NORCO COLLEGE

Program Review -Overall Report

Instructional: Manufacturing, Machine Shop Technology, Supply Chain Technology, Electronics

Data Review

2021 - 2024

Section 1: SLO Assessment Status (Based on Dashboard - Assessment Status)

Which Disciplines are included in this Assessment?

Manufacturing, Machine shop technology, supply chain technology, electronics, drafting **What percent of SLOs in the disciplines you identified above have been assessed?** 73.8

Which SLOs have not been assessed and why? Identify both the Course and the associated SLO(s). MAN-36 SLO 1, 2, 3, 4, 5. This class is easy to access and I will do the assessments soon. I have the data it just needs to be done.

MAN-56 SLO 1. I have assessed the objective of the course but not the SLO. Due to Covid the students were not able to produce parts so they did not do SLO 1 but they did complete the objectives of the course.

MAN-57 SLO 1 and 2. I have just completed the assessment of MAN 57 (4-20-2021) and I have published it.

MAN-60 SLO 1. We need to get the data from Gil after he and Claude are done teaching the class.

MAN-61 SLO 1, This class has not been offered in a long time, Gil and I are currently going through training on how to operate Fanuc robotics

ELE-27 has been partially been assessed but it should be assessed by Ashley Johnson since she was the last person to teach it.

Section 2: Mapping Status (Based on Dashboard - Mapping Status)

Are all SLOs mapped to at least one PLO?

Yes If all SLOs are not mapped to at least one PLOs, please explain why. All are mapped

Are the appropriate SLOs mapped to GELOs? (If you have a course that is listed in any general education area, it should have at least one SLO mapped to at least one GELO) No

If the appropriate SLOs are not mapped to GELOs, please explain why. The CTE manufacturing disciplines should not be aligned with GELO's.

Section 3: PLO Analysis (Based on Dashboard - Analysis: PLO Direct Assessment)

Which Programs are included in this Assessment?

Manufacturing, and machine shop technology

Please identify the PLO(s) - and name the associated Program(s) - that achieved benchmarks.

PLO 2 Create five-axis part drawing files using Computer Aided Manufacturing program such as Mastercam, numerical code files and Solid Works.

Assessment Review

PLO 3 Compose written assignments on occupation safety in general industry.

PLO 4 Solve mathematical formulas by using unknowns and apply this knowledge to solve problems for the industry.

PLO 5 Establish a systematic approach to recognizing the essential information given on a blue print.

To what to you attribute this success?

Hard work and teaching

Please identify the PLO(s) - and name the associated Program(s) - that did not achieve benchmarks. PLO 1 Create a steam or stirling engine based on blueprints that involves parts using both the mill and the lathe.

If there are PLOs that did not achieve benchmarks, what do you plan on doing to improve benchmark attainment?

Yes, the students were not on campus to be able to complete PLO1

Section 4: Alignment to Career and Transfer

Describe the process used in this area to ensure programs (PLOs) align with career and transfer needs.

I often attended industry advisory counsel meetings both virtually and in person. I have also had great phone discussions with people in industry. The machining programming has many advisories. The automated systems program often meets with such companies as Target, Amazon and Walmart. I also have many students in industry that also provides suggestions for how to improve class.

Describe the activities, projects, and opportunities this program offers to support experiential learning and alignment of programs to career and transfer (e.g. capstone projects, portfolios, service-learning opportunities).

Yes, the projects that the students make during the class are great for capstone projects. We also encourage the students to create portfolios and to save samples of their work. Canvas has the ability to save their work so that students can access their work.

Without looking at your current PLOs, describe some program outcomes which would best help your students continue on the path towards their workforce and transfer goals (e.g. subject matter expertise, hands on experience, partnerships, etc.).

PLO 1-2 is great for the students to be to show off what they do and it also helps them prepare for the workforce.

Review current PLOs. Do the outcomes listed above align with the current program outcomes? Yes

EMP GOAL 3. Close all student equity gaps.

GOALS AND ACTIVITIES

What are you doing now in support of this goal?

I have created so many videos about almost all of the lessons that I used to present during the class. I really need student lab aide help with making sure that all of the videos are ADA compliant.

What are your plans/goals (3-year) regarding this goal?

A lab aide to help with ADA compliance on the videos that I have already created

EVIDENCE

Do you have assessment data or other evidence that relates to this goal?

If you look at my techsmith you can see all of the videos that I have created.

ADA compliance has become a major issue for our CTE programs that make videos for teaching the content that they teach. I asked Glen why he retired and he stated it was because of ADA issues and the amount of work that is required to meet ADA compliance. My program requires so many videos to teach the subjects that I teach. Truthfully, I usually let the automatic captioning with in techsmith do all my captioning and I don't really worry about it being accurate. I have over 500 videos that I have created. There is no time for me to caption everything accurately. **RESOURCES**

Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left) Yes

EMP GOAL 4. Implement professional development around Guided Pathways and equity framework; foster a culture of ongoing improvement.

GOALS AND ACTIVITIES

What are you doing now in support of this goal?

During Spring break Gil and I took a class on skill boss training in order to teach trouble shoting and programming of PLCs on a new piece of equipment that is in our classroom and at Target. Target is asking us to provide training on this equipment at the college and in our classroom.

Gil and I also took classes on Fanuc robotics training during winter break

What are your plans/goals (3-year) regarding this goal?

Provide students training on this equipment

EVIDENCE

Do you have assessment data or other evidence that relates to this goal? Skill Boss Manufacturing - A Quick Demo (Amatrol) https://www.youtube.com/watch?v=nZHKNS59e20&t=145s https://www.youtube.com/watch?v=PxYVSrtbO_w

FANUC Industrial Robots at AUDI https://www.youtube.com/watch?v=rbki4HR41-4

RESOURCES

Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left) No

EMP GOAL 6. Pursue, develop, & sustain collaborative partnerships.

GOALS AND ACTIVITIES

What are you doing now in support of this goal?

Collaboration with local high schools including Norco High School, Temescal Canyon High School, Santiago High School and many other machining programs needs to continue.

What are your plans/goals (3-year) regarding this goal?

Reachout and develop articulation with these schools

EVIDENCE

Do you have assessment data or other evidence that relates to this goal?

Yes, here is an email from Robert Parks as an example and Articulation has already happened:

Hi Paul. I am looking to articulate our second year class in our engineering program but am not sure which Norco College class would be the best fit. Can I give you a brief list of what we do in the course and see if you have any suggestions?

- In this course they already are pretty good at Solidworks. We now start doing a lot of MasterCAM work. They complete all of the Titans of CNC building blocks projects
 (https://academy.titansofcnc.com/category/mill-building-blocks) but unlike the website, we do them all in MasterCAM.
- They learn to operate and set up our Haas mills. They can:
 - Install and square their vise.
 - Install all tooling.
 - \circ $\;$ Select proper tooling based on the part being made.
 - Set all tooling offsets.
 - Calculate speeds and feeds for their toolpaths based on the tool being used and the material being cut.
 - Some of the toolpaths they learn and use are:

- Facing
- Contour
- Drilling
- Chamfer
- Tapping cycles
- Pockets
- They learn to use a rough cutter for initial cuts then switch to something else for finishing cuts with changes in speeds/feeds, depth of cuts, step over, etc.
- Their MasterCAM projects are all 3 axis projects, no 4th or 5th.
- They already know how to or learn all sorts of inspection techniques for their projects including calipers, micrometers, height gauges, go-no go gauges, etc.
- They learn to operate and set up our CNC lathe (we only have one). Similar story to the Haas mills. They learn to install and set up tools based on what was required in the MasterCAM program.

These are the highlights but there's a lot more. I am also more than willing to add anything you'd think we should be doing to better serve our students and to successfully articulate.

Thanks again!

RESOURCES

Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left) No

EMP GOAL 7. Become the regional college of choice by offering a comprehensive range of programs that prepare students for the future and meet employer workforce needs.

GOALS AND ACTIVITIES

What are you doing now in support of this goal?

I need to take a class to update my OSHA card and my ability to teach MAN 55 the OSHA for general industry class. OSHA training costs about \$600.00 and will be offered during the summer.

Update for General Industry Outreach Trainers - OSHA 503

A refresher course for those who have completed the <u>OSHA #501 General Industry Outreach Trainer</u> course and who are authorized trainers in the OSHA Outreach Training Program. It provides an update on such topics as OSHA general industry standards, policies, and regulations.

Students in OSHA #503 must prepare a presentation on an assigned OSHA general industry outreach topic at the end of the course to renew authorization status. https://osha.asapconnected.com/#CourseID=28209

What are your plans/goals (3-year) regarding this goal?

To take the osha 503 update for general industry outreach training. This will help the college meet employer/workforce needs.

EVIDENCE

Do you have assessment data or other evidence that relates to this goal? Every three years my ability to teach OSHA needs to be updated.

Please note that effective January 1, 2019, the 90-day grace period is eliminated and the refresher course must be completed before the expiration date of the current outreach trainer card.

If the card is expired, you will need to retake <u>OSHA #501 Trainer Course for General Industry</u>; <u>OSHA #511</u> <u>OSHA Standards for the General Industry</u> will need to be completed first if it has been more than 7 years since you last completed it.

Extensions will not be granted.

https://osha.asapconnected.com/#CourseID=28209

RESOURCES

Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left) Yes

EMP GOAL 9. Expand workforce to support comprehensive college and develop/sustain excellent workplace culture.

GOALS AND ACTIVITIES

What are you doing now in support of this goal?

Recently, we have had visits from the technical trainers at Target. They stated that they mostly use Compact Logic Controls in there training and on their production lines. The mechatronics budget purchased a Skill boss trainer based on Target's suggestion. Attached to the skill boss trainer is a Compact logic PLC. When asked whether we should be teaching Siemens PLCs or Allen Bradley PLCs Target suggested that we should be teaching Allen Bradley. When asked whether we should be teaching students how to program the PLCs they stated that they want people to be able to trouble shoot the PLC systems including sensors and actuators. Students should know something about programming but not to the extent that we have been teaching it. Target stated that they need people that can look at the program to be able to evaluate which components need to be replaced. This does require some knowledge of what a PLC programs looks like. The disciple believes that we can teach troubleshooting using both brands. Trouble shooting involves being able to look at a program a be able to tell which hardware needs to be fixed or replaced. Further, troubleshooting involves be able to rewire the component. We really need to have both Siemens and Allen Bradley PLCs represented in the classroom since some companies use Siemens and some use Allen Bradley PLCs. In the past we used Allen Bradley MicroLogix PLCs. MicroLogix were quite inexpensive, however,

Allen Bradley stated that their MicroLogix line are no longer used and they have almost been discontinued.

What are your plans/goals (3-year) regarding this goal?

Yes Perkins funds to purchase the following:

We would like to purchase Allen Bradley compactlogics PLCs for use in the classroom. The industry (especially Target) is stating that the PLCs used in the United States are mostly Allen Bradley PLCs. We thought that the expense to have Allen Bradley compact logic plcs and software was out of the reach of the college. After discussion with the sales person, we have found some great deals on the software and the hardware. We plan on teaching both Allen Bradley compact logics PLCs and Siemens PLCs

EVIDENCE

Do you have assessment data or other evidence that relates to this goal?

Discussions with industry that is detailed above is the evidence. Please understand that these discussion were somewhat informal and they were when they visited the campus

RESOURCES

Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left) Yes

EMP GOAL 11. Implement professional, intuitive, and technology-enhanced systems.

GOALS AND ACTIVITIES

What are you doing now in support of this goal?

Creating videos of what I present during class. I have created 531 videos (about 200 lessons) related to the subjects that I teach. It was sad that the students were not able to use the machines this semester. I have created many videos to demonstrate how to use the machines in the classroom. The videos will be beneficial not only when the course is online but also in the classroom. When we are on ground we have problems with the students being able to see from a distance when the instructor is presenting how to operate a machine. The students will now be able to see what the instructor by watching the videos. This will also help with safety concerns because there have been times in which the students asked the instructor to present during lab. During these times the instructors attention will be diverted from making sure the other students in the classroom are performing operations safely. Once the coruse goes beck to the classroom we would suggest that we continue to use that videos and that the course be half online and half in the classroom. This would give the students enough time for both lecture and lab experience I also create videos that I send to the students showing them how they do on each project. I need to continue to have a subscription to techsmith so that I can store all of the videos that I have created.

Further, we need factilities provide ethernet cable drops near the machines in order to use the VMC connect software to show the machines' screens on videos

What are your plans/goals (3-year) regarding this goal?

I hope to obtain the ability to show the machiens' screens on the video. I have found a software that will help show the machines screens during the videos that I create. The VMC connect software is about \$350/year.

I also hope to purchase better camera equipment and video digitizing equipment. I have put in a Perkins request for what is shown below.

In order continue to provide additional accessible skill sets and skill development in these manufacturing including: MAN 64 - PLCs, MAN 56 - CNC setup and operations, MAN 35 - Mastercam program and many others. We need purchase video equipment and supplies that is going to properly demonstrate skilled video tutorials for students to provide them with an engaging lab and curriculum experience in the above courses. Having equal access to online materials provides flexibility for students to resources for students in an equitable instructional environment and advances skill attainment to help them attain high wadge high skilled in the manufacturing field. Three cameras of multiple angles of concurrent recording of demonstrated skill techniques. Such as how to wire up a PLC or how to produce a part on the machine.

Blac

3

(3) MOKOSE 12MP HDMI Camera 1080P USB HD Streaming Teaching

EVIDENCE

Do you have assessment data or other evidence that relates to this goal?

Here is a video of how the video capture is done on the haas machine

View Your Haas Control From Your Computer or Phone - Haas Automation Tip of the Day https://www.youtube.com/watch?v=ye1m8Y_LmXU

Currently, I am just pointing the camera at the screen and it is very hard for the students to see what I am doing on the machine.

RESOURCES

Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left)

Yes

2021 - 2024

Curriculum

Are all your courses current (within four years)? No What percentage of your courses are out of date? 10% or less If you have courses that are not current, are they in the curriculum process? No For out of date courses that are not already in progress of updating, what is your plan? MAN/ELE/ELC 73 and 72 are the two course. These courses are really not in my program but are in the electronics program Do you have proposals in progress for all the DE courses you intend to file? No Do you require help to get your courses up to date? No

Program Review Reflections

What would make program review meaningful and relevant for your unit?

Better tracking of articulation efforts. I know that articulation information is located in the catalog but I would like to see more information about what other teachers in the area are teaching.

What questions do we need to ask to understand your program plans, goals, needs? None

What types of data do you need to support your program plans, goals, needs? None

If there are any supporting documents you would like to attach, please attach them here.

2022 - 2023 Update

Resource Request

What resources do we already have?

One facemill that is used on three machines

What resources do you need?

Two more facemills that will be used on the other two machines. Kennametal, Item #77461986 (qty 2) Indexable Chamfer and Angle Face Mill, MAN CNC machining, and the Kennametal Carbide Milling Insert (Item # 32902579 qty 17) both from MSCDirect. Pull tabs CAT 40 (2 qty) Allows us to flatten the part.

Techniks CAT40 Taper Face Mill Holder & Adapter, Milling cutter holder for teaching MAN-56 CNC setup and operations (qty 2)https://www.mscdirect.com/

Referring to the core indicators for machining from 2017-2020 we have graduated 19 students in machining in our area. In 2020, there were 4,385 machining jobs in the inland empire/desert region. Employment for the machining occupational group is projected to increase by 3% through 2025, with 438 job openings available annually. Norco college has been teaching machining including setup and operations and programming by having the students create and program a finger treadle engine. This project lets the students experience many aspects of setup and operations. Many of the projects to create the engine requires the students to use a 3-inch endmill. Currently, we have one of these endmills for the Haas CNC machines in the classroom but with limited components. The center of excellence for labor market research (COE) "recommends expanding machining programs to meet the demand for more machining workers in the region. According to the COE "Three regional community colleges offer robotics programs across three TOP codes, but only one college has reported award counts. Norco College's industrial automation and supply chain automation program issued 24 awards annually over the last three academic years. About 75% of students exiting manufacturing and industrial technology programs reported working in their field of student. The median annual earnings from all exiters was \$42,198 and 68% attained a living wage." Norco College needs to grow the robotics program.

Colleges considering this program should provide knowledge and skills training leading to the numerically controlled tool programmers and machinist occupations, ensuring students will have access to jobs that offer self-sustainable earnings after existing the program. The Machining program needs additional components including ability to flatten parts with adding on to the endmill for the Haas CNC machines in the classroom to meet industry demands and prepare students for the increase in job growth in this industry. In regards to special populations and having marketable skills within the manufacturing and machining programs the industry would like to see students that have a reputable industry certification. For example, one type of certification that looks relevant for the students is the SACA certification as detailed at SACA.org. This certification includes subjects such as machining, automation, warehousing, fluid power, electrical systems, programmable logic controllers, robotics and much more. Due to covid and decreased access to qualified workers the industry is moving more into robotic systems in the industries of machining and supply chain management. Automation is where the industry is moving, and the college needs to adapt to this area. For example, the machining industry is using robots to load parts. We have worked hard to update the course outline of record to reflect the needs of the industry. The course used to have a requirement to work with microprocessers; now it focuses on industrial robotics. We have also taken a seminar on how to teach the Fanuc robot. In order to grow the program we need to have another industrial robot in the classroom.

Request related to EMP goal or Assessment? EMP Goal 9 \$ Amount Requested 2,800 Resource Type ITEM: Instructional supplies Potential Funding Source(s) CTE: Perkins (VTEA),CTE: Strong Workforce Project (SWP),Department Regular Funding The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 1 Is this request: New

For Administrative Use Only

Funding Status

Notes

2022 - 2023 Update

Resource Request

What resources do we already have?

13 studio 5000 perpetual mini software, plcs

What resources do you need?

Studio 5000 Perpetual Mini Software, PLCs, additional 13 licenses (we have purchased 13 on last Perkins) Vendor: Royal Industrial

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Request related to EMP goal or Assessment?

EMP Goal 9 **\$ Amount Requested** 4,500 **Resource Type** ITEM: Equipment, Services, Software, Furniture **Potential Funding Source(s)** CTE: Perkins (VTEA),CTE: Strong Workforce Project (SWP),Department Regular Funding **The evidence to support this request can be found in:** Program Review: Part 1 **This request for my area is Priority #:** 2 **Is this request:** New

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Funding Status

Notes

What resources do we already have? Two fanuc robots What resources do you need? Fanuc Robot , from Klein Educational Systems Fanuc Sole Source vendor

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Request related to EMP goal or Assessment? EMP Goal 9 \$ Amount Requested 50,000 Resource Type ITEM: Equipment, Services, Software, Furniture

Potential Funding Source(s) CTE: Perkins (VTEA),CTE: Strong Workforce Project (SWP) The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 3 Is this request: New

For Administrative Use Only

Funding Status

Notes

2022 - 2023 Update

Resource Request

What resources do we already have?

None

What resources do you need?

Professional development, smart automation certification alliance, SACA, college membership, annual, and certifications, travel may be needed

This certification will require the college to pay \$2,500 each year and we are asking for 6,000 for the first year in case there is travel involved.

Referring to the core indicators for machining from 2017-2020 we have graduated 19 students in machining in our area. In 2020, there were 4,385 machining jobs in the inland empire/desert region. Employment for the machining occupational group is projected to increase by 3% through 2025, with 438 job openings available annually. Norco college has been teaching machining including setup and operations and programming by having the students create and program a finger treadle engine. This project lets the students experience many aspects of setup and operations. Many of the projects to create the engine requires the students to use a 3-inch endmill. Currently, we have one of these endmills for the Haas CNC machines in the classroom but with limited components. The center of excellence for labor market research (COE) "recommends expanding machining programs to meet the demand for more machining workers in the region. According to the COE "Three regional community colleges offer robotics programs across three TOP codes, but only one college has reported award counts. Norco College's industrial automation and supply chain automation program issued 24 awards annually over the last three academic years. About 75% of students exiting manufacturing and industrial technology programs reported working in their field of student. The median annual earnings from all exiters was \$42,198 and 68% attained a living wage." Norco College needs to grow the robotics program.

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Request related to EMP goal or Assessment?

EMP Goal 11 \$ Amount Requested 6,000 Resource Type BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing) Potential Funding Source(s) CTE: Perkins (VTEA),CTE: Strong Workforce Project (SWP) The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 3 Is this request: New

For Administrative Use Only

Funding Status

Notes

2022 - 2023 Update

Resource Request

What resources do we already have?

Before covid we had the ability to have lab aides in the classroom

What resources do you need?

Lab aides in the classroom during class and one hour before class to help with watching for any unsafe activity and to help students during class. Further, I need help with captioning videos. I have created about 1000 videos presenting all of the topics that I teach in the classroom. I have only had time to caption about 200 of them. I do use the automatic captioning system but I need more time to captioning all of them.

Request related to EMP goal or Assessment? EMP Goal 3 \$ Amount Requested 2,000 Resource Type ITEM: Instructional supplies Potential Funding Source(s) Other/None The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 1 Is this request: New

For Administrative Use Only

Funding Status

Notes

2022 - 2023 Update

Resource Request

What resources do we already have? Software used in the classroom What resources do you need? Mastercam, VNC software, Solidworks (not sure how much solidworks costs because the drafting discipline usually purchases it) **Request related to EMP goal or Assessment?** EMP Goal 10 **\$ Amount Requested** 3,000 **Resource Type** ITEM: Equipment, Services, Software, Furniture Potential Funding Source(s) **Department Regular Funding** The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 1 Is this request: Revised

For Administrative Use Only

Funding Status

Notes

2022 - 2023 Update

Resource Request

What resources do we already have? Old ugly chairs in the classroom What resources do you need? New chairs in the classroom **Request related to EMP goal or Assessment?** EMP Goal 10 **\$ Amount Requested** 3,000 **Resource Type** ITEM: Equipment, Services, Software, Furniture Potential Funding Source(s) Instructional Equipment Allocation The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 1 Is this request: New

For Administrative Use Only

Funding Status

Notes

2021 - 2024

Resource Request

What resources do we already have?

Many machines in the classrooms??? Ability to use Zoom and Techsmith to create videos. People that help us out like Lue Vang and facilities department that helps us a lot.

What resources do you need?

ADA compliance has become a major issue for our CTE programs that make videos for teaching the content that they teach. I asked Glen why he retired and he stated it was because of ADA issues and the amount of work that is required to meet ADA compliance. My program requires so many videos to teach the subjects that I teach. Truthfully, I usually let the automatic captioning with in techsmith do all my captioning and I don't really worry about it being accurate. I have over 500 videos that I have created. There is no time for me to caption everything accurately..

Request related to EMP goal or Assessment?

EMP Goal 3 **\$ Amount Requested** 3,840 **Resource Type** BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing) **Potential Funding Source(s)** Department Regular Funding **The evidence to support this request can be found in:** Program Review: Part 1 **This request for my area is Priority #:** 2

For Administrative Use Only

Funding Status Completed/Funded **Notes** District has hired Instructional Designers to assist with ADA compliance.

2021 - 2024

Resource Request

What resources do we already have?
TechSmith and Zoom but I sure don't want to lose this resource
What resources do you need?
TechSmith and Zoom or another subscription that I can use to store and broadcast my videos
Request related to EMP goal or Assessment?
EMP Goal 3
\$ Amount Requested
4,000
Resource Type
BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing)
Potential Funding Source(s)
General Fund,Department Regular Funding
The evidence to support this request can be found in:
Program Review: Part 1

This request for my area is Priority #: 3

For Administrative Use Only

Funding Status Completed/Funded Notes Completed

2021 - 2024

Resource Request

What resources do we already have?

I have had training in this before but my OSHA card needs to be updated

What resources do you need?

I need to take a class to update my OSHA card and my ability to teach MAN 55 the OSHA for general industry class. OSHA training costs about \$600.00 and will be offered during the summer.

Update for General Industry Outreach Trainers - OSHA 503

A refresher course for those who have completed the OSHA #501 General Industry Outreach Trainer course and who are authorized trainers in the OSHA Outreach Training Program. It provides an update on such topics as OSHA general industry standards, policies, and regulations.

Students in OSHA #503 must prepare a presentation on an assigned OSHA general industry outreach topic at the end of the course to renew authorization status.

It is highly recommended that a laptop is brought to class to work on developing presentations.

https://osha.asapconnected.com/#CourseID=28209

Request related to EMP goal or Assessment? EMP Goal 7 \$ Amount Requested 600 Resource Type BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing) Potential Funding Source(s) Department Regular Funding The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 4

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Funding Status No Action-Insufficient funding **Notes** Approved/Forwarded to PDC

2021 - 2024

Resource Request

What resources do we already have? Student lab aides in the class What resources do you need? At least two student lab aides for the classes that I teach **Request related to EMP goal or Assessment?** EMP Goal 1 **\$ Amount Requested** 16,000 **Resource Type** BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing) Potential Funding Source(s) **Department Regular Funding** The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 5

For Administrative Use Only

Funding Status In Progress Notes Approved

2021 - 2024

Resource Request

What resources do we already have?

Simple web cam cameras

What resources do you need?

In order continue to provide additional accessible skill sets and skill development in these manufacturing including: MAN 64 - PLCs, MAN 56 - CNC setup and operations, MAN 35 - Mastercam program and many others. We need purchase video equipment and supplies that is going to properly demonstrate skilled video

tutorials for students to provide them with an engaging lab and curriculum experience in the above courses. Having equal access to online materials provides flexibility for students to resources for students in an equitable instructional environment and advances skill attainment to help them attain high wage high skilled in the manufacturing field. Three cameras of multiple angles of concurrent recording of demonstrated skill techniques. Such as how to wire up a PLC or how to produce a part on the machine. (this has already been submitted to perkins)

Request related to EMP goal or Assessment?

EMP Goal 11 **\$ Amount Requested** 6,788 **Resource Type** BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing) **Potential Funding Source(s)** CTE: Perkins (VTEA) **The evidence to support this request can be found in:** Program Review: Part 1 **This request for my area is Priority #:** 1

For Administrative Use Only

Funding Status Completed/Funded Notes Completed

2021 - 2024

Resource Request

What resources do we already have?

We do not have this ability What resources do you need?

I hope to obtain the ability to show the machines screens on the video. I have found a software that will help show the machines screens during the videos that I create. The VMC connect software is about \$350/year.

Request related to EMP goal or Assessment? EMP Goal 11 \$ Amount Requested 350 Resource Type ITEM: Equipment, Technology, Services, Software, Furniture Potential Funding Source(s) Department Regular Funding The evidence to support this request can be found in: Program Review: Part 1

This request for my area is Priority #: 1

For Administrative Use Only

Funding Status Completed/Funded Notes Completed

2021 - 2024

Resource Request

What resources do we already have? Please continue with the funding that we have been accustomed to throughout the years. What resources do you need? Please continue with the funding that we have been accustomed to throughout the years. **Request related to EMP goal or Assessment?** EMP Goal 1 **\$ Amount Requested** 0 **Resource Type** BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing) Potential Funding Source(s) **Department Regular Funding** The evidence to support this request can be found in: Program Review: Part 1 This request for my area is Priority #: 1

For Administrative Use Only

Funding Status Completed/Funded Notes Completed

2021 - 2024

Resource Request

What resources do we already have?

Older model out dated Allen Bradley PLCs and Siemens PLCs

What resources do you need?

I have requested from Perkins that we purchase Allen Bradley PLCs. Within my Perkins Proposal I wrote that I would like to have five years worth of the educational toolkit from Allen Bradley. This provides all of the software to run every Allen Bradley PLC ever made. I also put that we wanted 20 compact logics L16 processors because: recently, we have had visits from the technical trainers at Target. They stated that they mostly use Compact Logic Controls in there training and on their production lines. The mechatronics budget purchased a Skill boss trainer based on Target's suggestion. Attached to the skill boss trainer is a Compact logic PLC. When asked whether we should be teaching Siemens PLCs or Allen Bradley PLCs Target suggested that we should be teaching Allen Bradley. When asked whether we should be teaching students how to program the PLCs they stated that they want people to be able to trouble shoot the PLC systems including sensors and actuators. Students should know something about programming but not to the extent that we have been teaching it. Target stated that they need people that can look at the program to be able to evaluate which components need to be replaced. This does require some knowledge of what a PLC programs looks like. The disciple believes that we can teach troubleshooting using both brands. Trouble shooting involves being able to look at a program a be able to tell which hardware needs to be fixed or replaced. Further, troubleshooting involves be able to rewire the component. We really need to have both Siemens and Allen Bradley PLCs represented in the classroom since some companies use Siemens and some use Allen Bradley. In the past we used Allen Bradley MicroLogix PLCs. MicroLogix were guite inexpensive, however, Allen Bradley stated that their MicroLogix line are no longer used and they have almost been discontinued.

We hope to be able to use Perkins money to do the following: we would like to purchase Allen Bradley compactlogics PLCs for use in the classroom. The industry (especially Target) is stating that the PLCs used in the United States are mostly Allen Bradley PLCs. We thought that the expense to have Allen Bradley compact logic plcs and software was out of the reach of the college. After discussion with the sales person, we have found some great deals on the software and the hardware. We plan on teaching both Allen Bradley compact logics PLCs and Siemens PLCs

It should be noted that we may need to use general fund monies to support the tool kit after 5 years which would cost us \$300/year.

Request related to EMP goal or Assessment?

EMP Goal 9 **\$ Amount Requested** 26,000 **Resource Type** BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing) **Potential Funding Source(s)** CTE: Perkins (VTEA),Department Regular Funding **The evidence to support this request can be found in:** Program Review: Part 1 **This request for my area is Priority #:** 4

For Administrative Use Only

Funding Status Completed/Funded Notes Completed

What resources do we already have?

Haas CNC machines in the classroom

What resources do you need?

Using machining grant for manufacturing Ashley and I are working on getting more equipment for teaching machining. Ashley has a grant for \$67,000 that we will be spending on the following items:

Haas desktop mill, https://www.haascnc.com/machines/vertical-mills/desktop-mill.html 3 for \$10,000 each

Haas probing addition for the Haas mill near the rollup door: WIPS - The Haas Wireless Intuitive Probing System ~\$10,000

The Haas Wireless Intuitive Probing System (WIPS) does a lot more than you think. Not only does it allow you to easily set work and tool offsets, WIPS can also check if your parts are loaded correctly, inspect your parts in-process on the machine, and detect broken tools. This is one option you will never second-guess ordering on your next machine. https://www.haascnc.com/video/products/uma1a9q2imm.html

15 Haas simulators: A full-function haas control-without the machine. This is the newest control simulator and can even be connected to the internet so that students can practice and simulate their program at home through the internet. https://www.haascnc.com/machines/vertical-mills/control-simulator.html **Request related to EMP goal or Assessment?** EMP Goal 9

\$ Amount Requested
67,000
Resource Type
ITEM: Instructional supplies
Potential Funding Source(s)
CTE: Strong Workforce Project (SWP)
The evidence to support this request can be found in:
Program Review: Part 1
This request for my area is Priority #:
5

For Administrative Use Only

Funding Status Completed/Funded Notes Completed

Submission

2021 - 2024

All parts of my Program Review have been completed and it is ready for review Yes

2022 - 2023 Update

I would like to submit this update Yes The additions or updates to my Program Review can be found in: Resource Requests