

Facilities Maintenance Technology (FMT) Learning Outcomes Assessment Report For Fall Term, Winter Term, 2019; and Spring Term, 2019

For the 2018-2019 Academic Year for Fall, Winter, and Spring Terms, the Apprenticeship and Trades Department SAC is assessing the Learning Outcomes for our AAS in Facilities Maintenance Technology Degree.

The Courses used for this assessment have an FMT designation and they are our six core classes in the HVAC/R Curriculum: FMT 101 – Refrigeration I, FMT 102 – Refrigeration II, Refrigeration 103 – Refrigeration III, FMT 111 – Refrigeration Electrical I, FMT 112 – Refrigeration Electrical II, and FMT 113 - Refrigeration Electrical III.

We are assessing for the following Degree Outcomes:

Practice safety measures in all areas to prevent occupational incidents.

Communicate effectively through appropriate media with co-workers, customers, contractors, suppliers and supervisors.

Actively search for continuous improvement by analyzing the workplace for effectiveness and efficiencies.

These three Degree Outcomes incorporate our training in what the HVAC/R – FMT Industry calls soft skills, or quality customer service, or on the job communications. In contrast to the hard skills of installing, servicing, maintaining, and repairing equipment, the soft skills deal more with how the student delivers services to customers in the HVAC/R – FMT Industry and, therefore, reflect how employable a student will be and how valuable a student will be in the real world.

All candidates for the FMT Degree are required to take an eight credit course, FMT 280 A - Cooperative Work Experience. A student is asked to treat the course as a job hunting skill and directly contact supervisors, managers, foremen, or HR Departments and offer themselves as a Cooperative Work Experience Student to the company for 240 hours of free labor working under a technician or sometimes a supervising technician. It is similar to a job shadow. In return the student is afforded 240 hours of field, real world, hands-on experience as an FMT Technician.

At the end of the Cooperative Work Experience, the supervisor is asked to file a form evaluating each student's performance while at their site. A copy of the "Employer Evaluation" Form is attached to this report.

The Evaluation Report focuses on the soft skills and employability of the student and our SAC has determined that it is a very valuable assessment tool for the three Degree Outcomes outlined above.

FMT students have completed the six core classes prior to being advised that they can take on the FMT 280 A Class.

During Fall Term 2018, Winter Term 2019, and Spring Term, 2019; sixteen Employer Evaluations for Students registered in and completing FMT 280 A – Cooperative Work Experience were submitted to the Apprenticeship and Trades Coop work Experience Specialist.

The data from the Evaluations was entered into a chart similar to and Excel Worksheet so that the SAC could do a better side by side comparison of the data and here are the highlights of that data evaluation.

- Fifteen of sixteen had already been hired out of our Program prior to finishing the requirements for the FMT Degree and were using their current employer as their Cooperative Work Experience Site. The sixteenth student was hired by his Cooperative Work Experience Site after completing the FMT 280 A class with them.
- For all sixteen, there were 0% marks in the *Average, Needs Improvement, and Unsatisfactory* columns.
- For all sixteen, 85% of the marks were in the *Outstanding* column and 15% of the marks were in the *Very Good* column.

For our SAC the above data was unexpected and well above acceptable.

- For all sixteen, 100% of the FMT 280 A Students received an affirmative recommendation in the employer comment section of the evaluation form: *Would you recommend this student for employment in your own or another firm?*
- For all sixteen, 100% received another affirmative answer in the employer comment section of the evaluation form: *Did the student meet the objectives?*

For our SAC, we did not expect this high number of Yes responses but they are well above acceptable.

- In the employer comment section of the evaluation form: *What areas of work does the student need to improve?* 90% of the employer comments focused on students having solid basic technical skills but needing more real field experience in the HVAC/ – FMT Industry.

This unexpected high number of comments regarding our Students' technical skills has led our SAC to evaluate the ratio of Lecture hours to Lab hours especially in our six core classes. Additionally. We have already set in place a plan to improve, to increase, and to provide funding for the number of Trainers in Room 124 – The Refrigeration Lab for the three Refrigeration Mechanical Courses based on these comments from Coop site supervisors.

Thank You,

The Apprenticeship and Trades Subject Area Committee

