



Helena College Mission:

Helena College supports our diverse community by providing the paths and tools necessary to assist learners in achieving their educational and career goals.

CNC Machining Advisory Board Meeting Minutes
Wednesday, October 24th, 2023 1:00 P.M.
Airport Campus- Room 209

Attendees:

Paul Nicholson – CNC Machining Instructor

John McLaughlin – CNC Machining Instructor

Stephanie Hunthausen – Executive Director of Career Technical Education and Dual Enrollment

Sandra Bauman – Dean/CEO

Melissa Mousel – Administrative Associate - CTE

Preston Watts – Pioneer Aerostructures

Cody Smith – Pioneer Aerostructures

David Ehlert- Boeing

Matt Moyer -Boeing

Danny Farr- Haas Factory Outlet

Ken Johnson – CM Manufacturing

Dustin Nelson- Boeing

Curriculum and Instruction Update

- Identify and expand the use of new technologies.
 - First year instructor, John McLaughlin, will be teaching DDSN 132 Master Cam Solids for the second year this spring semester. Prior to last academic year, the first year students were taught Solidworks, but the decision was made to move to Master Cam as this is what the second year students work with and should help with a continuity of learning.
 - Second year instructor, Paul Nicholson, has decided to try utilizing more homework projects to offset some of the class time and still offer more lab hours.
- Compare content with occupational competencies and tasks.

- Second Year students are required to obtain both FANUC certified CNC training and the HAAS operation certification.
- Last year, second year students made more tool related projects and did more threading on CNC. This was well received by the students and will continue. Paul is also encouraging students to do more outside work in the second year.
- Second year students have been performing manual C and Y programming of the HAAS ST-20Y as well as 4th axis mill operations to complete first semester project parts.

Program Review Update

- Update of equipment and facilities.
 - One new vertical mill is ordered and will be used next semester.
 - The shop TV display screen is installed and working. Cameras located in 4th axis Mini-mill and the HAAS ST-20Y can display as well as on Paul's laptop computer. Students can watch what Paul is demonstrating inside the Mill and it can also be shared on Zoom and remote meetings.
 - A HAAS HA5C 4th axis device was added to the new Haas Mini-mill.
- Update of Enrollment and Curriculum
 - 2020-2023 Enrollment increased:
 - Fall 2022: 10 first year students, 3 second year students.
 - Fall 2023: 13 first year students, 7 second year students.

-We are coming back up to pre-Covid numbers. There are two ways that we tend to lose students after the first year. The first is that they choose to switch over to first year welding to attain a Metals Technology AAS. The second way is that some choose to go to work after the first year of machining. We urge our partners to encourage their student workers to complete their second year of CNC.
 - Curriculum review is still in process for the second-year program.

Recruitment and Job Placement

- Please 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 will continue visiting Machine shops to further understand what these businesses do. This will promote student and employer success through better job fits.

Staff Development

- Review professional development plans.
 - Our first year instructor, will be going through Master Cam Solids to fine tune curriculum and resources.
 - Our second year instructor, is working on his tenure portfolio. Paul is up for tenure this year and was successfully promoted last year.

Resources

- Instructors provide tours and field trips, job shadowing experiences, and guest speakers. The following spring semester field trips options are being discussed:
 - Boeing field trip for all students took place spring of 2023 and will take place again the spring of 2024
 - Pioneer Aerospace field trip in the works.
 - Possible out of town field trips are being discussed.

Topics for Discussion:

1. Student Performance:

- Do you employ any Helena College graduates? How are they doing?
 - 1/4 of Pioneer employees are HC alumni or currently going to school here now. They commented that retention is better if they come from Helena College first and the students have a lot of success.
 - Boeing states that HC students are happy with a better skill set and mind set. Presently they employ 8-9 of our alumni as machinists.
 - CM Manufacturing is pleased with what our students have accomplished in school.

2. Student Preparation:

- What non-technical (soft skills, 21st century skills, employability skills, etc.) are most important to you?
 - Teamwork and attitude
 - Attention to detail
 - Knowledge of final product and the understanding the why and how we got to the final stage.
 - Knowledge of how what you are working on affects the operation downstream...the overall process
 - Time management – including documenting time and learning how to improve processes
 - Learn how to do the process well then how to do it fast
 - Communication skills – For example –machinists must communicate with quality department, etc.

-Thinking how to make processes more efficient and make improvements in the process.

3. **Upcoming needs:**

- What trends, in technology or other areas, do you see in your industry that may require new skill sets for workers?
 - Coding class (open source coding solutions such as Python etc.
 - NC14.5 -companies do a blueprint test based on this for new employees.
 - Katea models are more prevalent....getting away from 2 D models
 - Robotics shells-how to program and utilize them. This technology is coming in 5-10 years.
 - Hybrid machines
 - 3 D modeling is becoming used more prevalently.
- How can we better partner/collaborate with you?
 - Those in attendance like our curriculum
 - Visit the employers to see what processes are like.
- How do you advertise for/recruit new employees? How can we connect you with our students?
 - Word of mouth
 - Face time with students and companies
 - Instructors visit facilities to see processes
 - Hiring incentives
 - Talk to students about how to get a career and grow in it
 - Face time/teams with out of town companies to show the students their processing floor.

4. **Other:**

- Recruiting efforts currently implemented by Helena College are as follows:
 - HC present in high schools. We have partnership with East Helena.
 - HC tour of Sentinel HS robotic students
 - HC hosting lego robotics competition in the Spring
 - HC Shadowing days. High school Junior and Seniors come and spend a day with current students.
 - HC Manufacturing and Mechanics night
 - HC hosts State Skills USA

What ideas do you have for recruiting new students?

- MT Manufacturing Extension Center does manufacturing days. Matty is the contact there to network and possibly set up a similar day.
- Find a way to reach out to students in other states and state wide.
- Promote that you can stay or come to MT for the jobs and stay in the industry

-It was noted that it is getting tough for new employees to afford to live/work in some areas in Montana.