



Manufacturing Externship – Application in the Home School Acknowledgement*

1. Educator Name: Emily Wagner
2. School District and School: South Williamsport Area School District, South Williamsport Area Jr/Sr High School
3. Date(s) of Manufacturing Unit: Monday, February 8, 2021
4. Length of lesson or unit: 1 hour
5. Number of students: ~80
6. Grade level of students: 9th grade

Description of Activity:

Students were introduced to the various career and technical education (CTE) programs available to them at Williamsport Area High School, starting in 10th grade. Discussion about career pathways and high-demand industries in our area reaffirmed the manufacturing related programs (i.e. Welding, Precision Machining, Engineering & Robotics) at Williamsport are great opportunities to get hands-on experience in pursuit of a career or continuing their education after high school.

What elements from your Manufacturing Externship were used in the preparation or delivery of the unit? (i.e. robot, PPTs provided, information gathered from discussions or tours, etc.)

- Information gathered from discussions with other attendees and faculty regarding college degree programs and commitment of students
- Tour information related to industry and demand in our area

How were students engaged with the unit? What hands-on activities occurred?

South Williamsport students who are currently in CTE programs at Williamsport presented their experiences to the audience. They discussed the benefits of joining and how it is preparing them for after high school. Attendees were able to ask questions and seek additional information.

As a follow-up activity, 9th graders were given a survey about their interest in pursuing one of the CTE programs discussed. Once this is completed (2/12/21), teachers from Williamsport will be conducting informal overviews of the topics, certifications, and coursework for their program through a recorded video. The application to a program of choice is the final activity for those students who are interested in the commitment.

Explain connections that were created/discussed between manufacturing careers and higher education.

- The Engineering Technologies and other degree programs at Pennsylvania College of Technology provide additional experience needed to support high school training for success in the workforce
- While a high school graduate is able to find entry-level work in a manufacturing career, the advancement can be minimal.
- The Advanced Manufacturing Pre-Apprenticeship program through Pennsylvania College of Technology was identified as a great opportunity for those who desire to work in the industry and want the knowledge, but unable to commit the time needed for a 3-year CTE program

How did students respond to the unit?

Participants were attentive and engaged throughout the presentation. Having the current CTE students talk about their experiences made it more informal and relatable to potential future CTE students. The connection between course selection and post-secondary planning is always an intimidating thought for young high schoolers. That is why we have designed our lesson approach to be scaffolded and reinforced over a period of a few weeks.

Were parents involved or aware of the unit? What was their response to the activities?

Parents were notified about the lesson conducted and information shared with students via email. They were asked to speak with their child about what they learned in the presentation and the possibility of committing to a CTE program next school year (survey completion). At this time, we have received a few responses from students/parents about their interest and will continue these conversations as we proceed with selecting courses for students in the 2021-2022 school year.

A goal of this program is to make advanced manufacturing education and information available to high school students. As such, Penn College is attempting to build a repository of activities that can be used across the K-12 environment. In the subsequent pages, please provide additional information on the lesson/units you implemented so that others can implement similar activities in their classrooms. Please be sure to include any material lists, photos/evidence of student work (not of student participants), and any other relevant information required to implement in another school.

Outline for 10th Grade Course Scheduling

- 1) January
 - a. Connect with Williamsport about taking a tour of their CTE facilities
 - b. Notify Director of IT about needing to create next school year in LMS
 - c. Update curriculum guide with new courses and other changes
 - d. Get teacher recommendation lists for mathematics

- 2) February
 - a. Take tour of CTE facilities
 - i. We were not able to do so this school year, so we had our students in those programs present the information to 9th grade
 - ii. PowerPoint with pictures of facilities
 - iii. Parent/guardian engagement
 - b. Discuss scheduling process
 - i. Application for CTE
 - ii. Preview curriculum guide (email digital copies to families)
 - iii. Review course requirements and Career Pathways
- 3) March – end of school year
 - a. Course selection
 - b. Notify CTE acceptance/rejection
 - c. Determine course availability based on request numbers
 - d. Modify schedules as needed

*By submitting this form, you acknowledge all information is accurate and correct to the best of your knowledge and you agree to the sharing of this information via publicly accessible websites.