

MACHINING-MANUFACTURING ADVISORY COMMITTEE MINUTES

DATE: June 7, 2023

TIME: 5:30-7:00 pm

PLACE: Lower Columbia College, VOC 112

I. Call to Order: 5:31 p.m.

II. Present:

Jennifer Hanson, USNR

Nathan Shepherd, Lower Columbia College

Noah Baxter, USNR

Richard Leu, CHAIR, Selway

Pete LaBerge, RD Olson Manufacturing

Jim Peters, Waite Specialty Machine Works

Matt Peterson, Genentech

Kreiter Staviy, Genentech

Tamra Gilchrist, Lower Columbia College

Jenny Smith, LCC Minutes

III. APPROVAL OF MINUTES: Will be sent by email

IV. INDUSTRY UPDATES:

- Machine shop sales are down. Robotics are going in because employees are hard to find
- Seeking Machinists/welders. USNR has an apprentice machinist program and one in fabricating. Each has a few participants - Need people
- Retirees are creating a deficit.
- New hires survive approximately a three-month turnaround time. Then they move on.
- Machines were just put at Vernonia and Clatskanie.
- Tours may help with exposure. Those who have seen how machining works were more interested in the field than those who had an idea of what machinists do.
- Incumbent workers are coming to LCC for Process Manufacturing and additional training.
- Centralia and Woodland are signing incumbents up too. There is some flexibility with the credit load.
- Robotic arms are becoming more widely used. Warehousing is using more robotic arms too. Automation is being reinvented.
- Mechanical aptitude is in demand. Retention is challenged.
- St Helens and Scappoose may be great target areas.
- Oregon Manufacturing building has some very cool things to see.

- Reach out to Woodland as well because the levy just failed. They had a sub, but there is a chance programs may be cut. We may be able to get students to us.
- Industry tours may help with retention, but early job offers can compete for time with respect to grades.
- The fairgrounds can compel interest. It is slow, but it is there. LCC is doing things right with respect to recruiting.
- Mark Morris is a little bit more “construction” based, and we make sure to create awareness. Some Toutle students are excelling.
- Running Start doesn’t typically cover trade courses, but it is an option. We don’t compete with high schools often though.
- High school counseling can help with recruiting a bit, but they are often working with mental health
- Does the state have programs for unemployment? Kelso office has lost touch. We are trying to re-establish those connections. They are pushing short-term currently, but employability is tied to longer-term training.
- Sometimes students who don’t have to pay for education don’t appear to recognize the value.
- Intern ages are typically 16 and older, but no forklifts, cranes, and there is a max hour requirement.

V. Education (LCC and K12) Updates

- **MASP Curriculum Update (Fall): Cam Todd was previously in charge and now updates are going to start happening**
 - i. Columns are projects in the main shop classes and skills learned
 - ii. Manual machining classes have a solid curriculum, but we are open to suggestions.
 - iii. We are hoping to improve on manual CNC coding, but we would like to transition into Mastercam. Reading code matters, but there is support for Mastercam which is offered in the spring quarter.
 - iv. The new curriculum will be investigated and developed over the summer for the upcoming academic year in fall/winter/spring
 - v. Set up is mandatory instruction when preparing for on-the-job work. Online training isn’t the same as setting up tool offsets and why do that.
 - vi. Next spring it may be incorporated into the CIM class.
 - vii. RPM and feed rate are practiced after the lecture
 - viii. What is the demand for the 4 and 5 axis? Very important according to advisory members. 4th axis is useful but not generated by a CAD program. We haven’t taught to the level of the 5th axis.
 - ix. Operators don’t know how to set up a feed and troubleshoot 1 offs.
 - x. The manual training will remain, but hand programming will be a bit more limited.
 - xi. CAD/Cam (like Gibbs cam or 360) would be interesting to investigate.
 - xii. If students make parts that assemble, teamwork/research/shop floor engineering is required.

- xiii. If competency is mastered, students can have time for extra credit projects. Creativity is encouraged, but reverse engineering is recommended by advisory. Having them repair a part, like pulling a dent out and resurfacing is good for experience too. These will be introduced.
- xiv. Repair may be a blind spot. That topic is great for extra credit and is part of job duties when you have a career.
- xv. Fixtures can take longer than a part, and be more problematic.
- xvi. Competitions would be inspired when we have the students to do so.
- xvii. Ask students how to make a part and discuss a step-by-step figuring out what to do next
- xviii. Robotics clubs help with interest
- **Facilities, Equipment, Technology, Desktop CNC (Spring)**
 - i. We got a grant for a desktop mill. We can roll it around to catch attention. The plan is to increase interactivity to recruit students.
 - ii. We also have 3D printers and a lot of foam (?).
- **Student Success/Performance (Fall/Spring)**
 - i. Fewer trade students. Aiming to bring in more to increase demand.
 - ii. K12 recruiting is happening. Both WA and OR are target markets.
 - iii. Nathan is teaching machining and Welding at Kelso High School. Wahkiakum students attend too.
 - iv. We are hoping to offer more credits next year.
 - v. One student already passed the WABO test.
- **K12 Updates (Try-A-Trade)**
 - i. This year we had spinning tops
 - ii. The attendance was cut by competing events.
- **LCC Updates**

VI. New Business:

- Next Fall discuss modernizing the MASP Program (Mastercam).
- Advanced Manufacturing for the fall meeting. We may need a separate focus group. Please let us know if you believe there should be others. Sept/Oct time frame. Brainstorming session requested.

VII. UPCOMING PROGRAM OR COMMUNITY EVENTS

- a. July 27th "Rock Enroll" Career Pathways Showcase 4:00-6:30 pm.
- b. Bicoastal media will have a presence
- c. Career Fair on May 25 didn't include many of the advisory committee members. They would like to be invited.
- d. Anticipating an October career fair too. Manufacturing week/month is also in October.

VIII. NEXT MEETING (DATE/TIME/PLACE): Not addressed

IX. Adjourned: 6:42 p.m.

ACTION ITEMS

- Next Fall discuss modernizing the MASP Program (Mastercam).
- Advanced Manufacturing for the fall meeting. We may need a separate focus group. Please let us know if you believe there should be others. Sept/Oct time frame. Brainstorming session requested.
- Invite Advisory Members to career fairs
- Robotics club that includes tours?
- Have students design a replacement part or fixture outlining steps to do so.

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