Maryland CTE Programs of Study

Introduction to Facility Management (2025)

GENERAL REQUIREMENTS. This course is recommended for students in Grades 9-12. 1

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INTRODUCTION 2

A Career and Technical Education (CTE) instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions. 2.A

B The Construction Career Cluster prepares students for careers in designing, planning, and building sustainable infrastructure. This field includes architects, engineers, construction managers, and skilled trades professionals. 2.B

C The Facilities Management Program of Study prepares students for careers in commercial building management through a comprehensive curriculum aligned with industry standards. Throughout this four-course sequence, students master the eleven core competencies established by the International Facility Management Association (IFMA), while earning their OSHA 30 Construction certification. Students develop practical skills in building systems operation, safety management, sustainability practices, and business operations. By program completion, students can perform building systems maintenance, implement safety protocols, manage facility operations, analyze financial data, and develop strategic facility plans. The program prepares students for entry-level facilities management positions and provides foundational knowledge for the Certified Facility Manager (CFM) credential. 2.C

D This foundational course introduces students to the core principles of facilities management while emphasizing workplace safety. Students develop fundamental knowledge of building systems, maintenance procedures, and occupant services. The course begins OSHA 30 Construction certification preparation and establishes essential professional communication skills. Through hands-on projects and practical exercises, students learn to perform basic facility inspections, maintain building systems, and implement safety protocols. This course lays the groundwork for advanced facilities management concepts while ensuring students develop a strong safety mindset. 2.D

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E **Students will participate in at least two Career-Connected Education and Work-Based Learning experiences in this course, which might include informational interviews or job shadowing relevant to the program of study.** 2.E

F **Students are encouraged to participate in extended learning experiences through aligned Career and Technical Student Organizations (CTSOs). CTSOs are a cocurricular requirement in the Carl D. Perkins Act, and alignment to CTSO activities is an expectation for CTE programs in the state of Maryland.** 2.F

KNOWLEDGE AND SKILLS 3

A **The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected to:** 3.A

1. Identify and demonstrate positive work behaviors that enhance employability and job advancement, such as regular attendance, promptness, proper attire, maintenance of a clean and safe work environment, and pride in work. 3.A.1
2. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn. 3.A.2
3. Employ effective reading, writing, and technical documentation skills. 3.A.3
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies. 3.A.4
5. Demonstrate leadership skills and collaborate effectively as a team member. 3.A.5
6. Implement safety procedures, including proper handling of hardware and following appropriate safety guidelines. 3.A.6
7. Exhibit an understanding of legal and ethical responsibilities in the IT field, following data privacy laws and best practices for security. 3.A.7
8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting. 3.A.8

B **The student identifies various career pathways in the facilities management field. The student is expected to:** 3.B

1. Develop a career plan that includes the necessary education, certifications, job skills, and experience for specific roles in facility management. 3.B.1
2. Create a professional resume and portfolio that reflect skills, projects, certifications, and recommendations. 3.B.2
3. Demonstrate effective interview skills for roles in the construction and facility management fields. 3.B.3

C **The student develops technology and digital literacy skills. The student is expected to:** 3.C

1. Use technology as a tool for research, organization, communication, and problem-solving. 3.C.1
2. Use digital tools, including computers, mobile devices, collaboration platforms, and cloud services, to access, manage, and create information. 3.C.2

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3 Demonstrate foundational technology skills by operating basic office software, utilizing simple building control interfaces, and implementing digital safety documentation systems while developing proficiency in standard facility management software platforms. 3.C.3

4 Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use. 3.C.4

D The student integrates core academic skills into facilities management practices. The student is expected to: 3.D

1 Demonstrate the use of clear communication techniques, both written and verbal, that are consistent with industry standards. 3.D.1

2 Apply fundamental mathematical skills including basic measurements of length, area, and volume for building spaces, calculate material quantities for maintenance tasks, and use percentages to interpret building occupancy rates. Basic geometric concepts are utilized to understand building layouts and space utilization. 3.D.2

3 Identify and explain basic principles of building science, including fundamental electricity concepts such as voltage and current, HVAC operation principles of heat transfer and air flow, and material science applications in building components. They apply basic chemical safety principles when working with cleaning and maintenance products. 3.D.3

E The student demonstrates understanding of foundational concepts in Facilities Management. The student is expected to: 3.E

1 Explain the primary responsibilities and duties of facility managers in various building types. 3.E.1

2 Analyze current industry trends and their impact on career opportunities in facility management. 3.E.2

3 Compare and contrast different roles within the facilities management organizational structure. 3.E.3

4 Describe the relationship between facility management and organizational success. 3.E.4

F The student analyzes occupancy and human factors in facility management. The student is expected to: 3.F

1 Evaluate the components of an effective workplace environment. 3.F.1

2 Develop basic protocols for delivering occupant services. 3.F.2

3 Apply fundamental occupant health and safety principles to common workplace scenarios. 3.F.3

4 Design simple solutions to improve workplace ergonomics and comfort. 3.F.4

G The student examines operations and maintenance fundamentals. The student is expected to: 3.G

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. Identify the major components of building systems and infrastructure. 3.G.1

2 Create basic preventive maintenance schedules for common facility equipment. 3.G.2

3 Demonstrate proper use and maintenance of fundamental facility tools and equipment. 3.G.3

4 Explain the relationship between building systems and occupant comfort. 3.G.4

H The student applies safety principles and OSHA guidelines. The student is expected to: 3.H

1 Interpret basic safety principles and their application in facility management. 3.H.1

2 Demonstrate proper selection and use of personal protective equipment (PPE). 3.H.2

3 Apply tool safety protocols in various maintenance scenarios. 3.H.3

4 Complete the first portion of OSHA 30 Construction certification requirements. 3.H.4

5 Conduct basic safety inspections using OSHA guidelines. 3.H.5

I The student understands related licensing requirements for trades performing work in facilities. The student is expected to: 3.I

1 Identify the requirements for Maryland, DC, Virginia, and Pennsylvania licensure in various related trades (Plumbing, HVACR, Electrical, etc.) 3.I.1

2 Identify the different levels of professional certification within these areas. 3.I.2

J The student interprets construction drawings and specifications. The student is expected to: 3.J

1 Identify basic components and features of construction drawings. 3.J.1

2 Differentiate between various types of construction drawings. 3.J.2

K The student develops professional communication skills. The student is expected to: 3.K

1 Create professional written communications for various facility management scenarios. 3.K.1

2 Demonstrate effective stakeholder communication strategies. 3.K.2

3 Prepare accurate maintenance and incident reports. 3.K.3

4 Utilize appropriate technical terminology in facility management communications. 3.K.4

L The student develops professional workplace behaviors and skills. The student is expected to: 3.L

1 Understand the importance of consistent attendance, punctuality, and professional communication. 3.L.1

Evaluate construction business opportunities and workforce entry strategies. 3.L.2

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3 Apply critical thinking skills to solve workplace problems. 3.L.3

4 Demonstrate appropriate social skills in professional settings to include customer service interactions that communicate the problem, potential solutions, and create positive customer experiences. 3.L.4