**Department/Program Review Summary**

**2021-2022**

**Department: MEE/HVA/EVT**

**Date of Review:** October 13, 2022

**Review Team Members and Titles:**

Anthony Ponder, Provost

Jennifer Kostic, Associate Provost

Jared Cutler, Assistant Provost of Accreditation and Assessment

Erica Mersfelder, Associate Professor, Biology

Derek Allen, Chair/Professor, Hospitality Management/Culinary Arts

Melissa Grymin, Advisor, Academic Advising

Pamela Callahan, Associate Professor, Radiologic Technology

Karla Knepper, Director, Academic Advising

**Department Members Present:**

Karl Hess, Dean, Science, Mathematics and Engineering

Charlie Setterfield, Interim Chair, Mechanical Engineering Technology

Faculty:

Steve Wendel, Professor, Mechanical Engineering Technology

Russell Marcks, Professor, Heating, Ventilating, Air Conditioning & Refrigeration Engineering Technology

Nate Goodrich, Associate Professor, Mechanical Engineering Technology

Jamshid Moradmand, Professor, Mechanical Engineering Technology

Staff/Coordinator:

Angela Long, Administrative Assistant, MET/MEE/HVAC

**Commendations:**

* The department is impressive in its commitment to meeting the needs of both local industry and students. Faculty in the department know their students, they know their industries, and this enables them to do an outstanding job of serving the needs of both. The strong connections they have forged with both the students they teach and the companies that will employ those students allow faculty in the department to be the bridge between student aspirations and industry need.
* The faculty’s sharp focus on students in this department is clear – it can be seen in their extraordinary efforts to help students learn more effectively, it can be heard in their voices as they describe the work they invest in helping their students succeed. It is clearly evident in how much effort they put into connecting with students, and how they prioritize giving students relatable content that connects with their educational and occupational goals.
* The work that has been done with the MET curriculum adding lab assignments has been exceptional. Faculty in the department have put in the work to make the topic more hands-on, which is essential for students going into this field. Faculty have really done a great job of taking the theoretical and putting it into practical applications at a level students can relate to. Hands-on, practical, experiential learning makes such a tremendous difference in student learning overall, but particularly in these fields.
* There are few more important indicators of the quality of a program than whether graduates find employment. The employment rate of students who graduate in these programs of study is phenomenal, and speaks to the level of preparation the department provides to students going into a high demand field.
* HVACR has exceptional laboratory space, without parallel in the region, and competitive on a national level. As one faculty member commented, if they can get potential students in their lab, they can get them in the program. Not only does it provide an excellent tool for recruitment, but it also provides exceptional training and preparation for future HVACR professionals.
* The amount and quality of equipment that has been donated to the department is amazing, and a testament to the relationships that have been developed between faculty and local industry. Departments don’t get those kind of donations without carefully cultivated relationships in the community, and businesses don’t give out equipment unless they believe in what a department is doing.
* HVACR is doing some highly commendable work related to apprenticeships, which not only provides important work experience, but frequently leads directly to employment.
* The department has high course success rates, which is an indicator that they excel in their efforts to help their students succeed academically. This is particularly impressive given the space challenges the department experiences.
* Courses in the department have a good faculty/student ratio, which enables faculty to have a large number of hands-on activities with their students.
* The work that has been done to change MAT requirements in ways that make students feel less intimidated and more likely to stay in the program are an excellent example of the department’s commitment to finding ways to help students succeed. This was an example of how it was clear the department prioritized student needs, focusing more on students and less on the demands of an external organization. The faculty viewed the situation through the lens of what the students experience, and took an approach of framing the issue in terms of student success over external requirements.
* The department’s attention to the appropriateness of courses in the curriculum will likely have an impact on student retention. Changing the MAT and CHE requirements in program curricula is likely to have a substantial impact on completions. The former MAT and PHY courses were intimidating to students, were more theoretical, and involved less application in the way they are delivered. The MAT skills taught in the previous course exceeded those that are required in the field of HVACR. Making these changes has been a real improvement for students, and is a testament to the concern the department has with helping students succeed.
* No source of information on preparation of students is more important or compelling than feedback from the employers who hire our students. There are tremendous advantages to using employers as a source of data on achievement of program outcomes by students - not every department gets that kind of data from employers.
* The Review Team was very impressed with the department’s work producing videos to recruit new students and to improve student learning.

**Recommendations for Action:**

* The Review Team recognizes the challenges of getting institutional marketing resources. The department has explored ways of marketing the program on their own, and should continue these efforts to explore ways to market the program without utilizing Sinclair Marketing Department resources. Are there opportunities for marketing outreach to career centers that do not offer these programs, or for recruiting at high schools and feeder schools?
* The Review Team encourages the MET component of the department to create an apprenticeship program in collaboration with the office of Work-Based Learning.
* The department should be intentional and proactive in identifying possible spaces that could be utilized to meet MET department needs. The move of the sheet metal equipment out of Eaker Street may be part of the solution for the need for more space for MET. The department should identify space that might be suitable to meet the need, and then work with the Dean and the Provost’s Office to advocate for the space.
* The department is also encouraged to move forward in collaborating with Academic Advising in development of pathways, utilizing both full-time and part-time maps. The department should ensure that these efforts utilize the established processes for developing pathways. The department is encouraged to intentionally develop a co-advising model between Academic Advising and faculty. Perhaps faculty could even develop a three-year pathway. Given that many students attend part-time, this could potentially have an impact on completion. There efforts must be collaborative in conjunction with Academic Advising.
* The transfer/articulation agreements for students who want to transfer are not very clear in some cases. The department is encouraged to explore development of stand-alone MET articulation agreements to provide a clear, specific pathway for students in the program who are interesting in transferring.

**Overall Assessment of Department’s Progress and Goals:**

The Review Team was deeply impressed with the exceptional, student-focused work that the department engages in. Both MET and HVACR have a finger on the pulse of what is going on, and are aware of industry trends and what their students will need to be successful in the future. There are initiatives – both underway and that are being discussed – that have the potential to expand the program. Given the exceptional HVACR lab facilities, getting more potential students into the lab would almost certainly lead to increased program enrollment. There is a definite need for graduates in both of these fields, and plenty of opportunities for students who enter these fields – we just need to find ways to direct more students into these pathways.

The department is focused on helping students obtain quality skills and credentials that are highly needed in our community, and is actively working to find ways to help students experience these exciting fields to draw them into the program. Few departments on campus have such high employment rates for graduates, and such strong employer needs.

Both departments are demonstrating high success rates while maintaining high demand employer demand for their students. The excellent reputation of the department, and the continuing demand for its graduates, are a testament to the hard work, dedication, and commitment to students that the faculty demonstrate.

**Institutional or Resource Barriers to the Department’s Ability to**

**Accomplish Its Goals, if any:**

* Marketing resources are a challenge for many academic departments – Sinclair may want to explore providing more guidance and resources for departments to self-market.
* There is a strong need for additional space for MET – we need to find a solution in the near future.
* While the current interim chair has done a great job, there is a strong need for consistent departmental leadership.
* There is strong need for succession planning for retiring faculty. While there is an Annually Contracted Faculty member who has a wealth of knowledge, there is still a need to take steps to ensure department knowledge is not lost in impending retirements.
* HVAC in such demand, getting instructors is a challenge because the private sector pays so well.