Maryland CTE Programs of Study

Business and Risk Management (2025)

GENERAL REQUIREMENTS. This course is recommended for students in Grades 10-12. 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 course transitions students from technical operations to management principles, focusing on the business aspects of facilities management. Students develop skills in budget preparation, quality management, and risk assessment. Through case studies and projects, students learn to create financial reports, develop risk management strategies, and implement quality control systems. The course emphasizes project management methodology and leadership fundamentals, preparing students to oversee facility operations effectively. Students develop critical thinking skills necessary for facility management decision-making and strategic planning. 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 Synthesize business and analytics technologies by developing advanced spreadsheet solutions, implementing project management systems, and creating data-driven analyses for risk assessment and financial planning in facility operations. 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 facility 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 Synthesize complex financial calculations for budgeting and cost analysis, incorporating statistical analyses of facility performance metrics. They evaluate probability concepts for risk assessment and develop comprehensive cost-benefit analyses for facility improvements and operations. 3.D.2

3 Evaluate scientific principles related to materials degradation and lifecycle analysis, analyze environmental impact using scientific metrics, and apply engineering principles in facility system assessment. They develop and implement testing protocols based on scientific principles for quality control. 3.D.3

E The student applies finance and business principles to facility management. The student is expected to: 3.E

1 Develop operational budgets for facility management departments. 3.E.1

2 Create capital planning proposals for major facility improvements. 3.E.2

3 Execute procurement processes for facility services and equipment. 3.E.3

4 Analyze facility service contracts for cost-effectiveness and scope compliance. 3.E.4

5 Calculate life-cycle costs for building systems and equipment. 3.E.5

6 Evaluate financial statements to make data-driven facility management decisions. 3.E.6

7 Implement cost-control measures while maintaining service quality. 3.E.7

F The student implements performance and quality management systems. The student is expected to: 3.F

1 Design quality management systems for facility operations. 3.F.1

2 Develop key performance indicators (KPIs) for facility services. 3.F.2

3 Create quality control procedures for maintenance operations. 3.F.3

4 Analyze performance metrics to identify areas for improvement. 3.F.4

5 Implement continuous improvement processes using industry-standard methodologies. 3.F.5

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6 Design performance evaluation systems for facility service providers. 3.F.6

G **The student develops comprehensive risk management strategies. The student is expected to:** 3.G

1. Conduct facility risk assessments using standard methodologies. 3.G.1
2. Create emergency preparedness plans for various facility crisis scenarios. 3.G.2
3. Develop business continuity plans for critical facility operations. 3.G.3
4. Design facility resilience strategies to address potential threats. 3.G.4
5. Implement risk mitigation measures for identified facility hazards. 3.G.5
6. Create emergency response protocols for facility staff. 3.G.6
7. Evaluate insurance requirements and coverage for facility operations. 3.G.7

H **The student applies project management principles to facility operations. The student is expected to:** 3.H

1. Develop project scopes and objectives for facility improvements. 3.H.1
2. Create project schedules using standard project management tools. 3.H.2
3. Estimate project costs and develop project budgets. 3.H.3
4. Implement project control systems to monitor progress and costs. 3.H.4
5. Evaluate project outcomes against established objectives. 3.H.5
6. Manage stakeholder communications throughout project lifecycles. 3.H.6

I **The student demonstrates leadership skills in facility management. The student is expected to:** 3.I

1. Apply team management principles to facility operations. 3.I.1
2. Implement decision-making frameworks for facility management challenges. 3.I.2
3. Create change management strategies for facility initiatives. 3.I.3
4. Develop communication plans for facility projects and changes. 3.I.4
5. Demonstrate conflict resolution techniques in facility management scenarios. 3.I.5