HELENA COLLEGE
UNIVERSITY OF MONTANA

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Computer Aided Manufacturing Program Advisory Committee Minutes

Attendees:

- Danny Farr, King Machine
- Jasmine Rusnell, Diversified Plastics, Inc.
- Ken Johnson, CM Manufacturing
- David Cash, Boeing Company
- Sharon Chapin, Boeing Company
- Tammy Burke, Boeing Company
- Cody Smith, Pioneer Aerostructures
- Preston Watts, Pioneer Aerostructures
- Sandra Bauman, Dean/CEO Helena College
- Stephanie Hunthausen, Executive Director of CTE
- Paul Nicholson, CNC Machining Instructor
- John McLaughlin, CNC Machining Instructor
- Melissa Mousel, Administrative Assistant of CTE

- **Introductions**

- **Curriculum and Instruction**

• Identification and expansion of new technologies.
  - John will be replacing DDSN 135 Solidworks with DDSN 132 Mastercam Solids upon approval from the state. The change will hopefully help 1st year students be able to go further in the 2nd year. It was noted that there is still a demand for the manual machining.
  - Changing the second semester of the second-year classes (MCH 237 and MCH 238) to hybrid classes. Gives the students flexibility to have more shop time on the machines.
    - Follow-up action: Helena College instructors have decided to try utilizing more independent projects to offset some of the class time and still offer more lab hours.- Our advisory board members noted that more hands on machine time is extremely important

• Compare content with occupational competencies and tasks.
  - Second Year students are required to obtain both FANUC certified CNC training and the HAAS operation certification. Paul is certified FANUC instructor
  - Second year students are making more tool related projects and doing more threading on CNC.

- Students have been incorporating C and Y manual programming of the HAAS ST-20Y to complete first semester parts in the second-year classes. This is a team effort as students need to work together to assemble the project.

- **Program Review**

  • Equipment and facilities updates:
    - Three new manual vertical milling machines are now up and running. These machines have been used this semester. Five other machines need replaced. The upside of the older equipment is that students learn how to fix the machines. The downside is that there is a loss of class time.
    - All components for the CNC lab display screen are in place and working. We are in process of fabricating a mounting system to hang the display screen on a steel column in the shop. There is a hope to have Capital high school come and work on Renshaw. This should be up and going soon.
  • Assist in short and long-term planning for program improvement.
    - 2021-2023 Enrollment increased:
      - Fall 2021: 9 first year students. For a variety of reasons there were only five 1st year by end of spring 2022 and 3 second year students.
      - Fall 2022: 10 first year students, 3 second year students. A couple of students are looking at going into Metals Tech. Seven current 1st year students are looking at 2nd yr CNC. The current 2nd year students are solid and are expected to complete this spring.
    - Curriculum review is still in process for second year.

- **Recruitment and Job Placement**

  • Notify instructors of entry-level job openings for students.
    - Employers are encouraged to contact the Helena College instructors to schedule meetings with students and or student groups regarding job opportunities. Department instructors will organize these events.
    - Employers are encouraged to provide or obtain cooperative work experiences, internships/externships, work/study or work-based learning opportunities for students.
    - First and second year instructors are trying to visit shops to further understand what these shops do. This will help students and employers find a better fit. Cody and Preston from Pioneer Aerostructures stated that they can be available for tours with short notice. They have also been talking with high school students to encourage trades

- **Staff Development**

  • Review professional development plans.

- John McLaughlin, our first year instructor will be going through MasterCam Solids to fine tune curriculum and resources. He is planning to Have students redo drawings/update the drawings that are used for instruction.
- Paul Nicholson, our second year instructor is working on his promotion and tenure portfolio. He is up for promotion this year and tenure next year.

- **Resources**

• Provide tours and field trips, job shadowing experiences and speakers.
- Boeing field trip for all students. There is a planned field trip For November 3rd.
- Pioneer Aerospace field trip is currently in the planning stages.
- Spring semester field trips are being discussed. The instructors are hoping to visit several different sites in one day.

- **Changes and improvements**

- The waste oil contractor will no longer handle our used coolant. We anticipate a cost of about $2000.00 annually to dispose of used coolant (200 gals) through a different vendor. We are looking at ways to evaporate our own coolant but feasible methods are proving to be costly.

  We are looking for a safe/cost effective option. It was suggested that maybe Pacific Steel and Recycling. It was noted that it would cost $5,000-$15,000 to buy evaporator.

- Updates and Feedback from industry partners. Advisors recommend:

  - Students need experience working as a part of teams.

  - Students need to have the ability to look at blueprints to build out projects and understand GD&T (Geometric Dimension & Tolerance).

  - Our program needs to consider automation which is becoming more prevalent.

  - Students need problem solving skills.