



Program of Study Guide:

Management and Entrepreneurship

Comprehensive guidelines and course standards for the
Business pathway

Office of College and Career Pathways

August 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, and III 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 SCED: Pending Grades: 9-12 Prerequisite: None Credit: 1	Management and Entrepreneurship I introduces students to the essential skills and concepts needed to understand and manage a small business. Students explore foundational topics such as the entrepreneurial mindset, business ownership and structure, marketing strategies, and basic financial literacy. Students learn to organize, analyze, and present business data, supporting their preparation aligned industry certification(s). The course also emphasizes employability skills - including communication, teamwork, and ethical decision-making - while providing opportunities for real-world application through project-based learning and simulated business experiences.
Required Core: Course 2	Management and Entrepreneurship II SCED: Pending Grades: 10-12 Prerequisite: Management and Entrepreneurship I Credit: 1	Management and Entrepreneurship II builds on foundational knowledge by engaging students in advanced business and organizational management skills. Students compare models of business ownership, evaluate legal and ethical responsibilities, and develop practical strategies for business growth and management. The course emphasizes project management principles, business process improvement (including Six Sigma White Belt concepts), and professional project planning tools. Students sharpen their leadership and employability through team-based projects, simulated business problem-solving, and preparation for industry-recognized certifications related to project management and process improvement.
Optional Flex: Course 1	Management and Entrepreneurship III SCED: Pending Grades: 11-12 Prerequisite: Management and Entrepreneurship I and II Credit: 1	Management and Entrepreneurship III advances students' leadership and management abilities, preparing them for real-world challenges in entrepreneurship and business operations. Students explore multiple leadership styles and analyze their impact on team performance and organizational culture. The course deepens understanding of advanced project management practices, adaptive approaches, and lifecycle processes. Through hands-on projects, students apply contemporary management strategies, develop advanced team and communication skills, and build a professional portfolio showcasing readiness for key industry credentials and leadership roles in business.

Course Level	Course Information	Description
Optional Flex: Course 2	Career Connected Learning I SCED: Pending Grades: 11-12 Prerequisite: See Course Description Credits: 1-3	Prerequisites: - Alignment to the student's 6-Year Plan - Completion of: - Minimum two sequential courses in a CTE pathway, OR - Minimum two years of the same world language; OR - Minimum two sequential courses in a comprehensive arts program; OR - Inclusion in the IEP/504 transition plan with supporting documentation (as required) - Endorsement from an educator, mentor, employer, or career coach - No more than one course recovery credit in core subjects is needed by the student. 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 practices. 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.

Course Level	Course Information	Description
Optional Flex: Course 3	Career Connected Learning II SCED: Pending Grades: 11-12 Prerequisite: Career Connected Learning I Credits: 1-3	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 Career-Connected Learning

The *Blueprint for Maryland's Future* and the High School Level of a Registered Apprenticeship

The Maryland State Department of Education recognizes the high-school level of a Registered Apprenticeship (RA), defined as a State-approved Registered Apprenticeship begun during high school in which students complete at least 144 hours of related technical instruction and 250 hours of paid on-the-job training before graduation, with the remaining required apprenticeship hours completed post-graduation, as the gold standard of Career Connected Learning.

The CTE Committee of the Governor's Workforce Development Board, in alignment with federal apprenticeship standards, requires 144 hours of RTI for all high school RA participants, and the Apprenticeship Maryland Program (AMP) defines the minimum RTI as **one course credit equivalent**. This high-school-level Registered Apprenticeship is the preferred career-connected learning option for students to meet the Blueprint's goal that 45% of public high school graduates complete either the high-school level of a Registered Apprenticeship or another industry-recognized credential.

To the extent practicable, the greatest number of students should achieve this goal through participation in a high-school level Registered Apprenticeship, with schools ensuring these requirements are scheduled, completed, and documented for transcript and reporting purposes.

To the extent practicable, the greatest number of students should achieve this goal through the high-school level of a Registered Apprenticeship.

Career-Connected Learning Resources		
Course 1: Career Awareness	Course 2: Career Preparation	Flex Courses: Career-Connected Learning
- Industry Visits - Guest Speakers - Participation in Career and Technical Student Organizations - Postsecondary Visits – Program Specific Site Tours - Mock Interviews	- All of Career Awareness plus the following: - Job Shadow - Employer Mentoring	- Registered Apprenticeship - Internship - School-Based Enterprise - Employer-Directed Capstone

Industry-Recognized Credentials – The standards in this document are aligned to the following certifications:

By the end of Management and Entrepreneurship I: Intuit Entrepreneurship and Small Business Certification (Certiport) + MS Office Specialist Associate: Excel Certification

By the end of Management and Entrepreneurship II: Google Career Certificate: Project Management and Six Sigma - White Belt

Optional Credentials (via the Flex Course options): Microsoft Excel Expert, Project Management Ready Certification (PMI), and Google Project Management Certificate

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). <i>Note: A 25th percentile hourly wage of \$24.74 or greater is required to meet this definition.</i>	Standard Occupational Code: 11-1021: General and Operations Managers Hourly Wage/Annual Salary: 11-1021 25 th Percentile: \$35.76 / \$74,381 50 th Percentile: \$50.64/ \$105,331 75 th Percentile: \$80.18 / \$166,774
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: 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 <u>405</u> openings between 2024-2029.	Annual Openings 8,386

Lightcast Data Updated August 2025

¹ Living Wage Calculator: <https://livingwage.mit.edu/states/24>

Labor Market Information Data Source

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 introduces students to the essential skills and concepts needed to understand and manage a small business. Students explore foundational topics such as the entrepreneurial mindset, business ownership and structure, marketing strategies, and basic financial literacy. Students learn to organize, analyze, and present business data, supporting their preparation aligned industry certification(s). The course also emphasizes employability skills - including communication, teamwork, and ethical decision-making - while providing opportunities for real-world application through project-based learning and simulated business experiences.
- 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—including initiative, self-advocacy, flexibility, open-mindedness, active listening, and a willingness to learn—to build professional credibility and resilience.
3. Employ effective reading, writing, and technical documentation skills.
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies, selecting and leveraging appropriate resources (e.g., online databases, subject-matter experts, industry networks, or help documentation) to reach sound solutions.
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.
9. Evaluate and apply artificial-intelligence tools ethically and effectively (e.g., for data analysis, content generation, and customer engagement), recognizing their limitations, ensuring transparency, and safeguarding intellectual property and privacy.

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 with industry-standard software by:
 - Creating clear slide decks using presentation software (e.g., PowerPoint, Google Slides);
 - Producing basic business visuals in graphic-design applications (e.g., Adobe Express, Canva);
 - Managing digital correspondence and shared files using common communication platforms (e.g., email, Google Drive, Microsoft SharePoint); and
 - Applying word-processing and spreadsheet tools for routine 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 foundational business technology skills using Microsoft Excel. The student is expected to:

1. Identify key features and functions of the Excel interface, including ribbons, tabs, and commands.
2. Navigate Excel to create, save, and manage basic spreadsheets for business-related tasks.
3. Format cells, columns, and worksheets to organize and present data clearly.
4. Enter and edit data in Excel worksheets using accurate and industry-appropriate techniques.
5. Apply basic formulas and functions (such as SUM, AVERAGE, and COUNT) to analyze business information.
6. Insert tables and simple charts to visually represent business data.
7. Use sort and filter tools to identify trends and patterns in business scenarios.
8. Demonstrate use of templates, data validation, and basic collaborative features to maintain accuracy and security of business information.

*Sample Related Excel Project: *Business Expense Tracker*: Students create and format a spreadsheet to track daily expenses for a small business, using formulas to calculate totals and averages.

F. The student develops foundational entrepreneurship knowledge and skills. The student is expected to:

1. Recognize the characteristics and mindset of successful entrepreneurs.
2. Describe sources of business ideas and explain methods to assess their feasibility.
3. Identify types of business ownership and legal structures, with emphasis on those suitable for small businesses.
4. Explain basic microeconomic and macroeconomic principles relevant to entrepreneurship using accessible examples.
5. Summarize the steps involved in starting a simple business.
6. Discuss the role of innovation and creativity in business success.
7. Identify ethical and social responsibilities of entrepreneurs.

*Sample Related Excel Project: *Business Idea Comparison Matrix*: Students organize possible business ideas in Excel, listing pros/cons, estimated startup costs, and a simple feasibility rating using scales or conditional formatting.

G. The student develops financial literacy and management skills for small business. The student is expected to:

1. Identify key financial terms and concepts (e.g., revenue, expenses, profit, budgeting).
2. Interpret simple financial documents, such as an income statement and balance sheet.
3. Apply Excel to perform basic calculations relevant to business finances.
4. Prepare a simple budget for a business or project using Excel.
5. Differentiate among common sources of business funding for entrepreneurs.
6. Explain the purposes of insurance and risk management in small business.

*Sample Related Excel Project: *Startup Budget Sheet*: Students develop a budget for a basic business plan in Excel, including revenue, expenses, and formulas for totals. They use charts or graphs to visualize income versus expenses.

H. The student explores fundamental marketing and customer service skills. The student is expected to:

1. Define marketing, customer service, and their importance in business.
2. Identify the components of the marketing mix (product, price, place, promotion).
3. Use Excel to organize and analyze sample customer or market data.
4. Identify target markets using basic demographic and market research concepts.
5. Outline a simple promotional or marketing plan.
6. Demonstrate appropriate habits and techniques for effective customer service in business settings.

*Sample Related Excel Project: *Customer Survey Data Analysis*: Students input sample customer survey results into Excel, use sorting and filtering features to analyze data, and create a chart showing preferences or satisfaction.

I. The student builds foundational management, leadership, and employability skills. The student is expected to:

1. Describe the basic roles and responsibilities of managers and leaders in business.
2. Identify and demonstrate essential soft skills, including teamwork, communication, and problem-solving.
3. Organize and prioritize business tasks using fundamental project management and time management techniques.
4. Distinguish among various types of business communication (written, digital, verbal) and appropriate uses for each.
5. Demonstrate respectful, ethical, and professional conduct in classroom and simulated business activities.

*Sample Related Excel Project: *Weekly Task Manager*: Students use Excel to build a simple project plan or to-do list for a team business project, applying sorting, filtering, and conditional formatting to prioritize tasks.

J. The student prepares for industry-recognized certification and future careers. The student is expected to:

1. Review objectives for aligned industry certifications.
2. Apply effective communication skills by creating and delivering written and oral presentations related to entrepreneurship and business projects.
3. Demonstrate teamwork and collaboration skills by participating in group projects, simulating business roles, and reflecting on contributions to team success.
4. Practice professional etiquette and ethical decision-making in classroom and simulated workplace scenarios, including responding to case studies and role plays.
5. Solve business-related problems by analyzing scenarios, proposing solutions, and utilizing feedback from peers and instructors.
6. Reflect on personal growth and skill development through self-assessment, goal setting, and maintaining a career readiness portfolio.
7. Participate in project-based learning activities and/or Career and Technical Student Organization (CTSO) events to apply technical and employability skills in authentic contexts.
8. Reflect on personal skills and set goals for growth in relation to career pathways and certification objectives.

*Sample Related Excel Project: *Weekly Task Manager*: Students use Excel to build a simple project plan or to-do list for a team business project, applying sorting, filtering, and conditional formatting to prioritize tasks.

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. Management and Entrepreneurship II builds on foundational knowledge by engaging students in advanced business and organizational management skills. Students compare models of business ownership, evaluate legal and ethical responsibilities, and develop practical strategies for business growth and management. The course emphasizes project management principles, business process improvement (including Six Sigma White Belt concepts), and professional project planning tools. Students sharpen their leadership and employability through team-based projects, simulated business problem-solving, and preparation for industry-recognized certifications related to project management and process improvement.
 - 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—including initiative, self-advocacy, flexibility, open-mindedness, active listening, and a willingness to learn—to build professional credibility and resilience.
3. Employ effective reading, writing, and technical documentation skills.
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies, selecting and leveraging appropriate resources (e.g., online databases, subject-matter experts, industry networks, or help documentation) to reach sound solutions.
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.
9. Evaluate and apply artificial-intelligence tools ethically and effectively (e.g., for data analysis, content generation, and customer engagement), recognizing their limitations, ensuring transparency, and safeguarding intellectual property and privacy.

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 with industry-standard software by:
4. Creating clear slide decks using presentation software (e.g., PowerPoint, Google Slides);
5. Producing basic business visuals in graphic-design applications (e.g., Adobe Express, Canva);
6. Managing digital correspondence and shared files using common communication platforms (e.g., email, Google Drive, Microsoft SharePoint); and
7. Applying word-processing and spreadsheet tools for routine documentation and financial planning.
 - (1) 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 compares and contrasts models for business ownership and growth. The student is expected to:**
1. Identify various business structures (e.g., sole proprietorship, partnership, LLC, corporation, franchise, cooperative).
 2. Summarize the characteristics, advantages, and disadvantages of each structure.
 3. Analyze real or hypothetical businesses to determine the most suitable structure for different entrepreneurial goals.
- F. **The student evaluates legal, ethical, and regulatory requirements for business operations and expansion. The student is expected to:**
1. List common legal documents and compliance requirements (e.g., licenses, permits, incorporation paperwork, tax registrations).
 2. Discuss the impact of ethical leadership and social responsibility on business success and reputation.
 3. Apply basic risk analysis by identifying potential legal or ethical issues in business case scenarios and propose preventative actions.
- G. **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, instructor-supplied 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).

H. **The student demonstrates professional skills and emerging leadership abilities essential for entrepreneurial success. The student is expected to:**

1. Deliver a three-minute persuasive pitch to peers and incorporate structured feedback for improvement.
2. Practice project-team roles (e.g., scrum master, note-taker, analyst) in a simulated sprint environment.
3. Apply a simple decision matrix to prioritize tasks and deliverables when under deadline pressure.

I. **The student prepares for industry-recognized certification in process improvement and project management. The student is expected to:**

1. Review and demonstrate objectives for the Six Sigma White Belt certification.
2. Review and demonstrate objectives for foundational project management certifications (such as Google Project Management).
3. Evaluate personal strengths and areas for growth in relation to Six Sigma and project management skill sets.
4. Compile artifacts and reflections in a career portfolio to document progress toward industry credential readiness.

J. **The student manages business projects and business operations using professional project management and process improvement concepts. The student is expected to:**

1. Define and communicate project goals, scope, deliverables, stakeholders, and success criteria within a business management context.
2. Develop project plans, including timelines, milestones, resource allocation, risk assessment, and basic budgets using contemporary tools.
3. Apply process improvement concepts such as DMAIC (Six Sigma), process maps/flowcharts, root cause analysis, and lean and continuous improvement methodology, in project planning and operational problem-solving.
4. Monitor and adapt project progress using tracking systems, performance metrics, and regular team meetings.
5. Demonstrate effective teamwork, leadership, and stakeholder communication in business and project management settings.
6. Discuss agile and traditional project management methodologies and choose appropriate tools for various business challenges.
7. Reflect on lessons learned, document outcomes, and recommend improvements for future projects or business operations.

K. **The student demonstrates advanced leadership and employability skills through business management and project experiences. The student is expected to:**

1. Demonstrate leadership by setting goals, managing teams, and resolving conflicts within classroom or simulated business environments.
2. Exhibit initiative, ethical judgment, and decision-making in entrepreneurship or project-based scenarios.
3. Apply problem-solving, adaptability, and critical thinking skills to address business or project management challenges.
4. Communicate with clarity and professionalism in written, verbal, and digital business formats.
5. Participate in relevant CTSO activities, simulated business competitions, or internships to refine business management and employability skills.

- L. **The student prepares for industry-recognized certification in project management and process improvement. The student is expected to:**
1. Review and demonstrate objectives for related project management certifications
 2. Evaluate personal strengths and areas for growth related to business and project management skill sets.
 3. Compile workplace artifacts and self-reflections in a professional portfolio as evidence of readiness for certification and future employment.

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. Management and Entrepreneurship III advances students' leadership and management abilities, preparing them for real-world challenges in entrepreneurship and business operations. Students explore multiple leadership styles and analyze their impact on team performance and organizational culture. The course deepens understanding of advanced project management practices, adaptive approaches, and lifecycle processes. Through hands-on projects, students apply contemporary management strategies, develop advanced team and communication skills, and build a professional portfolio showcasing readiness for key industry credentials and leadership roles in business.
 - 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—including initiative, self-advocacy, flexibility, open-mindedness, active listening, and a willingness to learn—to build professional credibility and resilience.
3. Employ effective reading, writing, and technical documentation skills.
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies, selecting and leveraging appropriate resources (e.g., online databases, subject-matter experts, industry networks, or help documentation) to reach sound solutions.
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.
9. Evaluate and apply artificial-intelligence tools ethically and effectively (e.g., for data analysis, content generation, and customer engagement), recognizing their limitations, ensuring transparency, and safeguarding intellectual property and privacy.

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 with industry-standard software by:
4. Creating clear slide decks using presentation software (e.g., PowerPoint, Google Slides);
5. Producing basic business visuals in graphic-design applications (e.g., Adobe Express, Canva);
6. Managing digital correspondence and shared files using common communication platforms (e.g., email, Google Drive, Microsoft SharePoint); and
7. Applying word-processing and spreadsheet tools for routine documentation and financial planning.
8. Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use.
9. 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 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 recorded 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.

F. The student demonstrates advanced project management skills to initiate, plan, execute, monitor, and close projects successfully. The student is expected to:

1. Describe common project management approaches (predictive, adaptive, hybrid) and compare and contrast them.
2. Define the project life cycle and key phases within various project management methodologies.
3. Differentiate between stakeholder roles and responsibilities (including sponsors, vendors, project manager, team members, customers).
4. Develop elements of a project charter (purpose, objectives, milestones) and explain its role in project initiation.
5. Describe and apply project communication strategies, including elements of effective communication, reporting status updates, and selecting appropriate communication methods for stakeholders.
6. Describe the purpose and components of a project management plan, with attention to budgeting, risk, schedule, and scope.
7. Apply the principles of scope, work breakdown structures (WBS), scheduling, and resource planning to sample project scenarios.
8. Describe project budget concepts, including procurement, vendor selection, and budget development methods.
9. Describe and apply the change management process and its steps to manage modifications during project execution.
10. Develop detailed project plans that include schedule development, resource allocation and resource leveling, risk management, and stakeholder engagement.
11. Apply project management methodologies, such as Agile, Waterfall, Scrum, or DevOps to complete team-based projects.
12. Utilize digital project management tools to track project progress; i.e. Asana, Monday.com, Smartsheet, Trello, or similar approved tool/platform.
13. Plan, launch, and close a small-scale school-based enterprise or pop-up venture (mock if necessary) (e.g., a one-day sales booth or online preorder), submitting a concise project charter, a Gantt chart with resource-leveling notes, and a two-page reflection comparing planned versus actual results.

G. The student demonstrates leadership and collaboration skills essential for managing teams and projects. The student is expected to:

1. Explain the characteristics of effective managers and leaders, including the differences between management and leadership roles.
2. Identify and evaluate major leadership styles (e.g., autocratic, democratic, transformational, transactional, servant leadership).
3. Analyze how different leadership styles impact team dynamics, motivation, productivity, and organizational culture.
4. Demonstrate the use of motivation, listening, and basic conflict management strategies (withdraw/avoid, smoothing/accommodating, compromise, force/direct, collaborate/problem-solve) in realistic scenarios.
5. Evaluate the role of ethical behavior and social responsibility in management and leadership decisions.
6. Reflect on personal leadership strengths and areas for growth through team-based projects or case studies.

H. **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.
5. Build and demonstrate a no-code or low-code AI or automation prototype (e.g., chatbot FAQ, automated email responder, simple predictive spreadsheet) and record a two-minute video or annotated screenshot deck explaining the workflow and estimated time saved.

I. **The student prepares for industry-recognized certification in project management and process improvement (PMI PMR or similar) and/or data management (MS Excel Expert or similar). The student is expected to:**

1. Review and demonstrate objectives for related industry certifications.
2. Communicate professionally in both written and oral formats for a variety of audiences and purposes.
3. Compile workplace artifacts and self-reflections in a professional portfolio as evidence of readiness for certification and future employment.