NORCO COLLEGE

Program Review - Overall Report

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

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

Assessment Review

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.

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:
 - o Install and square their vise.
 - o Install all tooling.

- 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 OSHA</u> <u>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. 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. 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.

3 videos cameras with shutter speed ability	\$ 5,500.00
Camera stands	\$ 350.00
Lighting	\$ 150.00

Blackmagic Design ATEM Mini HDMI Live Switcher	\$ 295.00
(3) MOKOSE 12MP HDMI Camera 1080P USB HD Streaming Teaching Webcam, Recording 4K@30FPS Industry C/CS-Mount Camera with 6- 12mm No Distortion Manual Zoom Lens	\$ 492.00

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? $\ensuremath{\mathsf{No}}$

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.

2021 - 2024

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

2021 - 2024

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 #:

2021 - 2024

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

2021 - 2024

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

2021 - 2024

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

2021 - 2024

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 #:

2021 - 2024

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

2021 - 2024

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 quite 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

2021 - 2024

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 \sim \$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 inprocess 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

2021 - 2024

All parts of my Program Review have been completed and it is ready for review γ_{Ps}

10:01:52 From Kris Costa : another issue is that the high schools have not grown their own teacher workforce. When HS programs have a retirement there is no one to fill the vacancy.

10:01:57 From Tracie Zerpoli : We currently offer courses in high school. For example, Automotive, Construction, STEAM, Manufacturing, etc. Sometimes the enrollment is low because parents don't want their children in these classes. Also we are competing with the idea of EVERY student should go to a 4-year university. How do we change this thinking?

10:02:37 From Molly - ED MCIE : Thanks Duane. The MCIE is trying to reach the younger generation. We just launched two videos that try to do that at www.ie-mfg.com .

10:02:50 From Kris Costa : @Tracie - this is where intentional Dual Enrollment can be very effective!

10:03:08 From DWANE FULLER : Your welcome

10:04:49 From Ben MacMahon : I find that robust career exploration / planning can reveal the lie behind the inherent 4- year university bias. The students see for themselves what education they need and the least expensive way to secure a successful future

10:05:07 From Lucy Centeno : Reach out to High School CTE (Career Technical Education) Directors at the school districts to implement more machinest/metal shop class. They do have Welding, Construction, Transportation, Logisites, etc. Here is the JUSD website for college and career readiness,

10:05:10 From Lucy Centeno : https://jurupausd.org/ourdistrict/education-services/college-career-readiness

10:07:05 From Eric Crawford : Jay, that sounds like an incredible project!

10:11:22 From Alan Braggins : Thank you everyone for taking your time out to join us. Please visit our Advisory Resource website:

https://sites.google.com/view/mfg2020advisory

10:12:10 From James Hattar : Help shape the future workforce by providing input to our educators via short survey https://bit.ly/MfgSurvey

10:13:46 From Paul Van Hulle : Nick, Norco College is doing everything you are talking about.

10:14:05 From Paul Van Hulle : Covid sure is effecting hands on

10:14:11 From Anaergia, Kristin Blake : @Eric Crawford, thank you! Check out our short video on how Anaergia is transforming waste into a resource:

https://www.youtube.com/watch?v=bBo3M8dPa2U

10:14:45 From Carrie O'Neal : Are there student opportunities for internships and job shadowing within your companies?

10:15:02 From Paul Van Hulle : Nick, are you using Siemens or Allan bradley

10:15:11 From Stefanie Padilla : What type of partnerships does the school have with manufacturing companies? A lot of businesses are moving out of state due to the cost of business in California...

10:15:32 From Stefanie Padilla : Logistics and manufacturing especially

10:15:38 From Paul Van Hulle : Nick, can we meet and talk further

10:15:57 From Anaergia, Kristin Blake : More on Anaergia at the below link. We are a global company with a strong commitment to our local regions, like California!

https://www.anaergia.com/what-we-do

10:16:15 From Allison Huie : @Rebecca.... how do you identify those qualities in candidates on paper? What goes on the resume that "shows" those qualities?

10:17:26 From Paul Van Hulle : Nick, what CNC machines are you using

10:18:11 From Rebecca Bettencourt : @ Allison we encourage to write experiences on resumes and projects worked on during school that demonstrate these items, we then ask questions in interviews

10:18:42 From DWANE FULLER : Here at TET we use Haas

10:19:48 From Lucy Centeno : ROP was replaced with CTE https://www.cde.ca.gov/ci/ct/

10:20:20 From Paul Van Hulle : We are teaching HAas machines at Norco College. What company did Nick say he was from? Sorry

10:20:48 From James Hattar : The use of social media is a great way to reach out to students, young adults and parents about the manufacturing industry and classes available in the high schools and colleges.

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11:15:54 From Molly - ED MCIE : Our MFG association would like to investigate a certification for entry level, basic skills.

11:16:01 From Molly - ED MCIE : Thanks Rick.

11:16:05 From Paul Van Hulle to Nick Tonti(Privately) : We are moving to getting the instructors certified in Fanuc

11:16:15 From Rick Radcliffe : Let's talk about SACA.org...

11:16:26 From Nick Tonti to Paul Van Hulle(Privately): We can connect after this to talk in more detail about what we look for.

11:17:07 From Paul Van Hulle to Nick Tonti(Privately) : That would be great

11:17:21 From Mark Martin (Regional Director - Adv Mfg, Bay Area) : ACT has some entry-level types of certifications. http://www.act.org/content/act/en/products-and-services/workkeys-for-educators/ncrc.html

11:17:30 From Sharon Van Madrigal : Some ROP programs have Career Readiness Specialist on a high school campuses where we have Advisories committees and we provide information to our students, teachers and stakeholders

11:17:37 From Nick Tonti to Paul Van Hulle(Privately) : Maybe we can schedule a call next week.

11:17:46 From Natalie Weaver, Chaffey College InTech Center : What are your thoughts of piloting programs through not-for-credit, which provides flexibility in making changes to curriculum?

11:18:07 From Natalie Weaver, Chaffey College InTech Center : Once we identify the type of curriculum that aligns with what industry needs, then we convert to credit.

11:18:09 From Mark Martin (Regional Director - Adv Mfg, Bay Area) : Also, NAM's Mfg Institute has a list of certifications. https://www.themanufacturinginstitute.org/workers/skills-certifications/

11:18:19 From Mariann Johnson : Molly-workforce would love to talk to you about this for our upcoming regional plan

11:18:27 From Sharon Van Madrigal : On our campus we have manufacturing through the ROP programs

11:18:41 From Nick Tonti to Paul Van Hulle(Privately) : If you send me an email, we can schedule a time to connect over the phone directly.

11:18:56 From Nick Tonti to Paul Van Hulle(Privately) : nick@trinityautomation.com

11:23:08 From Rebecca Elmore : Thank you all. This has been an informative discussion! I'm sorry; I have to leave for my next meeting. Have a great day!

11:31:44 From Rick Radcliffe : I want to take a minute to thank all of our panelists. As we saw from the survey, 80% of the attendees are from education. In my experience as a high school instructor, teachers would love to have input

from companies...but it's so hard to get industry to participate in these discussions. I think the most impact our panelists can have at this point is to bring their colleagues to the advisory panels in their local areas.

11:33:07 From Rick Radcliffe : A previous panelist commented that students were coming from CC programs with no experience in their particular software...schools need to know what specific software we should be teaching.

11:34:07 From Paul Van Hulle to Aldo Villalpando(Privately) : Do you still think that students should not only have mastercam but also manual programming

11:34:50 From Paul Van Hulle to Aldo Villalpando(Privately) : I really want my students to be able to read the code that mastercam produces

11:34:50 From Aldo Villalpando to Paul Van Hulle(Privately) : yes certainly

11:35:33 From Michael Lesiecki : thank you Rick

11:35:43 From Aldo Villalpando to Paul Van Hulle(Privately) : I learned it vis manual way with G codes and then switched with mastercam

11:36:16 From Paul Van Hulle to Aldo Villalpando(Privately) : Yes, I really want my students to know manual g codes before they go out to the industry

11:36:16 From Aldo Villalpando to Paul Van Hulle(Privately) : this is the way this is taught in NTMA, manual then automated

11:44:28 From Molly - ED MCIE : FYI: Please check out and share the videos for students and public, on plant tours and employee pathways. Let me know if there are other topics that would be of value to students. We will be producing more videos to entice students.

Visit www.ie-mfg.com

10:01:52 From Kris Costa : another issue is that the high schools have not grown their own teacher workforce. When HS programs have a retirement there is no one to fill the vacancy.

10:01:57 From Tracie Zerpoli : We currently offer courses in high school. For example, Automotive, Construction, STEAM, Manufacturing, etc. Sometimes the enrollment is low because parents don't want their children in these classes. Also we are competing with the idea of EVERY student should go to a 4-year university. How do we change this thinking?

10:02:37 From Molly - ED MCIE : Thanks Duane. The MCIE is trying to reach the younger generation. We just launched two videos that try to do that at www.ie-mfg.com .

10:02:50 From Kris Costa : @Tracie - this is where intentional Dual Enrollment can be very effective!

10:03:08 From DWANE FULLER : Your welcome

10:04:49 From Ben MacMahon : I find that robust career exploration / planning can reveal the lie behind the inherent 4- year university bias. The students see for themselves what education they need and the least expensive way to secure a successful future

10:05:07 From Lucy Centeno : Reach out to High School CTE (Career Technical Education) Directors at the school districts to implement more machinest/metal shop class. They do have Welding, Construction, Transportation, Logisites, etc. Here is the JUSD website for college and career readiness,

10:05:10 From Lucy Centeno : https://jurupausd.org/ourdistrict/education-services/college-career-readiness

10:07:05 From Eric Crawford : Jay, that sounds like an incredible project!

10:11:22 From Alan Braggins : Thank you everyone for taking your time out to join us. Please visit our Advisory Resource website:

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10:12:10 From James Hattar : Help shape the future workforce by providing input to our educators via short survey https://bit.ly/MfgSurvey

10:13:46 From Paul Van Hulle : Nick, Norco College is doing everything you are talking about.

10:14:05 From Paul Van Hulle : Covid sure is effecting hands on

10:14:11 From Anaergia, Kristin Blake : @Eric Crawford, thank you! Check out our short video on how Anaergia is transforming waste into a resource:

https://www.youtube.com/watch?v=bBo3M8dPa2U

10:14:45 From Carrie O'Neal : Are there student opportunities for internships and job shadowing within your companies?

10:15:02 From Paul Van Hulle : Nick, are you using Siemens or Allan bradley

10:15:11 From Stefanie Padilla : What type of partnerships does the school have with manufacturing companies? A lot of businesses are moving out of state due to the cost of business in California...

10:15:32 From Stefanie Padilla : Logistics and manufacturing especially

10:15:38 From Paul Van Hulle : Nick, can we meet and talk further

10:15:57 From Anaergia, Kristin Blake : More on Anaergia at the below link. We are a global company with a strong commitment to our local regions, like California!

https://www.anaergia.com/what-we-do

10:16:15 From Allison Huie : @Rebecca.... how do you identify those qualities in candidates on paper? What goes on the resume that "shows" those qualities?

10:17:26 From Paul Van Hulle : Nick, what CNC machines are you using

10:18:11 From Rebecca Bettencourt : @ Allison we encourage to write experiences on resumes and projects worked on during school that demonstrate these items, we then ask questions in interviews

10:18:42 From DWANE FULLER : Here at TET we use Haas

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11:15:54 From Molly - ED MCIE : Our MFG association would like to investigate a certification for entry level, basic skills.

11:16:01 From Molly - ED MCIE : Thanks Rick.

11:16:05 From Paul Van Hulle to Nick Tonti(Privately) : We are moving to getting the instructors certified in Fanuc

11:16:15 From Rick Radcliffe : Let's talk about SACA.org...

11:16:26 From Nick Tonti to Paul Van Hulle(Privately): We can connect after this to talk in more detail about what we look for.

11:17:07 From Paul Van Hulle to Nick Tonti(Privately) : That would be great

11:17:21 From Mark Martin (Regional Director - Adv Mfg, Bay Area) : ACT has some entry-level types of certifications. http://www.act.org/content/act/en/products-and-services/workkeys-for-educators/ncrc.html

11:17:30 From Sharon Van Madrigal : Some ROP programs have Career Readiness Specialist on a high school campuses where we have Advisories committees and we provide information to our students, teachers and stakeholders

11:17:37 From Nick Tonti to Paul Van Hulle(Privately) : Maybe we can schedule a call next week.

11:17:46 From Natalie Weaver, Chaffey College InTech Center : What are your thoughts of piloting programs through not-for-credit, which provides flexibility in making changes to curriculum?

11:18:07 From Natalie Weaver, Chaffey College InTech Center : Once we identify the type of curriculum that aligns with what industry needs, then we convert to credit.

11:18:09 From Mark Martin (Regional Director - Adv Mfg, Bay Area) : Also, NAM's Mfg Institute has a list of certifications. https://www.themanufacturinginstitute.org/workers/skills-certifications/

11:18:19 From Mariann Johnson : Molly-workforce would love to talk to you about this for our upcoming regional plan

11:18:27 From Sharon Van Madrigal : On our campus we have manufacturing through the ROP programs

11:18:41 From Nick Tonti to Paul Van Hulle(Privately) : If you send me an email, we can schedule a time to connect over the phone directly.

11:18:56 From Nick Tonti to Paul Van Hulle(Privately) : nick@trinityautomation.com

11:23:08 From Rebecca Elmore : Thank you all. This has been an informative discussion! I'm sorry; I have to leave for my next meeting. Have a great day!

11:31:44 From Rick Radcliffe : I want to take a minute to thank all of our panelists. As we saw from the survey, 80% of the attendees are from education. In my experience as a high school instructor, teachers would love to have input

from companies...but it's so hard to get industry to participate in these discussions. I think the most impact our panelists can have at this point is to bring their colleagues to the advisory panels in their local areas.

11:33:07 From Rick Radcliffe : A previous panelist commented that students were coming from CC programs with no experience in their particular software...schools need to know what specific software we should be teaching.

11:34:07 From Paul Van Hulle to Aldo Villalpando(Privately) : Do you still think that students should not only have mastercam but also manual programming

11:34:50 From Paul Van Hulle to Aldo Villalpando(Privately) : I really want my students to be able to read the code that mastercam produces

11:34:50 From Aldo Villalpando to Paul Van Hulle(Privately) : yes certainly

11:35:33 From Michael Lesiecki : thank you Rick

11:35:43 From Aldo Villalpando to Paul Van Hulle(Privately) : I learned it vis manual way with G codes and then switched with mastercam

11:36:16 From Paul Van Hulle to Aldo Villalpando(Privately) : Yes, I really want my students to know manual g codes before they go out to the industry

11:36:16 From Aldo Villalpando to Paul Van Hulle(Privately) : this is the way this is taught in NTMA, manual then automated

11:44:28 From Molly - ED MCIE : FYI: Please check out and share the videos for students and public, on plant tours and employee pathways. Let me know if there are other topics that would be of value to students. We will be producing more videos to entice students.

Visit www.ie-mfg.com

11:45:38 From Sharon Van Madrigal : thank you

11:47:02 From James Hattar : Help shape the future workforce by providing input to our educators via short survey https://bit.ly/MfgSurvey

11:48:04 From Aldo Villalpando to Paul Van Hulle(Privately) : When I learned the G codes took us about 3 months, and its very important to keep the students engaged during this time and lots of hand out training after a part is finished. so they see a final product and then later transferring them to automated mastercam

11:48:35 From Aldo Villalpando to Paul Van Hulle(Privately) : after their code is finish have them make the part and just simple cutting to start is very engaging with G codes

11:52:07 From Ruishan Chow : @Hector, thank you. It was difficult to speak up while I was in industry and having such challenges at first, but it was the leaders (male!) who encouraged me to speak up, and also spoke up for me. So, thank you so much.

11:53:47 From James Hattar : The videos can also be found here:

https://www.youtube.com/channel/UCUfBjFVlbWHyh-bMNwHIEmA

11:54:44 From Rosalinda Rivas : thank you for sharing the links!

- 11:55:47 From debbie smith : YAYYY Molly and MCIE, great job on the videos
- 11:56:17 From Michael Lesiecki : nice work on videos
- 11:56:32 From Mariann Johnson : these videos are great!
- 11:57:10 From Molly ED MCIE : Welcome for everyone to share at www.ie-mfg.com. Thanks!
- 11:57:14 From debbie smith : I think she did about 7 different stories/testimonials and shop visits
- 11:57:43 From Molly ED MCIE : Need your suggestions for additional topics.

11:57:52 From James Hattar : Help shape the future workforce by providing input to our educators via short survey https://bit.ly/MfgSurvey

11:58:40 From Carrie O'Neal, K12 Curriculum Specialist and Pathway Coordinator : Thank you all for the great information and conversation around improving economic opportunities for our community.

- 11:58:41 From Gary Potter : Thank you Alan and thank you panelists and everyone who is in attendance
- 11:58:45 From Aldo Villalpando : Thanks everyone
- 11:58:45 From Jenni Huter : Thank you, Alan!
- 11:58:49 From Ruishan Chow : thank you Alan!
- 11:58:51 From Molly ED MCIE : Thanks Alan!
- 11:58:51 From Peggy Weber : Thank You Everyone this was wonderful event
- 11:58:52 From James Hattar : Thank you
- 11:58:53 From Don Robinson : thank you
- 11:58:53 From Mark Martin (Regional Director Adv Mfg, Bay Area) : Thanks Alan. Nice job!
- 11:58:57 From Tracy Lokstadt : Thank you

11:58:57 From Rick Radcliffe : Thank you Alan!

11:59:03 From Rosalinda Rivas : Outstanding event, thank you everyone. Thank you Alan

11:59:09 From Gar Norlund : Great job everyone

11:59:10 From William ONeil : Thank you

11:59:17 From Larry McLaughlin : Great job Alan and Avi!

Nick T nick@trinityautomation.com 909-203-3662

Aldo Villalpando aldo@affordableplastics.com 909-234-0325

Paul,

Good afternoon.

Great to hear from you, thanks for the attention.

I will have Alan send you the link for the video.

And how about we touch base next week and will be more than happy to check out how we can work together.

Best Regards, Have a good weekend.

Aldo Villalpando Vice-President Affordable Plastics & Packaging, Inc. Office: (909) 657-2227 Cell: (909) 234-0325 Fax: (909) 972-0279 www.AffordablePlastics.com aldo@affordableplastics.com

Based on conversations with Aldo he stated that the students need plenty of time in the classroom to learn their skills especally in machining

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