

Maine Community College System
Five Year Program Review

College: Central Maine Community College
CIP: 46.0401

Program: Facilities Maintenance Management
Credential: Associate in Applied Science (AAS)

Review Team: Betsy Libby, Marc Gilbert, Eric Berg, Jennifer Jefferson, Kate McPherson, Steven Gray, Eric Meader, Mike Henry, Travis Brown, Rachel King, Brianna Doyle

Date: April 2023

Period of Review: AY 2017/2018-2021/2022

Program Overview:

1) **Program description** (*from the most recent college catalog*):

The Associate in Applied Science degree in Facilities Maintenance & Management prepares students for employment in building management by providing them the opportunity to learn entry level skills in the installation, operation, maintenance and repair of heating, air conditioning and refrigeration systems. The program is designed to build a foundation of construction, electrical, HVAC/R and plumbing skills through practical application and field experience of the methods, materials, and practices of the industry. Students will develop the skills needed to maintain, service, repair and operate advanced facility systems and computerized maintenance management systems in commercial and industrial institutions such as hospitals, schools, restaurants, community centers and residential office buildings.

2) **Program Learning Outcomes: all program learning outcomes are expected to be assessed within the five-year cycle. Please attach an Assessment Data and Reflection Template for each program learning outcome. Explain how the department used the assessment results to improve teaching, learning, and the curriculum.**

List the program learning outcomes:	Method of assessment: list the courses and activities/assignments used to assess the learning outcomes
<ol style="list-style-type: none"> 1. Demonstrate working knowledge of current codes and OSHA standards for facilities. 2. Demonstrate safe and appropriate use of electrical, HVAC/R, plumbing and construction equipment. 3. Troubleshoot, diagnose, maintain and repair basic HVAC/R equipment. 4. Service and repair basic plumbing systems. 5. Perform basic construction repairs. 6. Communicate effectively and work as part of a team using oral and written skills. 	

3) Credentials Awarded within the IPEDS year, i.e. July 1-June 30:

Credentials Awarded					
Credential	AY1718	AY1819	AY1920	AY2021	AY2122
AAS	--	--	--	--	--

4) Program Graduates Employed:

Number of Completers with any Wage Data	--
% of Completers with any Wage Data	--
# of Completers with First Year Earnings	--
Median First Year Earnings	--

5) Partnerships, collaborations, associations and memberships

a) Advisory Meeting Dates and Attendance (past 3 years)'

This program had not yet developed an active advisory board.

b) Program external accreditation, associations, and memberships (if applicable):

N/A.

6) Other Indicators of student success, direct and/or indirect, which may include:

	AY1718	AY1819	AY1920	AY2021	AY2122
Licensure/certification pass rates (if applicable)	n/a	n/a	n/a	n/a	n/a
Program Advisory Committee Member Survey (on scale of 1-5 averaged):					
Program Curriculum	n/a	n/a	n/a	n/a	n/a
Technical currency of the program	n/a	n/a	n/a	n/a	n/a
Preparation of program graduates for work in the field	n/a	n/a	n/a	n/a	n/a
Communication from program administration/faculty	n/a	n/a	n/a	n/a	n/a
Overall quality of the program	n/a	n/a	n/a	n/a	n/a
Other (please specify):					

7) Student demographics:

Admissions					
	AY1718	AY1819	AY1920	AY2021	AY2122
Fall Applications	--	--	3	4	7
% chg in Fall Applicants from PY	--	--		33%	75%
Enrolled (Yield)	--	--	1	0	0
% chg in Enrolled from PY	--	--	--	-100%	0%

Student Enrollment ¹					
	AY1718	AY1819	AY1920	AY2021	AY2122
Unduplicated Headcount Enrolled in Program	--	--	1	0	0
% chg in Headcount from PY	--	--	--	-100%	0%
Enrolled Credit Hours	--	--	16	0	0
% chg in Credit hours from PY	--	--	--	-100%	0%
FTE	--	--	1	0	0
% chg in FTE from PY	--	--	--	-100%	0%

¹ = students within the program in the fall of the academic year

Student Success					
Cohort Year	AY1718	AY1819	AY1920	AY2021	AY2122
Cohort Enrollment	--	--	1	0	0
Retained to the next semester	--	--	0%	0%	0%
Retained to the next year	--	--	0%	0%	0%
100% of program time	--	--	0%	0%	
150% of program time	--	--	0%		
200% of program time	--	--			
Transfer Rate (non-graduates) ²	--	--			
Transfer Rate (graduates)	--	--			
Enrolled in Another Program ²	--	--			
Graduated from Another Program ²	--	--			

². Determined at the maximum graduation point in this table, i.e. 200%

8) Strengths, challenges, and planned steps for continuous improvement: In your summary assessment you should reference sections of this review that informs the plan.

Program strengths:

- The Facilities Maintenance and Management (FMM) program provides practical knowledge and experience in:
 - OSHA rules
 - Plumbing Codes and Practices
 - Carpentry Practices and Tool Usage
 - Blueprint Reading
 - Basic Refrigeration
 - Heat Pumps/ HVAC diagnostics
 - Facilities Management
- The FMM program has the potential to appeal to individuals with a wide range of experiences and career goals.

Challenges:

- At its current levels, enrollment would not sustain long-term viability of this program.
- The FMM degree is made up from a broad range of disciplines but doesn't fully develop skills in any of these areas.
- This degree targets the non-licensed individual to provide them with practical skills that would allow them to work on their own residence but not commercial facilities because of lack of professional licensure.
- This degree does not provide a foundation in budgeting, building automation, building codes, mold mitigation practices and the energy code with which professional facilities managers should be knowledgeable.

Planned steps for continuous improvement:

- Work with Admissions to identify and market to individuals likeliest to benefit from this program, likely nontraditional students looking to advance in their current career in facilities work/management.
- Continue to monitor program for viability and consider significant changes or discontinue if enrollment does not increase significantly over the next 1-2 academic years.
- Investigate an online degree track that could be taken instead of in-person courses.
- Consider curriculum revisions to include a foundation in budgeting, building automation, building codes, mold mitigation practices and the energy.
- In keeping with current catalog, offer courses in computerized maintenance management and automation systems.
- Explore options for articulation agreements with four-year degrees in Facilities Maintenance and Management or related fields.