Maryland
STATE DEPARTMENT OF EDUCATION

# Program of Study Guide: Management and Entrepreneurship - DRAFT

Comprehensive guidelines and course standards for the Accommodations pathway

Office of College and Career Pathways

July 2025

## MARYLAND STATE DEPARTMENT OF EDUCATION

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# Purpose

**The purpose of this document is to communicate the required Career and Technical Education (CTE) academic standards for the Management and Entrepreneurship Program of Study. The academic standards in this document are theoretical and performance based. The standards contain content from multiple state departments of education, the College Board, and a number of management and entrepreneurship certifications and have been reviewed and vetted by members of the Maryland business and industry community.**

In addition to academic standards, the Maryland State Department of Education (MSDE) has incorporated into this document Labor Market Information (LMI) definitions and explanations for the Program of Study; program aligned Industry Recognized Credentials; and Work-Based Learning resources and requirements by course level.

This document is intended for use by educational administrators and practitioners. A similar document is available for each state-approved CTE Program of Study.

# Sources of Standards

The course standards for Management and Entrepreneurship I, II, III, and IV are informed by a combination of authoritative resources that provide comprehensive insights into entrepreneurship, project management, and business operations.

Below is a list of these sources, along with descriptions, their applications in course development, and corresponding web links:

1. **Advance CTE's Career Clusters Framework**
   A. **Description:** Advance CTE's Career Clusters Framework offers a structured approach to career and technical education, outlining essential knowledge and skills across various career paths, including Management and Entrepreneurship.
   B. **Usage:** This framework serves as the foundational guide for developing course standards, ensuring alignment with industry expectations and educational best practices.
   C. **Source:** Advance CTE Career Clusters

2. **Google Project Management Certificate**
   A. **Description:** ☐Developed by Google, this certificate program provides comprehensive training in project management, covering methodologies, tools, and best practices applicable across industries.
   B. **Usage:** The curriculum informs the project management components of the courses, preparing students for industry-recognized certification.
   C. **Source:** Google Project Management Certificate

3. **Lean Six Sigma White Belt Certification**
   A. **Description:** This certification introduces the principles of Lean Six Sigma, focusing on process improvement and operational efficiency.
   B. **Usage:** The concepts from this certification are integrated into the curriculum to teach students about quality management and process optimization.
   C. **Source:** Lean Six Sigma White Belt Certification

4. **QuickBooks Certified User**
   A. **Description:** ☐This certification validates proficiency in QuickBooks, a leading accounting software used by businesses for financial management.☐
   B. **Usage:** ☐The certification content is incorporated into the courses to equip students with essential accounting and bookkeeping skills.☐
   C. **Source:** QuickBooks Certified User

5. **Google Career Certificate: Digital Marketing & E-commerce**
   A. **Description:** This certificate program offers training in digital marketing strategies and e-commerce platforms, emphasizing practical skills for online business growth.
   B. **Usage:** The curriculum supports the development of digital marketing competencies within the courses, aligning with current industry trends.
   C. **Source:** Google Career Certificate: Digital Marketing & E-commerce

6. **Certified Associate in Project Management (CAPM)**
   A. **Description:** Offered by the Project Management Institute (PMI), the CAPM certification provides recognition for individuals with knowledge of project management principles and terminology.
   B. **Usage:** The CAPM framework guides the advanced project management standards in the curriculum, preparing students for certification.
   C. **Source:** Certified Associate in Project Management (CAPM)

7. **Microsoft Excel Expert Certification**
   A. **Description:** This certification demonstrates advanced proficiency in Microsoft Excel, including complex data analysis, formula creation, and automation.
   B. **Usage:** The certification objectives are integrated into the courses to enhance students' data management and analytical skills.
   C. **Source:** Microsoft Excel Expert Certification

8. **Tableau Desktop Specialist Certification**
   A. **Description:** This certification validates foundational skills in Tableau, a leading data visualization tool used for business intelligence.
   B. **Usage:** The certification content is utilized to teach students about data visualization and interpretation within the curriculum.
   C. **Source:** Tableau Desktop Specialist Certification

# Course Descriptions

| Course Level | Course Information | Description |
|---|---|---|
| Required Core: Course 1 | Management and Entrepreneurship I<br>SCED: <XX><br>Grades: 9-12<br>Prerequisite: None<br>Credit: 1 | This course introduces students to the fundamentals of entrepreneurship and small business management, focusing on identifying opportunities, developing strategies, and securing financing to launch a business. Students will explore the role of small businesses and startups in driving innovation and supporting economic growth. |
| Required Core: Course 2 | Management and Entrepreneurship II<br>SCED: <XX><br>Grades: 10-12<br>Prerequisite: Management and Entrepreneurship I<br>Credit: 1 | Building upon foundational business concepts, this course emphasizes intermediate skills in digital marketing, e-commerce, and operational efficiency. Students will develop advanced marketing plans, execute digital campaigns, and analyze performance metrics to inform business decisions. |
| Optional Flex: Course 1 | Management and Entrepreneurship III<br>SCED: <XX><br>Grades: 11-12<br>Prerequisite: Management and Entrepreneurship I and II<br>Credit: 1 | Management and Entrepreneurship III is an advanced course that prepares students to manage projects and analyze business performance using industry-standard tools and methodologies. Students will learn to align projects with strategic business goals, utilize advanced project management frameworks such as Agile and Waterfall, and employ tools like Microsoft Excel and Tableau for data analysis and visualization. |

| Course Level | Course Information | Description |
|---|---|---|
| Optional Flex: Course 2 | Career Connected Learning I<br><br>SCED: <XX><br>Grades: 11-12<br>Prerequisite: Management and Entrepreneurship I and II<br>Credit: 1 | This flexible, work-based learning course introduces students to real-world applications of classroom knowledge and technical skills through on-the-job experiences and reflective practice. Students engage in career exploration, skill development, and professional networking by participating in youth apprenticeships, registered apprenticeships, pre-apprenticeships, internships, capstone projects, or other approved career-connected opportunities. Variable credit (1–3) accommodates the required on-the-job training hours and related instruction. By integrating industry standards, employability skills, and personalized learning goals, Career Connected Learning I equips students to make informed career decisions, develop a professional portfolio, and build a strong foundation for success in postsecondary education, training, or the workforce. |
| Optional Flex: Course 3 | Career Connected Learning II<br><br>SCED: <XX><br>Grades: 11-12<br>Prerequisite: Career Connected Learning I<br>Credit: 1 | Building on the foundational experiences of Career Connected Learning I, this advanced work-based learning course provides students with deeper on-the-job practice, leadership opportunities, and refined career exploration. Students continue to enhance their technical and professional skills, expanding their industry networks and aligning personal goals with evolving career interests. Variable credit (1–3) remains aligned with the required training hours and related instruction. Through elevated responsibilities and skill application, Career Connected Learning II prepares students to confidently transition into higher-level postsecondary programs, apprenticeships, or the workforce. |

***Dual Enrollment and Career Connected Learning Experiences Must be Aligned to the CTE Core.***

# Industry-Recognized Credentials and Work-Based Learning

| **Industry-Recognized Credentials – The standards in this document are aligned to the following certifications:** |
|---|
| **By the end of Management and Entrepreneurship I:** QuickBooks Certified User (Not on the IRC list)<br><br>**By the end of Management and Entrepreneurship II:** Google Career Certificate: Digital Marketing & E-commerce and Lean Six Sigma White Belt<br><br>**Optional Credentials (via the Flex Course options):** Tableau or Microsoft Excel Expert, Certified Associate in Project Management (CAPM), and Google Project Management Certificate |

| **Work-Based Learning Examples and Resources** | | |
|---|---|---|
| **Management and Entrepreneurship I: Career Awareness** | **Management and Entrepreneurship II: Career Preparation** | **Flex Courses: Career Preparation** |
| • Industry Visits<br>• Guest Speakers<br>• Participation in Career and Technical Student Organizations<br>• Postsecondary Visits – Program Specific Site Tours<br>• Mock Interviews | • All of Career Awareness plus the following:<br>• Job Shadow<br>• Paid and Unpaid Internships | • Paid and Unpaid Internships<br>• Apprenticeships |

# Labor Market Information: Definitions and Data

Labor market information (LMI) plays a crucial role in shaping Career and Technical Education (CTE) programs by providing insights into industry demands, employment trends, and skills gaps. This data helps education leaders assess the viability of existing programs and identify opportunities for new offerings. By aligning CTE programs with real-time labor market needs, schools can better prepare students for in-demand careers and ensure that resources are effectively used to support pathways that lead to high-quality, sustainable employment.

**Standard Occupational Code (SOC) and Aligned Industry:**

| Indicator | Definition | Pathway Labor Market Data |
|---|---|---|
| **High Wage**[1] | Those occupations that have a 25th percentile wage equal to or greater than the most recent MIT Living Wage Index for one adult in the state of Maryland, and/or leads to a position that pays at least the median hourly or annual wage for the DC-VA-MD-WV Metropolitan Statistical Area (MSA).<br><br>*Note: A 25th percentile hourly wage of $24.74 or greater is required to meet this definition.* | **Standard Occupational Code:**<br>11-1021: General and Operations Managers<br><br>**Hourly Wage/Annual Salary: 11-1021**<br>25th Percentile: $33.51 / $69,701.00<br>50th Percentile: $49.24 / $102,419.00<br>75th Percentile: $78.64 / $163,571.00 |
| **High Skill** | Those occupations located within the DC-VA-MD-WV Metropolitan Statistical Area (MSA) with the following education or training requirements: completion of an apprenticeship program; completion of an industry-recognized certification or credential; associate's degree, bachelor's degree, or higher. | **Typical Entry-Level Education:**<br><br>Top executives typically need a bachelor's or master's degree in an area related to their field of work, such as business or engineering. Top executives in the public sector may have a degree in business administration, public administration, law, or the liberal arts. |
| **In-Demand** | Annual growth plus replacement, across all Maryland occupations, is 405 openings between 2024-2029. | **Annual Openings** |

[1] Living Wage Calculator: https://livingwage.mit.edu/states/24

**Labor Market Information Data Source**

Lightcast Q4 2024 Data Set. Lightcast occupation employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Lightcast earnings by industry. Foundational data for the state of Maryland is collected and reported by the Maryland Department of Labor.

**Methodology for High Wage Calculations**

To combine labor market data across multiple Standard Occupational Classifications (SOCs), a weighted average approach was used to ensure accurate representation of the marketplace. Median wages for each SOC were weighted based on their respective employment levels, reflecting the relative demand for each occupation. This method ensures that occupations with higher employment contribute proportionately to the overall wage calculation. Additionally, job openings from all relevant SOCs were summed to determine the total projected demand. For example, if Mechanical Engineers account for 67% of total employment and Electrical Engineers for 33%, their respective wages are weighted accordingly, and job openings are aggregated to provide a comprehensive view of labor market opportunities. This approach delivers a balanced and accurate representation of both wages and employment demand for the program.

**Methodology for In-Demand Calculations**

The baseline for annual job openings, taking into account new positions and replacement positions, was determined by taking the average of all annual job openings between 2024 and 2029 across all 797 career sectors at the 5-digit SOC code level. For the 2024-2029 period, average job openings (growth + replacement) is 405.

# Course Standards: Management & Entrepreneurship I

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

2. **INTRODUCTION**
   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.
   B. The Management, Entrepreneurship, and Sales Career Cluster involves skills and occupations that are essential across all industries, focusing on business administration, operations optimization, strategic planning, workforce management, and entrepreneurship. It merges key areas such as data management and analysis, human resources, general operations, administrative support, project management, and organizational leadership. This Cluster ensures that businesses across all industries efficiently meet their goals, adapt to market changes, and maintain competitive advantage. By emphasizing entrepreneurship, this Cluster supports the creation of new ventures, driving economic growth and innovation and making it a cornerstone of modern economies.
   C. The Management and Entrepreneurship Program of Study equips students with the knowledge and skills necessary to excel in careers focused on business innovation, project leadership, and strategic management. This program emphasizes entrepreneurial thinking, project management methodologies, and the integration of emerging technologies to foster innovation across industries. Students progress through a rigorous curriculum that builds foundational knowledge of business operations, financial management, digital marketing, and process improvement, advancing to complex concepts such as strategic leadership, data-driven decision-making, and stakeholder management.
   D. Management and Entrepreneurship I includes key topics in business ownership structures, market research, financial planning, and digital tools for business management. The course emphasizes employability skills such as communication, collaboration, and problem-solving. Students will gain hands-on experience with financial software and basic bookkeeping, preparing them for the QuickBooks Certified User certification by the end of the course.
   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.
   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.

## 3. KNOWLEDGE AND SKILLS

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

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.
2. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn.
3. Employ effective reading, writing, and technical documentation skills.
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies.
5. Demonstrate leadership skills and collaborate effectively as a team member.
6. Implement safety procedures, including proper use of software and following privacy guidelines.
7. Exhibit an understanding of legal and ethical responsibilities in the management and entrepreneurship field, following copyright laws and regulations.
8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting.

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

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

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

1. Use technology as a tool for research, organization, communication, and problem-solving.
2. Use digital tools, including computers, mobile devices, collaboration platforms, and cloud services, to access, manage, and create information.
3. Demonstrate proficiency in using emerging and industry-standard technologies, including word processing and spreadsheet software for basic business documentation and financial planning.
4. Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use.

D. **The student integrates core academic skills into management and entrepreneurship. The student is expected to:**
   1. Apply mathematical principles, such as percentages, ratios, and financial projections, to develop and evaluate business budgets and forecasts.
   2. Use critical reading and comprehension skills to analyze business case studies, market research, and entrepreneurial resources.
   3. Demonstrate effective written communication by preparing business plans, marketing proposals, and project reports.
   4. Interpret and construct data visualizations, such as graphs and charts, to support decision-making and project presentations.
   5. Apply problem-solving strategies and logical reasoning to address business challenges and optimize project outcomes.

E. **The student demonstrates the necessary skills to understand the fundamentals of entrepreneurship and small business management. The student is expected to:**
   1. Define entrepreneurship and explain its significance in fostering innovation and economic growth across industries.
   2. Identify characteristics of successful entrepreneurs and analyze how these traits contribute to business success.
   3. Explore the role of small businesses and startups in local, national, and global economies.
   4. Examine various types of business ownership, including sole proprietorships, partnerships, and both for-profit and non-profit corporations.
   5. Describe the role of leadership in entrepreneurship, including how effective leaders motivate teams, communicate vision, and make decisions that drive business success.

F. **The student demonstrates the ability to identify business opportunities and develop strategies for launching a business. The student is expected to:**
   1. Conduct market research to identify business opportunities and customer needs.
   2. Develop a basic business plan, including elements such as mission statement, target market, financial plan, risk mitigation, and operational strategy.
   3. Analyze competition and identify unique selling propositions (USPs) for a business product or service.
   4. Discuss legal requirements for starting and operating a business, including permits, licenses, taxes, and insurance (e.g., liability, property, and workers' compensation insurance).
   5. Explain basic principles of microeconomics and macroeconomics—such as supply and demand, market structures, inflation, and the role of government—and describe how these concepts influence business decisions.

G. **The student demonstrates the ability to use financial management tools and principles to manage a business effectively. The student is expected to:**
   1. Explain the importance of financial management and its role in business success.
   2. Utilize basic accounting principles, including tracking income, expenses, and profitability.
   3. Create and analyze budgets to ensure financial stability in a business.
   4. Demonstrate proficiency in using QuickBooks for bookkeeping, invoicing, and financial reporting.

H. **The student integrates digital tools and technologies into business practices. The student is expected to:**

1. Explain the role of digital tools, such as financial software and e-commerce platforms, in modern business operations.
2. Use cloud-based tools for collaboration and data management.
3. Explore the basics of digital marketing, including social media platforms and online advertising.
4. Understand the importance of maintaining cybersecurity for business data and transactions.

I. **The student demonstrates employability skills essential for success in business and entrepreneurship. The student is expected to:**
   1. Exhibit professionalism, including punctuality, appropriate dress, and ethical behavior.
   2. Communicate effectively in written, verbal, and digital formats, including appropriate use of letters, emails, texts, and phone calls based on context and audience.
   3. Demonstrate teamwork and collaboration in group settings.
   4. Develop time management and problem-solving strategies, including how to prioritize and triage a list of business-related tasks and deliverables.

# Course Standards: Management & Entrepreneurship II

1. **GENERAL REQUIREMENTS.** This course is recommended for students in Grades 10-12.

2. **INTRODUCTION**
   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.
   B. The Management, Entrepreneurship, and Sales Career Cluster involves skills and occupations that are essential across all industries, focusing on business administration, operations optimization, strategic planning, workforce management, and entrepreneurship. It merges key areas such as data management and analysis, human resources, general operations, administrative support, project management, and organizational leadership. This Cluster ensures that businesses across all industries efficiently meet their goals, adapt to market changes, and maintain competitive advantage. By emphasizing entrepreneurship, this Cluster supports the creation of new ventures, driving economic growth and innovation and making it a cornerstone of modern economies.
   C. The Management and Entrepreneurship Program of Study equips students with the knowledge and skills necessary to excel in careers focused on business innovation, project leadership, and strategic management. This program emphasizes entrepreneurial thinking, project management methodologies, and the integration of emerging technologies to foster innovation across industries. Students progress through a rigorous curriculum that builds foundational knowledge of business operations, financial management, digital marketing, and process improvement, advancing to complex concepts such as strategic leadership, data-driven decision-making, and stakeholder management.
   D. In Management and Entrepreneurship II, students will learn principles of process improvement using Lean Six Sigma and apply them to business operations. Collaboration, innovation, and leadership are key focus areas, as students work on real-world business scenarios. By the end of the course, students will be prepared to earn the Google Career Certificate: Digital Marketing & E-commerce and/or the Lean Six Sigma White Belt certification.
   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.
   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.

3. **KNOWLEDGE AND SKILLS**
   A. **The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected to:**
      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.
      2. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn.
      3. Employ effective reading, writing, and technical documentation skills.
      4. Solve problems using critical thinking techniques and structured troubleshooting methodologies.
      5. Demonstrate leadership skills and collaborate effectively as a team member.
      6. Implement safety procedures, including proper use of software and following privacy guidelines.
      7. Exhibit an understanding of legal and ethical responsibilities in the management and entrepreneurship field, following copyright laws and regulations.
      8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting.

   B. **The student identifies various career pathways in the management and entrepreneurship field. The student is expected to:**
      1. Develop a career plan that includes the necessary education, certifications, job skills, and experience for specific roles in management and entrepreneurship.
      2. Create a professional resume and portfolio that reflect skills, projects, certifications, and recommendations.
      3. Demonstrate effective interview skills for roles in management and entrepreneurship.

   C. **The student develops technology and digital literacy skills. The student is expected to:**
      1. Use technology as a tool for research, organization, communication, and problem-solving.
      2. Use digital tools, including computers, mobile devices, collaboration platforms, and cloud services, to access, manage, and create information.
      3. Demonstrate proficiency in using emerging and industry-standard technologies, including tools and processes like Lean Six Sigma to evaluate efficiency.
      4. Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use.
      5. Use digital marketing tools and platforms for e-commerce and advertising.

D. **The student integrates core academic skills into management and entrepreneurship. The student is expected to:**
   1. Apply mathematical principles, such as percentages, ratios, and financial projections, to develop and evaluate business budgets and forecasts.
   2. Use critical reading and comprehension skills to analyze business case studies, market research, and entrepreneurial resources.
   3. Demonstrate effective written communication by preparing business plans, marketing proposals, and project reports.
   4. Interpret and construct data visualizations, such as graphs and charts, to support decision-making and project presentations.
   5. Apply problem-solving strategies and logical reasoning to address business challenges and optimize project outcomes.

E. **The student demonstrates the necessary skills to apply intermediate principles of entrepreneurship and small business management. The student is expected to:**
   1. Compare multiple entrepreneurial pathways (franchise, licensing, social enterprise) and evaluate their suitability for different market needs.
   2. Assess how leadership *styles* (transformational, servant, transactional) influence startup culture and growth.
   3. Analyze small-business contributions to regional supply chains and job creation using current data.
   4. Differentiate advanced ownership structures (single-member LLC, multi-member LLC, S-Corp, C-Corp) and their tax/legal implications.
   5. Draft an executive summary that articulates opportunity, competitive edge, and leadership approach for a proposed venture.

F. **The student demonstrates the ability to validate business opportunities and develop strategies for launching a venture. The student is expected to:**
   1. Conduct a feasibility study that integrates primary market research with secondary data (industry reports, census statistics).
   2. Develop a refined business plan or pitch deck that includes SWOT analysis, TAM–SAM–SOM estimates, and a 12-month cash-flow forecast.
   3. Perform competitor benchmarking (pricing, features, positioning) and propose a unique value proposition.
   4. Explain intellectual-property options (copyright, trademark, patent) and outline a basic protection strategy.
   5. Summarize regulatory and insurance requirements for two contrasting industries (e.g., food service vs. software-as-a-service).

G. **The student demonstrates the ability to use intermediate financial-management tools and analysis techniques to manage a business effectively. The student is expected to:**
   1. Prepare basic financial statements (income statement, balance sheet, cash-flow statement) from raw transaction data.
   2. Use accounting software (e.g., QuickBooks or Xero) to set up classes, recurring transactions, and customized reports.
   3. Calculate break-even point and margin of safety for a proposed product or service.
   4. Compare funding sources (micro-loans, revenue-based financing, angel investment) and articulate lender or investor expectations.

H. **The student integrates intermediate digital tools and marketing strategies into business operations. The student is expected to:**
   1. Build a simple e-commerce site or landing page and integrate secure payment processing.
   2. Design a multi-channel digital-marketing plan that combines organic social content, basic SEO, and an entry-level paid-advertising budget.
   3. Track campaign metrics in Google Analytics (sessions, bounce rate, conversion goals) and interpret results.
   4. Implement cybersecurity best practices (multi-factor authentication, password vaults) and explain the basics of data-privacy compliance (GDPR/CCPA).

I. **The student demonstrates professional skills and emerging leadership abilities essential for entrepreneurial success. The student is expected to:**
   1. Create a LinkedIn profile and personal brand statement that align with entrepreneurial goals.
   2. Deliver a three-minute persuasive pitch to peers and incorporate structured feedback for improvement.
   3. Practice project-team roles (e.g., scrum master, note-taker, analyst) in a simulated sprint environment.
   4. Apply a simple decision matrix to prioritize tasks and deliverables when under deadline pressure.

J. **The student demonstrates introductory data-analytics and business-intelligence skills for entrepreneurs. The student is expected to:**
   1. Import, clean, and chart data in spreadsheet software using filters, conditional formatting, and basic formulas.
   2. Create one interactive visualization in Tableau Public, Google Data Studio, or a similar BI tool.
   3. Explain how data-quality issues (missing values, bias) can distort business insights and decisions.
   4. Present a data-supported recommendation to improve a marketing or operations process.

# Course Standards: Management & Entrepreneurship III

1. **GENERAL REQUIREMENTS.** This course is recommended for students in Grades 10-12.

2. **INTRODUCTION**
   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.
   B. The Management, Entrepreneurship, and Sales Career Cluster involves skills and occupations that are essential across all industries, focusing on business administration, operations optimization, strategic planning, workforce management, and entrepreneurship. It merges key areas such as data management and analysis, human resources, general operations, administrative support, project management, and organizational leadership. This Cluster ensures that businesses across all industries efficiently meet their goals, adapt to market changes, and maintain competitive advantage. By emphasizing entrepreneurship, this Cluster supports the creation of new ventures, driving economic growth and innovation and making it a cornerstone of modern economies.
   C. The Management and Entrepreneurship Program of Study equips students with the knowledge and skills necessary to excel in careers focused on business innovation, project leadership, and strategic management. This program emphasizes entrepreneurial thinking, project management methodologies, and the integration of emerging technologies to foster innovation across industries. Students progress through a rigorous curriculum that builds foundational knowledge of business operations, financial management, digital marketing, and process improvement, advancing to complex concepts such as strategic leadership, data-driven decision-making, and stakeholder management.
   D. In Management and Entrepreneurship III leadership and team management skills are emphasized through collaborative projects and case studies. The course culminates in preparation for the Certified Associate in Project Management (CAPM) and/or Microsoft Excel Expert or Tableau certifications, equipping students with the knowledge and skills to succeed in high-demand project management and entrepreneurial roles.
   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.
   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.

3. **KNOWLEDGE AND SKILLS**
   A. **The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected to:**
      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.
      2. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn.
      3. Employ effective reading, writing, and technical documentation skills.
      4. Solve problems using critical thinking techniques and structured troubleshooting methodologies.
      5. Demonstrate leadership skills and collaborate effectively as a team member.
      6. Implement safety procedures, including proper use of software and following privacy guidelines.
      7. Exhibit an understanding of legal and ethical responsibilities in the management and entrepreneurship field, following copyright laws and regulations.
      8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting.

   B. **The student identifies various career pathways in the management and entrepreneurship field. The student is expected to:**
      1. Develop a career plan that includes the necessary education, certifications, job skills, and experience for specific roles in management and entrepreneurship.
      2. Create a professional resume and portfolio that reflect skills, projects, certifications, and recommendations.
      3. Demonstrate effective interview skills for roles in management and entrepreneurship.

   C. **The student develops technology and digital literacy skills. The student is expected to:**
      1. Use technology as a tool for research, organization, communication, and problem-solving.
      2. Use digital tools, including computers, mobile devices, collaboration platforms, and cloud services, to access, manage, and create information.
      3. Demonstrate proficiency in using emerging and industry-standard technologies, including data visualizations and dashboards tools like Tableau or Excel for informed decision-making.
      4. Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use.
      5. Leverage project management software to schedule, monitor, and execute tasks.

D. **The student integrates core academic skills into management and entrepreneurship. The student is expected to:**
   1. Apply mathematical principles, such as percentages, ratios, and financial projections, to develop and evaluate business budgets and forecasts.
   2. Use critical reading and comprehension skills to analyze business case studies, market research, and entrepreneurial resources.
   3. Demonstrate effective written communication by preparing business plans, marketing proposals, and project reports.
   4. Interpret and construct data visualizations, such as graphs and charts, to support decision-making and project presentations.
   5. Apply problem-solving strategies and logical reasoning to address business challenges and optimize project outcomes.

E. **The student demonstrates the necessary skills to apply advanced principles of business management and entrepreneurship. The student is expected to:**
   1. Analyze strategies for scaling a business, including market expansion, product or service diversification, strategic partnerships, and technological innovation.
   2. Explore global business opportunities and evaluate the challenges of operating in international markets.
   3. Examine ethical considerations and corporate social responsibility in entrepreneurial decision-making.
   4. Develop comprehensive business strategies to address real-world scenarios.

F. **The student demonstrates the ability to analyze and interpret business data for strategic decision-making. The student is expected to:**
   1. Use advanced features of Microsoft Excel, such as pivot tables, data validation, and macros, to manage and analyze business data.
   2. Create interactive dashboards and data visualizations using tools like Tableau to present business insights effectively.
   3. Choose and defend a set of key performance indicators (KPIs) and other gauges (such as schedule-adherence or cost-variance reports) that fit a specific business model. Interpret those metrics—together with basic financial data—to spot performance gaps and recommend strategic actions.
   4. Communicate data-driven insights through visual and written reports tailored to diverse audiences.

G. **The student demonstrates advanced project management skills to initiate, plan, execute, monitor, and close projects successfully. The student is expected to:**
   1. Develop detailed project plans that include schedule development, resource allocation and resource leveling, risk management, and stakeholder engagement.
   2. Apply project management methodologies, such as Agile, Waterfall, Scrum, or DevOps to complete team-based projects.
   3. Utilize project management tools, such as Microsoft Project or online task management platforms, to track project progress.
   4. Prepare for the Certified Associate in Project Management (CAPM) certification by demonstrating knowledge of the Project Management Body of Knowledge (PMBOK) guide.

H. **The student demonstrates the ability to integrate marketing and operational strategies to achieve business goals. The student is expected to:**
   1. Develop and execute advanced digital marketing campaigns that incorporate paid advertisements, search engine optimization (SEO), and analytics tools.
   2. Evaluate customer feedback and adjust marketing strategies to improve customer satisfaction and loyalty.
   3. Design operational workflows that optimize efficiency and meet business objectives.
   4. Explore case studies of successful businesses and analyze how marketing, operational workflows, and product manufacturing or service delivery are coordinated—often through project-management practices—to achieve strategic goals.

I. **The student demonstrates leadership and collaboration skills essential for managing teams and projects. The student is expected to:**
   1. Apply conflict resolution techniques and leadership principles in team settings.
   2. Foster an inclusive and collaborative work environment to maximize team productivity.
   3. Develop professional communication strategies to present ideas, lead meetings, and manage stakeholder relationships.
   4. Reflect on personal leadership strengths and identify areas for growth.

J. **The student integrates advanced technology tools into entrepreneurial and project management practices. The student is expected to:**
   1. Explore emerging technologies—such as AI chatbots, generative-content tools, or simple workflow automations—then demonstrate an appropriate use-case in a business process and explain, with basic evidence (e.g., time saved or error reduction), how it improves efficiency.
   2. Use cloud-based tools for real-time collaboration and project tracking.
   3. Apply cybersecurity best practices to protect sensitive business and project data.
   4. Research and implement innovative solutions to enhance business efficiency.

# Course Standards: Career Connected Learning I and II

**Career connected learning is an educational approach that integrates classroom instruction with real-world experiences, enabling high school students to explore potential careers and develop relevant skills before graduation. By participating in work-based learning opportunities—such as apprenticeships, internships, capstone projects, and school-based enterprises—students apply academic concepts in authentic settings, gain practical industry knowledge, and build professional networks. This hands-on engagement helps students connect their studies to future career paths, strengthens their problem-solving and communication skills, and supports a smoother transition into college, vocational programs, or the workforce.**

All Career and Technical Education Programs of Study include aspects of work-based learning, and almost all of the programs include two Career Connected Learning (CCL) courses. Below are the course descriptions for CCL I and CCL II. The CCL standards can be found via this link: