

Machine and Metals Technology

Advisory Committee Meeting

Wednesday, November 14, 2018
Indian Valley Campus, Building 9, Room 101
3:00 – 4:30 p.m.

Beth Pratt began the meeting welcoming everyone. Then each attending member conducted a self-introduction. She thanked all for attending and explained the purpose of the gathering.

We began reviewing the current labor market for the Machine and Metals Technology industry. The labor market reports showed the job industry strong in the area. Occupation growth is projected as a 6.2% growth in the next couple of years. The pay median rate is over \$26/hour. The job hiring rate averaged at 187/month. Many industries show a demand for machine metal workers. All statistics were found through EMSI (Economic Modeling System International).

The discussion opened to the industry members to gather their input of what they think is currently happening and what needs are in demand for our region. Committee members expressed that there is a lot of overlap, and all the trades are hurting for employees. It's hard to find employees to show up at their jobs on time every day. Relevant skills are needed. At Taylor & Turner, it takes 5 years to train their new hires. New employees need to learn a lot from the beginning such as blue print reading, safety, and TIG (Tungsten Inert Gas) welding. TIG welding skills is in high demand.

Committee members expressed that only business offering high-end services survive such as custom medal details to homes or custom cams for expensive cars. They agreed that employees need to be able to conduct simple math solving including fractions/decimal conversions, some geometry, etc. The students entering into community colleges from their welding or machine shop classes at the high school level do not seem to learn the math skills. Additionally, they often do not know basics about tools.

For community colleges in general, budget often is an issue. COM Machines and Metals program could benefit with more TIG machines. With the TIG you can

control the flame, the heat and the process better in welding. This should go right into the program review.

Turner & Taylor has 11 employees. Though they have enough work for 30 people, but the caliber of candidates is not adequate enough for the business to justify the time in training. Furthermore, the commute is too insane to get people hired from Sonoma to work in Marin, and the cost of living is keeping people from the mid-west from moving into California and remaining here.

High schools have dropped what they used to call “consumer math”. This is where the student wouldn’t need to begin with Algebra, and the student would pick up the basic math. However, smartphone voice commands can give many of the math answers.

The committee’s discussion topic changed to the motive of the students in the program. Is there a method in knowing what students are taking the classes for hobby and which ones are looking to finish the program and take their skills into the industry? Employers are looking for candidates for solid computer skills first, then knowing software involved with manufacturing. Computer skills are key. CAD would be beneficial for students to learn for Machine and Metals Technology. Students can go to multimedia to gain this. COM can incorporate a CAD class into the program.

Shorter focused classes were suggested for students where the attention span cannot stick with a 16 weeks semester. Ron stipulated COM is looking into shorter lengths of courses instead of a full 16 weeks semester. So, some disciplines are thinking about offering 8 weeks courses.

Arthur Lutz gave an overview of the current curriculum for MMT. He stated that blue print reading is part of the curriculum. He thought that the program is strongest in lay and mill use. A number of the students have gone on to work in the area successfully. What is a concern seems to be the way the industry seems to be moving, COM is behind with hardware and software. The computer (Computer Numeric Controls) systems needs upgrading. Also, the MMT program does provide the basic skills.

Joel Osborn spoke about his business in manufacturing machine parts for the NASA and Aerospace programs meeting strict requirements. The industry is growing and this company has been recognized as one of the top 33 growing companies in the Bay Area in the San Francisco Business Times. Hiring and employment issues has been the same for this company as what was mentioned before including commutes, skills, cost of living, computer and math skills, etc.

Having shorter classes would help. This company doesn't need welding, but CNC milling is very valuable. Arthur updating the mills and curriculum would be a big boost to companies such as this one. CAM, milling aspects, reading blue prints, safety and certain measuring skills would really be valuable to the parts manufacturing industry. ESL is also needed.

These comments/questions were raised by the committee:

- Basic concepts learning with a little older, used machine wouldn't be a loss. A brand- new machine would be faster and offer some extra features, but the concepts are still the same.
- Marketing posters would help. We could put them up in the shops of some of the business or high school classes.
- Funding via the state can be available for apprenticeships where tracking of applied skills would be documented. This would be gaining work experience along with their college education.
- Alex Jones asked the committee if it would be beneficial to set up internships for businesses. Internship implies a short time stint where a lot of time is invested into the student with training. Some committee members stated it is likely the student would move to other business for employment. Many of the businesses are too small to support an internship. The idea of an internship wasn't favorable with the committee as a whole. The ROI didn't seem worth the investment.
- Co-op programs seem to work based on the industry publications where a new hire will receive training on the job, but they also are paid to go to college.

Ron Palmer explains that COM program's funding primarily comes from grant money. We are able to get equipment for instruction through grant money, and the funding is usually from the State government. Educational program instructors often have to fight for the money. Through Strong Workforce money, funding is only applied to Career and Technical Education where community colleges are required to be accountable for the outcomes. Private grant possibilities come up where local organizations would be able to give. According to one committee member, College of Marin doesn't seem to ask alumni for money raising.

Mark Barrall explains the importance of messaging to the students. Now we have guided pathways. Mark explained the new Industrial Technical certificate that

would blend the trades classes of Electrical and Metals and Machine Technology. He explained the classes would also provide hands-on training and small amount of lecture where the lab work is actually accounted into the class time instead of a separate lab.

Ron explains the timing and the commitment of the classes are very manageable for the working student. Most classes are $\frac{1}{4}$ lecture and $\frac{3}{4}$ projects. Also, he explains, the instructors fairly assign the grades that are earned. Mark went on to explain what has worked well with the students in learning such as practical hands-on projects. The industrial technology certificate came from a demand for maintenance in the food and wine process issue. Units needed for a certificate of achievement has been dropped to 12 units minimum by the state.

Beth and Ron expressed thanks to everyone, and the meeting adjourned at 4:30 p.m.