A. Instructor, Radiology B.A., Clark University; M.A. University of Michigan, Dearborn. swu@hfcc.edu	317-6595 Room H-133C
Leo G. Yaros, M.A. Instructor, Architecture/Construction Technology A.S., Henry Ford Community College; B.S., M.A., Eastern Michigan University. lyaros@hfcc.edu	317-1517 Room D-164A
Laura Yeakel, Ph.D. Instructor, Chemistry B.S., St. Mary's College; M.S., University of Wisconsin; Ph.D., University of Notre Dame. lyeakel@hfcc.edu	845-9721 Room S-14
Warren Yeakel, Ph.D. Instructor, Chemistry B.S., University of Idaho; M.Div., Temple Baptist Theological Seminary; Ph.D., University of Wisconsin. wyeakel@hfcc.edu	845-9725 Room S-12
Deborah Zopf, M.A. Instructor, Mathematics B.S., Purdue University; M.A., Eastern Michigan University. dzopf@hfcc.edu	845-6430 Room A-227

Appendix A

Transfer Guide and Articulation Agreement Information

HFCC- A History of Excellence

The Henry Ford Community College Counseling Office maintains over 450 transfer guides for students who want to transfer to a four-year institution in Michigan. A student can follow a particular guide and it will list courses that will transfer for a certain major to a specific institution.

Formal articulation agreements have been established which permit HFCC graduates of many career and academic programs to continue their education in certain bachelor degree programs at particular four-year colleges and universities. These agreements assure graduates the opportunity of working towards a bachelor's degree without loss of credits earned at Henry Ford Community College, providing a student selects the preferred courses listed on the articulation guides. An articulated transfer guide/agreement is for areas where HFCC does not have a concentration/program or where not all the credits from a concentration/program can be used towards completing a bachelor degree. A student can secure a copy of an articulated transfer guide/agreement for a specific school from the University Transfer, Advising, and Career Counseling Center, room LRC-117.

Appendix B

HFCC- A History of Excellence, Innovation and Success

Since 1938, Henry Ford Community College has provided an enriching educational experience for a diverse student community. HFCC serves more than 20,000 students each year of all ages and backgrounds, offering university transfer programs and associate's degree and certificate career programs that are designed for your success all at an affordable cost.

HFCC was established as Fordson Junior College and classes were held at Fordson High School in Dearborn. HFCC is operated by the Dearborn Public School District and is governed by an elected, seven-member Board of Trustees.

Today, HFCC has three campuses. The main campus sits on 75 acres donated by the Ford Motor Company, on Evergreen Road just south of Ford Road in Dearborn. All of HFCC's associate degree and certificate programs are offered on the main campus. The Dearborn Heights Center is home to HFCC's Center for Lifelong Learning. The Center for Lifelong Learning offers continuing education courses for professional and personal development. The new Michigan Technical Education CenterSM at HFCC, located on Schaefer Road in east Dearborn, is a corporate and industrial training center that specializes in customized training in high-tech, high-demand, high-wage fields. It is the only center of its kind in Wayne and Monroe counties.

A visionary program, utilizing the latest in technology and training, the M-TEC at HFCC is a 30,000 square foot specialized facility constructed entirely with a \$5,000,000 state grant for training, retraining, and updating job skills of Ford Motor Company workers, the workers of other Michigan companies, and the general public. Much of the training focuses on the critical job-skill needs of the manufacturing, steel, and information technology sectors of the Detroit-area economy. The M-TEC operates during the day, evenings, and weekends to be easily accessible to workers and the public.

HFCC has completed a 10-year master plan of renovation and new construction on the main campus. Now, HFCC has one of the most modern, up-to-date college campuses in the country with state-of-the-art classrooms and laboratories equipped with the latest technology and equipment, including a wireless network in most buildings.

HFCC is committed to giving you the best educational experience. Come and be part of our community of excellence!

Appendix C

HFCC Foundation

The Henry Ford Community College Foundation was established by the HFCC Board of Trustees in 1982 as a tax-exempt organization for the explicit purpose of raising funds in support of the College's mission and academic programs. The management and control of the Foundation's property and activities are vested in the Board of Directors, a group of business, labor, and community leaders from southeastern Michigan committed to the mission and philosophy of service to the College. Contributions to the Foundation are tax deductible to the extent provided by law.

The College welcomes donors who may be interested in starting a scholarship or contributing to existing development initiatives. Scholarships provide financial resources beyond the capabilities of the College. The generosity of these individuals makes higher education a reality for many of our students. If you are interested in donating to the College, please call the Foundation Office at 313-845-9620 or visit www.hfcc.edu/foundation.

The College offers hundreds of scholarships yearly. The list on the next page summarizes all of the available scholarships. To apply for a scholarship, please visit our Web site at www.hfcc.edu/scholarships or call 313-845-9620.



OFFICE OF DEVELOPMENT

2008 SCHOLARSHIPS

At Henry Ford Community College we believe in rewarding academic excellence by helping to finance your education through scholarships. As you can see from this Guide, scholarships are available to support students from diverse backgrounds and interests who seek a college education in a wide variety of programs on campus.

There may be money waiting to help you realize your goals. Select the scholarship that is right for you. Complete, if appropriate, the "Free Application for Federal Student Aid"; then apply for scholarships by using the HFCC General Scholarship Application. For further information on a scholarship for your future contact the Henry Ford Community College Office of Development by calling 313-845-9620.

These scholarships are made possible by generous alumni, other friends of the College, local businesses, faculty, staff, and the Board of Trustees who believe in the value of education and in your future. **Minimum of 6 credit hours unless stated otherwise. Application deadline is May 1, 2008.**

KEY

* This is an endowed scholarship. Award amount depends on endowment earnings.

T Tuition F..... Fees HS ... High School
B..... Books O..... Other C..... College

Categories of Scholarships	Maximum \$ One Award	GPA	High School or College	Fields of Interest	Min. Hrs. Per Sem.	Other Criteria	T	F	B	O
Alberta Muirhead Honors*	Up to \$500	3.50	3.2 Min./Class	Honors		Must Maintain a 3.5 GPA with No Single Semester GPA Below 3.2				
Alberta Muirhead Nursing*	Up to \$500	3.50	High School/College	Nursing	6.00	Enrolled in Nursing Program; Current Student				x x x
American Association of University Women	Varies		6 cr. Hrs./College			Minimum 25 Years of Age; Academic Achievement; Returning Adult Student; Financial Need				
Andreas Seavitt	\$500	3.00		Math/Eng.						x x x
Andrew A. Mazzara*	Up to \$500	3.00								
Anita & Benjamin Bachrach*	Varies	3.00		Art/Music						
Antonio & Concetta Mazzara*	Up to \$700	3.00	High School/2.5 College		9.0	Must be Planning to Continue Education; Submit a Letter Explaining Your Plans for Your Life Applicant/Parent Naturalized Citizen; Submit 100-200 Word Essay <i>Importance of Family</i>				x x x
Arthur & Elizabeth Rosenau*	Up to \$1000	3.00			9.00	Cannot Pay More Than 75% of Tuition; Award is \$500/Semester				x
Arthur Bokatzian*	Up to \$650	2.50		Culinary Arts		3.0 in Culinary Arts; Evidence of Curricular Activity in Culinary Arts Field; Current Student; Letter of Recommendation				x x x x
Arthur Jefferson*	Up to \$200	3.00	High School	History	9.00	Needed, But Not Eligible for Financial Aid				x x x x
Arthur Thomas	\$500	3.50	College	Business		Pre-requisite: 6 cr. Hrs. of History; Must Take a Directed Study Class in History; Current Student				x x x x
Beverly Duquette Endowed/Memorial	\$500	2.50				Enrolled in Administrative Information Systems Management Courses/Program				x x x x
Bobbie Jo Komisar	\$500	3.00	High School or College			Letters of Support Documenting Community Service/Care				x x x x
Charles Rapp*	Up to \$600	3.50	College/15 Cr. Hrs.	Manufacturing/Technology		Current Student; Incoming Student				x x x x
Christopher Dunn*	Up to \$600	3.00	HS/3.5 College	Fine Arts		Composite ACT/SAT at 70%; Submit Portfolio - Awarded by Fine Arts Department				x x x x
Civic Leaders*	Up to \$250	3.00	HS/College	Civic Involvement		Essay (<i>Civic Involvement</i>); 2 Letters of Recommendation Verifying Civic Activities				x x x x
David & Barbara Schloff	Varies			Nursing		Must be Accepted to the Nursing Program - Selected by Nursing Department; Current Student				x x x x
David Cobb/Kiwanis Outer Dr.*	Up to \$350	2.80	High School/College			Essay <i>Why I Should Receive This Award?</i> ; Financial Need				x x x x
David R. Rosteck Memorial	Varies	3.00		Athletics		Award for a Member of the Golf Team; To be Awarded By the Athletic Director				x x x x
David Wygonik Memorial	\$500			Journalism/Pre-Law/Political Science		Preparing for Career in Journalism, Political Science, Pre-Law; Community Service or Extracurricular Activities				x
Dearborn Federal Savings Bank	\$750	2.75	High School/College			No Dearborn Federal Savings Member; Dearborn/Dearborn Heights Resident				x x x x
Dearborn Federation of Teachers Retirees Chapter	\$500					Dearborn School Graduate				
Dearborn Kiwanis Key Club	\$500	3.00	High School			Active Key Club Member; Edsel Ford High School Graduate				x x x x
Dearborn PTA	\$500	2.75	High School			Must Work/Volunteer; Financial Need; Current Student; Incoming Student; Returning Adult Student;				x x x x
Dearborn Rotary Club*	Up to \$500	3.25		Nursing	12.00	Full Time First or Second Year Student in the Nursing Program; Evidence of Community Service; Financial Need				x x x x
Dearborn Federation of School Employees (DFSE)	\$500	2.50				Only Dearborn Federation of Schools Employees Members or Family Members				x x x x
Donald & Mary Kosch*	Up to \$1000	2.75		Athletics		High School Academic Achievement; Outstanding Athlete; Financial Need				x x x x
Dorothy L. Walls	Varies					Financial Need				x x x x
Dorothy Mireck*	Up to \$1500	3.25	32 Cr. Hrs./College			Associate Degree; Must Expect to Graduate at the End of the School Year; Current Student				x x x x
Douglas Balsis	Up to \$500	2.75				Evidence of Community Service/High School Activities; Allen Park Graduates				x x x x
Douglas W. Lowe Memorial	Varies	2.50		Criminal Justice		Child of an Active or Retired Dearborn Police Officer; Dearborn Resident; Submit a Brief Statement of Goals and Aspirations.				

Categories of Scholarships	Maximum \$ One Award	GPA	High School or College	Fields of Interest	Min. Hrs. Per Sem.	Other Criteria	T F B O
Dr. J. Michael & Mrs. Margaret Meade	\$500					Must be a Member of the HFCC Volleyball Team	X X X
Dr. Mark B. Saffer	\$500	2.50		Nursing		General Education with Financial Need (Without Federal Support)	X X X X
Edith Chadwick Memorial	\$500					Lincoln Park School Graduate	X X X X
Eduardo & Rosaria Bruno*	\$500	2.50	College/30 Cr. Hrs.	Technology/ Engineering/ Industrial	30 Cr. Hrs.	Student From Union Family Preferred (UAW Preferred); Labor Union Background; Current Student; Financial Need; Write Brief Statement on <i>The World of the Working Man</i>	X X X
Emilie Eysel/Mitchell Endowed*	Up to \$500	2.50		Hospitality/Business Science		Submit Letter of Appreciation and Designation of Field of Interest	X X X
Eugene A. Forfa Memorial*	\$1,000					Prefer Fordson High School Graduates	
Exchange Club of Dearborn* Endowed	Varies					Financial Need	X X X
Focus on Women*	Varies	2.50				Selected by FOW Department; Current Student; Incoming Student; Returning Adult Student; Financial Need	
Ford-EEOC*	Varies					Women and Minorities Who Are Employees of Ford Motor Company; GPA Selected	
Frances G. Barrett	Up to \$500			Creative Writing/ English		Creative Writing Field of Study; Entries May Be Personal Essays, Short Stories, Poetry or Drama; Research Papers Not Allowed; Two Typed Copies of Each Item Must Be Enclosed; Contestants Must Not Reveal Their Names on the Manuscripts	X X
Frank & Barbara Darin*	Up to \$500			Nursing		Must be a 2nd Year Student; Current Student	X X X
Frank G. Franchi Endowed*	Varies					Financial Need	X X X
Fred & Barbara Brandenburg	\$500	3.00		Nursing		Academic Scholarship; 2nd Year Student; Current Student; Financial Need	X X X X
Frederick P. & Violet Sharpe*	Full Award	3.00		Business	12 Cr. Hrs.	Required Major: Business Administration Information Technology	X X X X
Garden Club of Dearborn*	Up to \$500	3.00	College/30 Cr. Hrs.	Environmental Science	Completed 30 Cr. Hrs.	Field of Study; Biology Department Selects; Current Student	X X X
Gene Haa Manufacturing	Up to \$1000	2.00		Manufacturing/CNC		Must Write 500 Word Essay <i>Why You Should Receive This Scholarship Including Your Interest in CNC/Manufacturing</i>	X X X X
Genevieve Czamecki Endowed*	\$500			Nursing		Selected by Nursing Department; Current Student	X X X
George & Helen Martin*	Up to \$900			English		Fordson High School Graduate	X X X
Gloria Ankeny Memorial*	Up to \$500	2.50		Teaching		2 Letters of Recommendation; Brief Statement of <i>Goals and Challenges Faced</i> ; U.S. Citizenship Not Required; Female Preferred; Dearborn Schools Graduate; Financial Need	X X X X
Harold King*	Up to \$600	3.50	College/24 Cr. Hrs.	Organized Labor		Essay 500 words <i>Contributions of Organized Labor to American Society</i>	X X X
Harry & Edith Miller Memorial*	Up to \$550	3.20	High School/College			One Year Only; Not Eligible for Other Financial Aid	X X X
Helen C. Smith Endowed*	Varies					Financial Need	X X X
Helen Hackett*	Up to \$1000	3.50	College/15 Cr. Hrs.	Nursing		Demonstrated Interest in Campus or Community Activities	X X X
Helen Szeslicki Endowed *	Up to \$500	3.20				Prefer: Polish Heritage; Nursing; Current Student	X X X
Helen Wornell	Varies					Financial Need	X X X
HFCC Alumni Association*	Up to \$800	2.50	High School/College	Nursing	12.00	Nominated by Alumni; Community Service Involvement	X X X
HFCC College Store	\$250	2.50		Nursing		Nursing Student Preferred; Current Student; Financial Need	X
HFCC Foundation Board	\$1,000	3.00			6.00	Financial Need Considered	X
Hood E. Biggers*	Up to \$550	3.00	High School	Athletics	12.00	Fall Term/Played Varsity Athletics	X X X
Ida Murray *	Up to \$500						X X X
Industrial Drafting	\$500	2.75	3.25 College	Drafting	12.00	Pre-requisite of 4 Basic Drafting Classes; Current Students; Financial Need	X
Jack Demmer*	Up to \$500	2.50	High School	Radiographer/ Pre-Elementary Education		Divine Child Graduate; Selected by Divine Child Staff; Financial Need	X X X
James & Betty Davies	Varies	2.50				2nd Year Student in Radiology or Pre-Elementary Education; Current Student	X X X
James & Darlene Schoolmaster	\$500						X
James R. Stokes & Frederick W. Hoffman	1/2 Tuition	2.50	High School GPA 2.75	Public Administration or Related		Gay Individual or Natural or Adopted Child of Gay Parent; SE Michigan Resident	X
John E. Grenke	\$500			General Studies		Returning Adult	X X X X
John Kohnke	\$500			Nursing		Enrolled in Nursing Program; Current Student	X X
John R. & Margrite Davis						Financial Need	
Joseph & Veronica Hallissey*	Up to \$1000	3.20	High School/College			Preference Given to Needy Students Without Financial Aid	X X
Joseph Knappp	Up to \$900	3.25	College/12 Cr. Hrs.		9.00	Older Student; Returning Adult Student; Financial Need	X X
Kalmeta Family Fund	\$500	2.50		Pre-Education	6.00	Majoring in Pre-Education	X X X X
Karcher Agency	\$500			Nursing		Enrolled in Nursing Program; Current Student	X X X
Karl & Doreen Fava Endowed*	\$500			Accounting			X X X
Karl Yoke teaching*	Up to \$500	3.00		Pre-Education		Evidence of Community Service and Extra Curricular Activities	X X X
Ken Wright CNC	Up to \$750	2.00		Manufacturing/ CNC	9.00	Must Submit a 500 Word Essay <i>Describing Your Interest in CNC Manufacturing and Why You Should Receive This Scholarship</i>	X X X X

Categories of Scholarships	Maximum \$ One Award	GPA	High School or College	Fields of Interest	Min. Hrs. Per Sem.	Other Criteria	T F B O
Kenneth Anderson Endowed*	Up to \$1200	2.00	HFCC /10 Cr. Hrs.	Hospitality		Evidence of Extra Curricular Activity in the Hospitality Field; Submit a Letter Stating Why They are Seeking a Career in the Hospitality Industry; Current Student	x x x x
Kiwanis Club of Dearborn Heights*	\$500	2.50			9.00	Not Eligible for Federal Grant; Civic Involvement; Dearborn Heights Resident	x x x x
Kiwanis Club of Dearborn*		3.25	High School/College			Proof of Community Service; Dearborn or Dearborn Heights Resident	x x x
Kyle Dodge	Up to \$500	2.50		Legal Assistant		Must Join and Be Active in the LAAN or Criminal Justice Clubs; Award is \$200 for the First Semester; \$300 is Awarded for the Second Semester Upon Receipt of Letter From Club President Verifying Club Membership and	x x x
Lawrence R. Anderson	Varies	3.00	English	Business		Participation; Current Student	x x x
Lorne N. Colter Poetry Award	\$100	3.00				Must be in the Business Field	x x x
Louie & Eleanor Mancinelli	Varies	3.50		Dance		Creative Writing Field of Study; Submit Personal Essays, Short Stories, or Poetry, Drama; Research Papers Not Allowed; 2 Typed Copies of Each Item Must Be Enclosed; Contestants Must Not Reveal Their Identity on the Manuscripts.	x x x x
Margaret E. Henry*	Varies					Serious Dance Students Involved in the Dance Company or Dance Classes at HFCC. Strong Ethics and Academic Standing; Current Student	x x x x
Margaret Sauer*	Up to \$600	3.25	College/15 Cr. Hrs.	Nursing		Enrolled in Nursing Program; Current Student	x x x
Marie Louise Hickey*	Varies	3.25		Art		Must Submit a Portfolio to the Art Department; Awarded by Art Department	x x x x
Mark & Karen Bewick Memorial*	Up to \$500	3.25		Science		Current Student; Financial Need	x x x x
Martha M. Montgomery	Varies			Engineer/Journalism/Advertising			x x x x
Mary & Vincent Bruno	\$500	2.50	College/30 Cr. Hrs.	Nursing		Must be Accepted in the Nursing Program; Current Student	x x x x
Mary Huchia Bugaiga*	Varies		College	Technology/Engineering/Industrial		Student from Union Family Preferred; (UAW Preferred) Labor Union Background; Write Brief Statement of The World of the Working Man; Current Student; Financial Need	x x x
Mary Joan & Anthony E. Woods	\$500	3.50		Nursing		Enrolled in Nursing Program; Student Selected by Nursing Department; Current Student	x x x x
Mazen Saleh Memorial*	Up to \$500	3.20		English		Must Submit a Writing Sample; English Department Will Select For Individuals in the Midst of Major Life Changes; M. Assel Serves on Selection Committee; Current Student	x x x x
Michael & Shannon Scanlon	Up to \$500			CIS/Pre-Education		Returning Student Over 21 yrs. of age; Major: Pre-Education or CIS; Incoming Student or Returning Adult Student	x x
Michael Adray Endowed*	Up to \$2000	3.00	High School/College			Civic Involvement; Submit a 300-500 Word Essay <i>Entrepreneurship or Civic Responsibility</i>	x x x
Michael & Deborah Zopf	Up to \$1000	\$500	High School/College	CIS/Pre-Education	12.00	Pre-Education Program; Financial Need	x x x
Michael Berry Endowed*	Varies	3.00		Civic Involvement		Evidence of Civic Involvement, One Parent Naturalized Citizen From Middle Eastern Country	x x x
Michael D. Brown Endowed	Varies	3.00		Pre-Education		Preparing for Career in Pre-Education, Participation in Community Service and Extracurricular Activities	
Mottillo-Jodocy Scholarship	\$500	2.50		Teaching	9.00	Pre-Education Major	x
Nancy Bryden*	Up to \$400	3.00	College Sophomore	Athletics	9.00	Fall Term; Member of the Softball Team; Display Extraordinary Sportsmanship; Current Student	x x x
Optimists Club of Dearborn	\$500	2.00			9.00	Submit 2 Letters of Recommendation to Verify Civic Volunteerism and/or Service Activities	x x x
Outer Drive Hospital*	Up to \$500	3.00		Allied Health Field		Enrolled in an Allied Health Program; Financial Need	x x x
Pam Cervi Memorial	\$500			Pre-Education		Must Be in Pre-Education Program	x x x
Pat & Jim Doyle*	\$500	2.50		Business	9.00		x
Patrick Clack	\$600	3.00		Journalism	12.00	Must Be a Full-Time Student; Journalism Major	x x x
Pay/It Forward	Up to \$500	2.00				Must Write an Essay Reflecting on the Movie, "Pay It Forward"; Financial Need	x x x
Phyllis & Donald Dodge	Varies			Nursing		Enrolled in Nursing Program; Current Student	x x x
President's Scholarship	Varies					Financial Need	
Raymond & Helen Steslick*	Up to \$500	3.20		Nursing		Perfor Polish Heritage; Nursing Program; Current Student	x x x x
Raymond Spencer*	Up to \$600	3.20	College/15 Cr. Hrs.	Math/Science/Engineering/Statistics		3.5 GPA in Math; Current Student; Incoming Student	x x x
Rebecca & William Horvath	\$500					Financial Need	x x x
Returning Adults	Up to \$1000						
Robert Knoop Memorial*	Up to \$500	2.50		Firefighter/Paramedic		Child of Dearborn Firefighter Preferred or Graduate of Dearborn School District; Evidence of Community Service; Entering into Firefighter/Paramedic Program; Write a Brief Statement of Goals or Aspirations	x x x
Robert Oris	Varies			Performing Arts		Dearborn Schools Graduate	
Ronald D. Anspaugh	\$500					Enrolled in Performing Arts Program	
Ronie DeJohn*	Varies	3.00			12.00	Financial Need	x x x
Sharon Kaczmarczyk Memorial	\$1,000	2.50				Live in HFCC District; Show Civic or Community Involvement	x x x
Stephen Brandt Memorial*	Up to \$500		PHYS 131 Required	Physics/Science		Student in PHYS 131 Who Will Be Taking PHYS 132; Current Student	x x x

Categories of Scholarships	Maximum \$ One Award	GPA	High School or College	Fields of Interest	Min. Hrs. Per Sem.	Other Criteria	T F B O
Stephen J. Long*	Up to \$500	3.00		Business Accounting	12.00	Dearborn Resident; Financial Need	X X X X
Stuart & Carol Waddell	\$500	3.00	High School/3.0			Evidence of Community Service; Incoming Student	X X X X
Susan K. Hedge	Up to \$500					Homemakers Only; Apply to Focus on Women Program	X X X X
Susan Ryan	\$500	3.00		Pre-Education			X X X X
Tabitha's Light	Varies; Min. \$500					Current or Former Student of Vista Maria (Dearborn Campus); Current Student; Incoming Student; Returning Adult Student	X X X X
Tarik & Helen Daoud*	\$500			Hospitality		Must be a Hospitality Student	X X X X
Wallace Smith Family*	Up to \$500	3.00				Returning Student With Extended Absence From Formal Education; Incoming Student	X
Walter & Rita Talamonti	\$500						X X X X
Ward Aurich	\$500			Nursing		Text Books Only; Financial Need	X X X X
Wayne County Reading Council	Varies	2.50		Pre-Education		Financial Need	X X X X
DEPARTMENTAL SCHOLARSHIPS							
Architectural ACT Golf Tournament				Architecture/Construction			X X X X
Art Foundation	Varies			Art		Concentration in Ceramics and Pottery	X
Art History	Varies			Art		Concentration in Ceramics and Pottery	X X X X
Ceramics Fund	Varies			Fine Arts		Focus on Ceramics; Awarded by Fine Arts Department	X X X X
Czamecki Nursing*	Up to \$500			Nursing		Student Selected by Nursing Department	X X X X
Dance Scholarship	Varies			Dance		For Serious Dance Students Involved in the Dance Co. or HFCC Dance Classes; Strong Academic Standing and Ethics; Current Student	X X X X
ENT, Power, ICT	Varies		College	Engineering/Technology		Power/Instrument Fields; Contact Jim Martini or Jim Knace; Current Student; Incoming Student; Returning Adult Student	X X X X
Fifty-One O One Award	\$750			Hospitality		Student Selected by Hospitality Department	X X X X
Focus on Women Emergency Fund	Varies					Student selected by Focus On Women (FOW) Department; Financial Need	X X X X
Graphic Design	Varies					Awarded by Fine Arts Department; Art Student	X X X X
Henry Ford II Honors*	Full Tuition	3.50	Graphic Design High School/3.5 College	Honors Program	8.00	High School 80th Percentile or better on ACT/SAT scores	X
Honors Program	\$500	3.50	High School/3.5 College	Honors Program		High School 80th Percentile or better on ACT/SAT scores	X
Hospitality	Varies	2.50	College	Hospitality		Single Parent/Displaced Worker; Prefer Past Hospitality Worker; Returning Adult	X X X X
Hyatt Regency Dearborn	Varies			Hospitality/Culinary Arts		Student Selected by Hospitality Department; Current Student	X X X X
Ice Carving	\$500	2.00		Hospitality/Ice Carving	6.00	Active Member of Ice Carving Club; Current Student	
Industrial Drafting	\$500	2.75		Drafting	12.00	Must Have Completed 4 Basic Level Drafting Classes (DRAF 110, 20, 130 and 140) With a Minimum 3.25 GPA; Current Student	
Interior Design	Varies			Fine Arts		Awarded by Fine Arts Department; Art Student	X X X X
Math Scholarship	Varies			Math			X
Music Department	Varies			Music			X X X X
Nursing Merit	\$500	3.20	College	Nursing		1st Year Nursing; Extra Curricular Activities; Non-Financial Aid; 300 Word Essay <i>Public Image of Nursing</i> ; Current Student	X X X X
Performing Arts Scholarship	Varies			Performing Arts		Enrolled in Performing Arts Program; Selected by Performing Arts Department; Current Student	
PTDA Industrial Distribution	\$100	2.00		Industrial Distribution		Pays for Tuition/Books for BBA 161-Introduction to Industrial Distribution	X X
Rich Mitchell Memorial	\$500			Music		Awarded by Music Department; Contact Fine Arts Department 2 weeks prior to Beginning Semester	
SNA Needy Nurses	Varies			Nursing		Enrolled in Nursing Program; Must Join SNA Organization; Current Student	
Special Needs	\$1,000			Special Needs	9.00	Certified by Counseling Department as Meeting Special Needs Requirements	X
Zudick Hospitality Endowed*	Up to \$750	3.00	High School/College; 15 Cr. Hrs	Hospitality	10.00	Awarded by Hospitality Department; 2 Letters of Recommendation; Minimum 10 Cr. Hrs. in Hospitality; Evidence of Volunteer Work in Hospitality	X X X X
Zudick Music Endowed*	Up to \$750	3.00		Music	12.00	Outstanding Talent in Performing and Music Ability; Participate in at Least Two HFCC Choral Ensembles; Current Student	X X X X
HIGH SCHOOL AWARDS							
High School Community	\$1,000	3.20	High School			Selected by Local High Schools; Apply to School Counselor; Incoming Students	

Appendix D

Optional General Education Requirements for students first enrolled at HFCC before Fall 2005 who will graduate no later than May 2008

All students receiving an Associate Degree are required to meet General Education Outcomes. Henry Ford Community College defines General Education as courses and/or learning experiences that enable students to attain the knowledge and skills needed by every college graduate. General Education establishes a foundation of skills and understandings to enable success in employment and further education. In line with its belief that General Education competence should be defined by the College to meet the needs of the external communities in which its graduates must function, HFCC has collected and restated expectations identified by employers, alumni, and four-year colleges. The General Education Outcomes reflect those expectations. To receive an Associate Degree from the College, students must earn a passing grade in at least one of the courses (or pairs of courses) listed for each General Education Outcome.

Students first enrolled at HFCC before Fall 2005 who will graduate no later than May 2008 have the option of meeting the requirements listed below or on page 17. However, all students applying to graduate after May 2008 or who enroll for the first time at HFCC in Fall 2005 or later must meet the General Education Outcomes listed on page 17.

General Education Outcome #1

American Social/Political Institutions

Courses Meeting General Education Outcome #1

POLS 131	Intro to Amer Govt and Political Science	3 Cr. Hours
SSC 131	Survey of Social Sciences	3 Cr. Hours

General Education Outcome #2

Computer Literacy

Courses Meeting General Education Outcome #2

ACT 112	Computers in Architecture	1 Cr. Hour
AH 125	Survey of Computer Med Info Sys	3 Cr. Hours
ART 275	Advanced Projects (Graphic Design)	3 Cr. Hours
BCA 140	Microcomputer Apps for Business	3 Cr. Hours
CIS 100	Intro to Information Technology	3 Cr. Hours
CIS 221	Instructional Tech for Elem Educators	3 Cr. Hours
CIS 223	Instructional Tech for Sec Educators	3 Cr. Hours
HCS 131	Computers and Health Care	3 Cr. Hours
HIT 161	Medical Information Processing	2 Cr. Hours
MFMT 103	Industrial Computer Orientation	2 Cr. Hours
TAFD 115	Computer Apps for Skilled Trades	2 Cr. Hours
CLT 100	Computer Literacy Test	0 Cr. Hours

Students who have already learned the required Computer Literacy competencies may meet the requirements by signing up for CLT 100 and passing the Computer Literacy Test. CLT 100 consists of only one class session when the Computer Literacy Test is given.

General Education Outcome #3

Critical Thinking

Courses Meeting General Education Outcome #3

Any non-activity based course numbered 100 or higher will meet the requirements of General Education Outcome #3.

General Education Outcome #4 & #5

English Language Proficiency

Courses Meeting General Education Outcome #4 & #5

ENG 131	Composition I <i>and</i>	3 Cr. Hours
ENG 132	Composition II	3 Cr. Hours
<i>OR</i>		
ENG 131	Composition I <i>and</i>	3 Cr. Hours
ENG 135	Business and Technical Writing	3 Cr. Hours

General Education Outcome #6

Physical Education

Courses Meeting General Education Outcome #6

2 credit hours in any HPE or HPEA courses.

Important notes on courses that meet General Education requirements:

- 1 Courses required in the curriculum for particular programs may also fulfill General Education requirements. Students should carefully compare the course requirements for their program with General Education requirements to ensure that they enroll in the most efficient manner possible.
- 2 Particular programs may recommend that students take specific courses meeting General Education requirements for the purpose of transfer to other colleges and/or universities. Students should check the transfer requirements for the college and/or university they plan to attend to ensure they enroll for the appropriate required courses. See the HFCC University Transfer, Advising, and Career Counseling Center for information on transfer requirements.

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