

**Precision Machining Advisory Committee Meeting Minutes
Minnesota West Community & Technical College Granite Falls Campus
April 23, 2018**

Members Present: Joe Naber, Vishay, Inc.
David Yaeger, Former Faculty Member
Tim Schulte, Tolamatic

College Staff: Ray Louwagie, Faculty
Dawn Regnier, Dean

Called to Order: 4:50 p.m.

Approve Minutes 4/24/2017 Meeting: Dave Yaeger motioned, Joe Naber Second; Minutes approved

Welcome & Introduction of Members

Old Business / Updates: Ray provided the update for the committee on the following topics:

Equipment:

- Haas Mini Mill was delivered and set up in May 2017. Ray attended two training seminars for the equipment at Productivity in July 2017; one session for the Mill & one session for the Lathe total of four days. There was no cost for the training, only cost charged to program was lodging and mileage. Dave asked about the simulator for the Mill and the need for the Lathe. Ray indicated that the simulator is mostly compatible but there needs to be modifications made to format USB drives to make the machine “think it is a floppy disc”. The Haas Mill also has a simulator.
- Ellis Sander purchased for the shop
- Received the B12 Citizen Swiss Lathe donated from Specialty Manufacturing in Granite Falls and will use the bar feeder. Jerry Rupp will assist in training Ray for the programming
- Awarded leveraged equipment funds to support the purchase of the Trimos Height gauge, additional Digital Read Outs for mills, Power Feeds for mills and the Ellis Saw. The total cost of the equipment is \$17,464. As a result, all of the mills have digital read outs and power feeds and the equipment is in good working order.
- The lighting in the shop area has been upgraded to LED lights which is cost effective and has been an improvement to the shop area.
- Equipment and supplies no longer being used will be included on the surplus list for disposal. Ray provided the list to Dawn and will go through the College process for equipment disposal.

Marketing & Promotion

Ray shared that Nicole Zempel is the new Marketing/Recruiter for Minnesota West at the Granite Falls Campus. Nicole is very outgoing and actively markets the Precision Machining program and schedules high school and other events.

- Ray and Nicole represented the Precision Machining program at three High Schools during the Fall semester: Minneota, Montevideo, Yellow Medicine East.
- Hosted the Yellow Medicine East 9th Grade students for the career/manufacturing awareness
- Attended the Career Expo at SMSU in Marshall in October. Approximately 1,400 high school 10th grade students participated
- Hosted the Breaking Traditions high school student program in Precision Machining over 50- 9th grade students from area high schools participated at the Granite Falls Campus.

- Participated in the High School Career Day hosted at the Canby Campus; nearly 90 high school students (9th-11th grade) participated representing 8 area high schools.
- Fall Semester Field trips included Octoberfest at Productivity; DP Machining; Truwe Machining; Specialty Industries; and Chandler Industries.
- Spring Semester Field trips included Nova Tech; Tolomatic; Fey Industries; and High Performance Engineering in Sioux Falls, SD
- Scheduled to present to the Tracy and Edgerton High Schools in May 2018 and the Trades on the Prairie in July.

Introduction to Manufacturing and Engineering: A new course offered in the Spring semester. Pilot program with the five high schools in the Minnesota River Valley Education District including Lakeview (Cottonwood); MACCRAY (Maynard-Clara City-Raymond); Montevideo; Renville County West; and Yellow Medicine East (Granite Falls-Clarkfield). Results include:

- 12 High School Students participated; 11 males and one female (11th & 12th Grade)
- Purpose of class was to increase awareness for manufacturing careers and education programs
- The course divided between Precision Machining 18 hours; Welding 18 hours; Mechatronics/Engineering 36 hours. Students came to Minnesota West Campus Tuesday, Wednesday, and Thursday from 8 a.m.-9:30 a.m. On Monday/Friday the students learned employability skills, resume preparation, job application completion, soft skills, and participated in Job Shadows.
- Each student participated in two job shadows with local employers including Chandler Industries, Spec Systems; Avicenna Technology, Inc., Fagen, Inc., Granite Falls Energy, K&M Manufacturing.
- Student survey results indicated they were all pleased with the course, they learned much about the manufacturing industry that they did not know, and would tell their friends to take the class. One thing they requested was more evenly distributed time between the topics. As a result, for the next class the time will be evenly split into five week sessions for each topic.
- For Precision Machining the students were in the lab each day with the College students. The project was to design, program and make a CNC name plate. Ray showed some of the projects and shared that he was pleased with the class and their performance. The Advisory members indicated it was a good marketing opportunity and hoped it would continue.

Newspaper Article: Annie Magnuson is the female student in the diploma program. She was hired by Specialty Industries and is interested in pursuing the AAS degree. The Granite Advocate is interviewing and will run an article about Annie.

New Business:

Schedule/Classes/Course Modifications:

- **Autocad (FLPW 1115)** was offered in the Fall semester instead of the Spring semester; was changed from a 2-credit lecture only course to a 1-credit lecture/1-credit lab. The course is taught by Ray Louwagie and is a cored course for both Precision Machining and Mechatronics. Last year it was more of a grid paper process for design, this year the assignment was to design and CNC program a name plate. They started the programming about 3-4 weeks into the semester. Ray reported it worked well this year. Program changes will be updated on the College website and program outlines.
- **MACH 1465 Cam Software and Programming** has been removed per the Advisory Committee direction during the 2017 meeting. The software has been removed and replaced with Swiss Lathe Programming & Operation. The course is a 1 lecture/1lab course. During the Spring semester there have been a couple of programming done on the machine. During the summer Ray indicated he would be working with Jerry Rupp at Specialty Industries to learn more about the programming for the Swiss Lathe in order to dedicate 3-4 hours per week on the machine operation/programming rather than dedicating the time to the Mastercam software. The Committee approved the dedication of time to incorporate more G codes for integration in next year's instruction.

- **Rotary table and indexing head:** Ray discussed the machine and asked whether it should be kept in the program because it is old technology. The Advisory Committee recommended not dedicating time to the rotary process.
 - **NIMS Credential:** Based on the direction provided by the Advisory Committee, the students paid the \$40 registration fee for the NIMS test. The program covered the \$35 cost for the test for each student. To date all completed the Safety/Precision Measuring and passed. All will be taking the CNC Lathe and CNC Mill Operator tests on April 25-26. According to the Advisory Committee they do not base the new hire compensation on the credential but agree it is good for the students.
 - **Concentration on CNC Programming:** The number of lab projects have been reduced to incorporate more CNC programming in combination with some manual processes into each project. Some of the projects include:
 - **Trailer Hitch Ball:** Students programmed and made trailer hitch balls for themselves and other College staff/faculty. The project was done on Wednesday and are being stress proof zinc plated in Watertown. This was a good PR project for the class. Also made **Christmas Ornaments & Tops.**
 - **Bar Feeder Components:** Design & machined components for bar feeder for the Swiss Lathe and added punches.
 - **Introduction to Machining Evening class:** Jerry Rupp and Ray L. offered a 24-hour introduction course for seven adult students and charged \$199 per student. The students indicated that it was very valuable and suggest it is offered again. There was one High School student and one Mechatronics student in the course. Hope it will be a feeder into the diploma program.
 - **Enrollment Update for Next Year:** To date three students are enrolled all high school seniors graduating in May. One PSEO student is scheduled to visit the program next week. An Applied Engineering company from Yankton SD requested a tour of our program as they are having challenges recruiting machinists and may be interested in a partnership. The Advisory Committee asked about high school programs. Ray indicated that Lakeview and Redwood Falls have nice welding/metal working lab areas but the Ag teachers do not have the metal working skills. The Committee suggested inviting High School representatives to the Committee meeting.
 - **Equipment Updates:** For next year Ray discussed the potential to upgrade to a 4th Axis for the Milltronics or Haas machine likely would be \$10,000-\$11,000. Also additional pedestal grinder with buffing wheels, sodick wire; the Bridgeports are working well. The items no longer in use have been approved for sale and will be sold online with Hoffman Auction this year.
 - **Budget & Scholarship Fund:** The program is within the budget for this year and spent \$10,525.71 to date for program operations and supplies. The Scholarship Fund has a \$1740 balance and would like to grow this balance to support program enrollment.
 - **Pipeline Grant Program:** Dawn R. provided information and discussed the Minnesota Pipeline Dual Training grant program available to employers to support technical skills training in the advanced manufacturing industry in partnership with Minnesota West. The grant provides funds to pay for tuition, fees and book charges and is reimbursed directly to the employer up to \$6,000 per employee. This is a possible option to support training and professional development budgets for employers and could be a recruitment tool for Precision Machining.
- Meeting adjourned at 6:20 p.m.** Committee members invited to the Rock for dinner.