



Henry Ford Community College

Technology Investment Fund

Project Funding Request

This application form with original signatures must be received by the Vice President/Controller's office by 4:00 p.m. on either the **first Friday after Labor Day** (Fall semester) or the **third Friday in January** (Winter semester) in order to be eligible for funding. Applications will only be accepted on this form. Applications must include an Executive Summary which will be shared with the Campus Community. (**Attach additional sheets for any section needed.**)

Date of Application: Jan. 17, 2013		Project Type: <input checked="" type="checkbox"/> New <input type="checkbox"/> Upgrade/Expansion	
Project Director: Mark Siedlik Department/Division: ELEC. TECH./ TECHNOLOGY		How many students will directly benefit from the project? 160-175	Total TIF Funds Requested: \$38,394
Problem Statement			
Define the problem/idea. (What do you want to do? Why?)	<p>Adopt the Robot manufacturer that is industry leader and has been chosen by Ford and GM as their robot of choice. Since the College, a couple of years ago, financially supported the adoption of new Programmable Logic Controllers and new touch screen controllers Ford will be sending their Electricians and Engineers to HFCC for re-training. Purchasing the Fanuc Robot and the Certified Education Robot Training (CERT) Program would cover the major new technologies Ford has adopted for the launch of new vehicles. The CERT program will allow 20 students to use software valued at \$25,000 per seat to do online programming and simulation. The proposal also includes a vision inspection system which our advisory committee strongly urged incorporating into our curriculum. There is a massive need for technicians and engineers with training on the Fanuc Robot and software. More and more job descriptions are asking for Technicians with programming skills with the Fanuc robot.</p>		
Evidence for Project Validity (What is the current situation?)			
What resources do you have/use now?	Currently we have one Motoman Robot and three Fanuc robots. A fourth Fanuc robot will allow us to offer a course on Fanuc robots leading to Fanuc certification. Fanuc charges \$23,000 for a one week certification class.		
Why can't you use your existing resources to do this project? T	Motoman does not offer the massive educational package nor discounts on their online software that Fanuc offers.		
What evidence do you have that this project will be successful? (Cite specific information.) <ul style="list-style-type: none"> • Current research • Examples from other schools or teachers • Letters of support from experts in the field • Your own past experience. 	<p>Fanuc is the world leader in Robotics controlling 55% of the market. Number two in the field is ABB with 14% of the market share and Motoman with 7% of market share. See letter of endorsement from Ford's Manager of Powertrain and Process Development Launch Planning and Workforce Readiness Department Willy Kaulfersch,</p>		

Relevance to Technology Investment Committee Guidelines

(Address only those that apply.)

INNOVATION:	
Is the proposal innovative to the field of Instructional Technology?	<ul style="list-style-type: none"> • The 25 seats that are part of this proposal will allow students access to Fanuc's eLearn (Web) training courses. Which features the following: Easy-to-use interface for simple navigation • Access to specific content through modules that target specific areas of interest or need • Automatically bookmarks progress through the course based on username logon and password identification, making identification of completed modules easily recognizable • Provides printable Quick Reference Guides for step-by-step instructions to accomplish specific tasks for future reference.
Is the proposal innovative to HFCC?	Yes, currently HFCC has a monopoly in the state on PLC training. This purchase will add the final missing piece in Automation skills training.
Is the proposal innovative to the specific discipline?	Yes, the College does an excellent job of training people in automation. However, when it comes to "Robotics" we were limited to floor space and cost of one physical robot. With the 25 software seats robot simulation software and eLearn (Web) training courses that limitation is removed.
NEED:	
Is the proposal essential for the instructional design?	Yes. This summer we piloted a new course in Automation/Robotics that covered the new plc and the new Human Machine Interface. By this winter I would like to pilot a course in the new Robots and curriculum. This will allow the student to become a certified Fanuc robot technician at HFCC.
Does it create new programs or courses with the potential for increased student enrollment?	Yes. Please see above. Our enrollments are up 40% over the last two years.
Is it necessary to remain competitive with post-secondary institutions?	Yes. Macomb is offering Fanuc certification.
Does it provide skills that are transferable to the workplace?	Yes, Ford has approached the College to re-train their Electricians and Engineers. Ford and GM have adopted the Fanuc Robot as the robot of choice for any new launches.
Does it prepare students for transfer to upper-level curriculum?	We have a 3+1 articulation agreement signed with EMU. We also have transfer agreements with Lawrence Tech. and Wayne State if student want to acquire a four year Bachelor of Electrical Technology. We could have more guest student coming here for this advanced training.

Relevance to Technology Investment Committee Guidelines (continued)

(Address only those that apply.)

<p>Does it keep the course or program current in the related technology?</p>	<p>It keeps the program at the cutting edge. The proposal also includes a vision inspection system which our advisory committee strongly urged incorporating into our curriculum</p>
<p>NATURE OF PROPOSAL:</p>	
<p>Is the proposal a component of curricular revision?</p>	<p>It will add an online component to our program</p>
<p>Is it the next logical step in the evolution of the course/curriculum?</p>	<p>Yes, it will add the next class sequence to our program.</p>
<p>Will it help attract students to HFCC?</p>	<p>When you are the only College placing student in high skill, high demand, high paying jobs, which in itself is a marketing tool. Many of the current population of Engineers, Technicians, and maintenance personnel will have to come to HFCC to be retrained. We currently have a small group of four years Bachelor of Electrical Engineering Technicians in industry that are making 75-100k a year. I would like to see this former Alumni group grow.</p>
<p>Will it support HFCC community outreach/public relations activities?</p>	<p>Currently Corporate Training has 10 weeks of student enrollment booking T 236. Ford wants to send engineering and trade personnel from four of their plants to HFCC</p>
<p>Will it support student retention activities at HFCC?</p>	<p>Absolutely. Placement in high paying jobs is a great retention tool.</p>
<p>Will it become an integral part of the course, program or curriculum?</p>	<p>It is a key component to a course in Advanced topics in Robotics.</p>

Resources

Where will the project hardware be installed?	T 236	
Who will do the job? • List the personnel • List their duties	Mark Siedlik. Most of the training is on line. However, Mark Siedlik will be required to attend a one week Certification course at Fanuc in Auburn Hills.	
Who will use the hardware?	Students in the Tech, Trade and Engineering fields.	
Who will conduct any necessary project-hardware training?	Mark Siedlik	
Who will handle any spring and summer semester duties related to hardware installation?	Mark Siedlik	
Do you have commitment from your administration for personnel support? <i>(Be specific, include documentation.)</i>	Yes, Mr. Livermore has committed. However, the work will be done by Mark Siedlik	
Is release time required to complete this project? If yes, has it been approved at this time by your Associate Dean?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>TIF does not fund release time. If you are requesting release time, it must be approved by the appropriate administrators prior to proposal submission.</i>

Evaluation

(How will you know if it worked?)

How will you demonstrate to the college that this was an effective use of funds? *(How will you evaluate the goals listed as Expected Outcomes?)*

I will survey our students and Technical Advisory Committee

How will you determine the success or shortcomings of the project?

I will survey our students and Technical advisory Committee. After this equipment and curriculum is implemented, and once it is marketed we should see an increase in enrollments.

Budget

(You must also include an itemized budget statement.)

What do you need to complete this project? *(Be specific about equipment, software, and training.)*

6 axis robot and controller \$28,895
 Mobile training enclosure, transformer, compressor, and tooling \$7000
 Roboguide software, instructor training, 25 student seats \$7000
 Vision guidance hardware & software \$3340
TOTAL COST \$38394

Industry pricing \$339180

What is the TOTAL COST? *(You must attach an itemized cost analysis with this proposal.)*

See attached quote

How recent is your quote?

Jan. 9, 2013

Are changes to the college infrastructure necessary to support this project?

Yes No

If "yes" provide an explanation from the Directors of Data & Voice and Buildings & Grounds, and from the Administrator in charge of the affected room(s).

What other monetary commitments exist? *(Department/Division/ External) Please be specific; include documentation wherever possible.*

None

<p>If other sources of funding are not available, why?</p> <ul style="list-style-type: none"> • Doesn't have the support? • Not viewed as feasible? • Not a priority? • Other? 	<p>Many of our courses filled up in the first day. Our students pay TIF fees. HFCC Electrical Technology Department is known for high quality labs, I would like to maintain that reputation.</p>
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Strategic Plan

Include with your application a document that indicates the ways in which your project addresses the goals and objectives of the Henry Ford Community College Strategic Plan. Also, indicate how your project addresses your Division or Department plan. Be as specific as possible.

1a) Expand the delivery of online courses, programs, and services and ensure that all instructional and support service components are appropriately in place.

The Fanuc proposal has 20 eLearning seats for two of their courses. The two courses represent about 30 hours of instruction.

IIa) Provide academic programs and specialized training opportunities to contribute to the economic development of the region.

Ford has approached the College about training personnel from four of their local plants.

IIIa) Ensure that HFCC students are prepared with the knowledge and skills required to successfully live and work in a rapidly-changing, global economy and society.

V) Develop new and strengthen existing collaborative relationships that benefit the College and its constituents

Ford is the major employer and tax payer in the Dearborn area.

VII) Provide academic programs and specialized training opportunities to contribute to the economic development of the region.

Ford has approached the College about training personnel from four of their local plants. Also, the majority of the workers in the electrical industry can retire in the next Three to five years.

If your proposal is Non-Instructional (Library Services, Learning Lab, Counseling, Placement Services), please skip this section and complete the information in the Non-Instructional section.

Instructional Proposals

Complete this section if this is an Instructional Proposal, directly impacting student teaching and learning.

Expected Outcomes

(Project Objectives)

What is your current teaching method? How will this project fit into your current plan?

The current method is lecture/lab with lab being 70% of a four hour class. This is somewhat misleading since most students spend 6-10 hours a week on these 4 hour classes. This project will add an online component.

How will this improve student learning? (List specific goals.)

As a result of this project students will:

- Self-paced learning when the student needs it
- Offers instant feedback, letting students know about areas that may need review
- Use as a primer to instructor-led courses held at FANUC Robotics Rochester Hills facility
- Diminishes the time users spend away from their primary job function for training
- Reduces travel expenses to attend basic operations training
- Can also be used as a refresher course, due to constant personnel change.

Instructional Proposals (continued)

State how the project addresses the Seven Principles of Good Practice in Undergraduate Education.
(Address only the relevant criteria.)

Supports student-faculty contact

Students must still come into the class to prove that their on line simulation program works in the real world.

Supports cooperation among students	
Supports active learning	The classes in the Technology area are 50% hands on labs.
Supports prompt feedback	The online component of the 20 software seats from Fanuc Offers instant feedback, letting students know about areas that may need review
Supports time on task	The online component offers the student self-paced learning when they need it
Supports high expectations	The online software provides self-assessment through Progress Check and Mastery Challenge testing
Supports diverse talents and ways of learning	Students must be able to assimilate the lecture/theory, apply the theory to real world problems, program their solution, and trouble shoot their program.

SIGNATURES:

**Project Director

Date

*Associate Dean/Department Head

Date

*Vice President

Date

**Director of Building & Grounds

Date

**Director of Data & Voice

Date

* For notification purposes only

** For project feasibility

Non-Instructional Proposals

Complete this section if this is a Non-Instructional Proposal, related to college areas that serve and support student instructional progress. (Non-Instructional areas include Library Services, the Learning Lab, Counseling, and Placement Services.)

Expected Outcomes (Project Objectives)

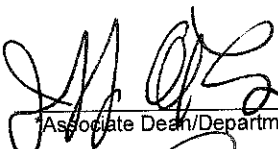
What will this project accomplish that you can't accomplish now?

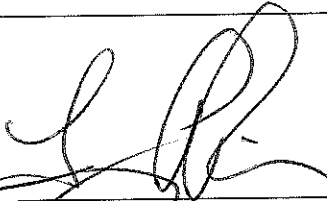
How does the project enrich or support the learning, teaching, or communication technology needs of students? (List specific examples.)

As a result of this project, service to students will be improved through:

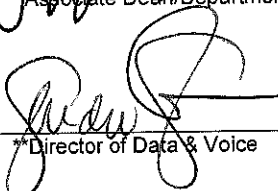
SIGNATURES:

 1/17/13
 **Project Director Date

 01/17/2013
 *Associate Dean/Department Head Date

 1/18/13
 *Vice President Date

**Director of Building & Grounds Date

 1/18/2013
 **Director of Data & Voice Date

* For notification purposes only
 ** For project feasibility



Henry Ford Community College

Technology Investment Fund Project Funding Request

Executive Summary

DATE OF APPLICATION	PROJECT TYPE
Jan. 17, 2013	<input type="checkbox"/> New <input checked="" type="checkbox"/> Upgrade/Expansion
NAME OF PROJECT DIRECTOR OR PRESENTER	DEPARTMENT/DIVISION
Mark Siedlik	Electrical Tech./Technology
COST OF PROPOSED PROJECT	NUMBER OF STUDENTS SERVED ANNUALLY
\$38,394	160-175 potentially much higher

SUMMARY

Adopt the Robot manufacturer that is industry leader and has been chosen by Ford and GM as their robot of choice. Since the College, a couple of years ago, financially supported the adoption of new Programmable Logic Controllers and new touch screen controllers Ford will be sending their Electricians and Engineers to HFCC for re-training. Purchasing the Fanuc Robot and the Certified Education Robot Training (CERT) Program would cover the major new technologies Ford has adopted for the launch of new vehicles. The CERT program will allow 20 students to use software valued at \$25,000 per seat to do online programming and simulation. The proposal also includes a vision inspection system which our advisory committee strongly urged incorporating into our curriculum.

There is a massive need for technicians and engineers with training on the Fanuc Robot and software. More and more job descriptions are asking for Technicians with programming skills with the Fanuc robot.

(Attach additional sheets if needed.)