

# **Career & Technical Education (CTE) Standards Revision Project**

## **Cluster: Management and Administration**

**Pathways: Administrative Services, Business Information Technology, Corporate/General Management, Human Resource Management, Operations Management**

### **Management and Administration Cluster Overview**

The Management and Administration Cluster prepares learners for careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Career opportunities are available in every sector of the economy and require specific skills in organization, time management, customer service and communication.

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**Participation in this review and update included secondary business and marketing teachers and secondary language arts and math teachers.**

Updated June 2010

## Standards: Information Technology

<b>Career Cluster/Cluster Grouping:</b>	<b>Management and Administration</b>
<b>Pathway(s):</b>	<b>Business Information Technology</b>
<b>Prepared Completer Competencies:</b> <ul style="list-style-type: none"> <li>MAIT.01 Develop the ability to analyze, synthesize, and evaluate situations at home, school, or work, and then apply technology to solve problems and complete tasks efficiently and effectively.</li> </ul>	
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b> <ul style="list-style-type: none"> <li>MAIT.01.01 Impact on Society: Assess the impact of information technology in a global society.</li> </ul>	
<b>Evidence Outcomes</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<b>Students can:</b>	
<ul style="list-style-type: none"> <li>a. Analyze how developments in information technology affect the supply/demand characteristics of the job market. PWR2.1.a, RWC04.10.c</li> <li>b. Examine how information technology changes the breadth and level of worker responsibilities. PWR2.1.a, RWC04.10.c</li> <li>c. Assess how information technology changes the manner in which training is offered and implemented. PWR2.1.a</li> <li>d. Analyze and compare society's influence on information technology and information technology's influence on society. PWR2.1.a, RWC04.10.c</li> </ul>	<b>Academic Content Knowledge Alignment:</b> RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem  <b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR2.1.a-Postsecondary & Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Apply logical reasoning and analytical skills
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b> <ul style="list-style-type: none"> <li>MAIT.01.02 Hardware: Describe current and emerging hardware; configure, install, and upgrade hardware; diagnose problems; and repair hardware.</li> </ul>	

<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Remove, upgrade, store, and install computer hardware and supportive software.</li> <li>b. Repair computer hardware and solve supportive software problems.</li> <li>c. Troubleshoot advanced hardware and supportive software problems. PWR2.1.a</li> <li>d. Evaluate and recommend hardware to solve specific problems. PWR2.1.a, RWC04.10.c</li> <li>e. Analyze cost benefit and life cycle of hardware. PWR2.1.a, RWC04.10.c</li> <li>f. Evaluate hardware vendors, warranties, and purchasing options PWR2.1.a, RWC04.10.c</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b> RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR2.1.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Apply logical reasoning and analytical skills</p>

### High School Expectations

<b>Concepts and skills students know include:</b>
<ul style="list-style-type: none"> <li>• MAIT.01.03 Operating Systems and Utilities: Identify, evaluate, select, install, use, upgrade, customize, and diagnose and solve problems with various types of operating systems and utilities.</li> </ul>

<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Compare and contrast the functions, features, and limitations of different operating systems and utilities (e.g., open source, mobile, and proprietary operating systems). PWR2.1.d, RWC04.10.c</li> <li>b. Select operating systems and utilities appropriate for specific hardware, software, and tasks. RWC04.10.c</li> <li>c. Install and customize operating systems and utilities.</li> <li>d. Diagnose and repair installations and operational problems of operating systems and utilities.</li> <li>e. Identify and use appropriate help resources (e.g., help desks, online help, and manuals) to install, configure, upgrade, diagnose, and repair operating system and utilities. RWC04.10.c</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b> RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR2.1.d-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Collect and analyze quantitative and qualitative data and research</p>

### High School Expectations

<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MAIT.01.04 Input Technologies: Use various input technologies to enter and manipulate information appropriately.</li> </ul>	
<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Develop proper input technologies (e.g. keyboarding, 10-key touch pad, scanning, speech recognition, hand typing, digital inking, digital cameras, student response systems, and the use of a touch screen, mouse, or stylus).</li> <li>b. Select appropriate input technology to optimize performance.</li> <li>c. Apply a variety of input technologies to maximize productivity.</li> <li>d. Optimize academic and workplace performance using a variety of input technologies.</li> <li>e. Compose documents using a variety of input technologies. PWR1.1.b</li> <li>f. Explore translation and digital language input tools and resources for effective global communication.</li> </ul>	<b>Academic Content Knowledge Alignment:</b>
	<b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR1.1.b-Postsecondary & Workforce Readiness, Content Knowledge , Literacy - Write clearly and coherently for a variety of purposes and audiences
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MAIT.01.05 Productivity Software: Identify, evaluate, select, install, use, upgrade, and customize productivity software; diagnose and solve software problems.</li> </ul>	
<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Research advance software functions using knowledge-based tools (e.g., user communities, RSS feeds, tech support). RWC04.03.c</li> <li>b. Use the collaborative features of productivity software to accomplish organizational tasks. PWR2.2.a</li> <li>c. Diagnose and solve problems resulting from productivity software's installation and use.</li> <li>d. Demonstrate the transferability of skills between productivity software applications.</li> <li>e. Select and integrate productivity software products appropriate for various computer platforms. PWR2.2.a</li> </ul>	<b>Academic Content Knowledge Alignment:</b>
	RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources  RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem

<p>f. Identify, evaluate, and select software specific to an organizational function and/or industry. PWR2.2.a, RWC04.10.c</p>	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
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**High School Expectations**

**Concepts and skills students know include:**

- MAIT.01.06 Interactive Multimedia: Use multimedia software to create media rich projects.

<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
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<p>a. Identify and select appropriate multimedia file formats and properties (e.g., plug-ins, codes, compression). PWR2.2.a</p> <p>b. Create multimedia content and prepare it for delivery (e.g. compressions, resolution). PWR2.2.a, RWC2.6.b</p> <p>c. Configure and build multimedia delivery tools (e.g. blogs, podcasting, webcasting). PWR2.2.a, RWC2.6.b</p> <p>d. Analyze multimedia delivery tools and their impact on business functions. PWR2.2.a, RWC04.10.c</p> <p>e. Select and integrate multimedia software products appropriate for various computer platforms. PWR2.2.a, RWC04.10.c</p>	<p><b>Academic Content Knowledge Alignment:</b>  RWC2.6.b-Reading, Writing and Communicating, Reading for All purposes, Apply understanding of complex organizational text structures and features to reading comprehension. - Use the features of electronic information to communicate, gain information, or research a topic</p> <p>RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
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**High School Expectations**

**Concepts and skills students know include:**

- MAIT.01.07 Web Development and Design: Design, develop text, implement, update, and evaluate web solutions.

<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
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<ul style="list-style-type: none"> <li>a. Identify client and target needs and create content that is readable, accessible, searchable, and sticky.</li> <li>b. Research and apply accessibility guidelines and laws affecting website design and research and analyze hosting and domain solutions. RWC04.10.c</li> <li>c. Design, develop, and deliver advanced web content and applications using authoring tools. PWR1.1.b</li> <li>d. Build a comprehensive website using collaborative tools. PWR1.1.b</li> <li>e. Design e-business and e-commerce solutions. PWR1.1.b</li> <li>f. Troubleshoot advanced server and site dilemmas. RWC04.10.c</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b> RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p>
<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR1.1.b-Postsecondary &amp; Workforce Readiness, Content Knowledge , Literacy - Write clearly and coherently for a variety of purposes and audiences</p>	
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MAIT.01.08 Information Retrieval and Synthesis: Gather, evaluate, use, cite, and disseminate information from technology sources.</li> </ul>	
<p><b>Evidence Outcomes - Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<ul style="list-style-type: none"> <li>a. Analyze the effectiveness of online information resources to support collaborative tasks, research, publications, communications and increased productivity. PWR2.2.a, RWC04.10.c</li> <li>b. Synthesize information from data sources to formulate decisions. PWR2.2.a, RWC04.10.c</li> <li>c. Use mathematical and/or statistical methods to manipulate data into useful information. MAT03.04.a, PWR2.2.a</li> <li>d. Present analyzed information in a meaningful format. PWR2.2.a, MAT03.03.a</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b> MAT03.03.a-Mathematics, Data Analysis, Statistics, and Probability, Visual displays and summary statistics condense the information in data sets into usable knowledge - Identify and choose appropriate ways to summarize numerical or categorical data using tables, graphical displays, and numerical summary statistics (describing shape, center and spread) and accounting for outliers when appropriate</p> <p>MAT03.04.a - Data Analysis, Statistics, and Probability - Randomness is the foundation for using statistics to draw conclusions when testing a claim or estimating plausible values for a population characteristic - Define and explain the meaning of significance (both practical and statistical)</p> <p>RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p>

	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MAIT.01.09 Database Management Systems: Use, plan, develop, and maintain database management systems.</li> </ul>	
<p><b>Evidence Outcomes - Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<ul style="list-style-type: none"> <li>a. Explain the nature and interrelationships of bytes, field, records, and databases. RWC01.07.b</li> <li>b. Use database application development tools to create information systems to solve organization problems. PWR2.2.a</li> <li>c. Identify and select logical and physical structures appropriate for specific applications.</li> <li>d. Explore industry standards for cross-platform interface development (e.g. XML, ASP, PHP). PWR2.2.a, RWC04.10.c</li> <li>e. Develop retention schedules that adhere to organization policies and federal and state law. RWC04.04.a</li> <li>f. Design and implement a database server solution.</li> <li>g. Use data mining techniques to extract useful information. PWR2.2.a</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b>  RWC01.07.b - Oral Expression and Listening - Oral presentations require effective preparation strategies - Use verbal and nonverbal techniques to communicate information</p> <p>RWC04.04.a - Research and Reasoning - Complex situations require critical thinking across multiple disciplines - Analyze the logic of complex situations by questioning the purpose, question at issue, information, points of view, implications and consequences inferences, assumptions and concepts</p> <p>RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
<p><b>High School Expectations</b></p>	

<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MAIT.01.10 Systems Analysis and Design: Analyze and design information systems using appropriate development tools.</li> </ul>	
<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Identify and explain the steps in the systems development life cycle. RWC04.10.c</li> <li>b. Use project management tools to manage information systems development projects. PWR2.2.a</li> <li>c. Define system requirements using structures systems analysis tools.</li> <li>d. Incorporate appropriate human interface design principles.</li> <li>e. Develop design specifications for record types, output, and data stores. PWR2.2.a, RWC04.10.c</li> <li>f. Create appropriate documentation for information systems. PWR2.2.a</li> <li>g. Develop a testing plan and a training plan. PWR2.2.a</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b> RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MAIT.01.11 Programming and Application Development: Design, develop, test, and implement programs.</li> </ul>	
<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Choose the appropriate language or application development tool for specific tasks. PWR2.2.a</li> <li>b. Develop both procedural and object-oriented programs. PWR2.2.a</li> <li>c. Use application development tools to create code. Code common tasks (e.g. creating, adding, deleting, sorting, and updating records). PWR2.2.a</li> <li>d. Code a program solution in more than one programming language. PWR2.2.a</li> <li>e. Create a project to solve a business problem integrating mobile platforms. PWR2.2.a, RWC04.10.c</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b> RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>

<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MAIT.01.12 Telecommunications and Infrastructures: Develop the skills to design, deploy, and administer networks and telecommunications systems.</li> </ul>	
<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Identify network devices, including network connectivity hardware, and describe their function. PWR2.2.a</li> <li>b. Use appropriate tools to document network topologies and configurations (e.g., graphic modeling tools, network analyzers). PWR2.2.a</li> <li>c. Apply theoretical models (OSI) and the concept of layers to design, to manage, and troubleshoot networks. PWR2.2.a</li> <li>d. Describe server functions, including specialized servers (e.g., Web, DHCP, DNS, mail, proxy servers), and identify hardware and software requirements. PWR2.2.a, RWC04.10.c</li> <li>e. Install and configure routers to simulate a LAN/WAN environment. PWR2.2.a</li> <li>f. Establish interoperability in a multiserver, multivendor network operating system environment. PWR2.2.a</li> <li>g. Identify, analyze, and evaluate emerging communications technologies for use in organizations. PWR2.2.a, RWC04.10.c</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b> RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MAIT.01.13 Information Technology Planning and Acquisition: Plan the selection and acquisition of information technologies.</li> </ul>	
<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Identify and analyze user needs within an organization and identify the information technology solutions to meet organization needs. PWR2.1.b, RWC04.10.c</li> <li>b. Analyze, compare, and contrast total costs of ownership for information technology solutions. PWR2.1.b, RWC04.10.c</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b> RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p>

<ul style="list-style-type: none"> <li>c. Develop a request for proposal for an information system and evaluate bid specifications received from vendors. PWR1.1.b</li> <li>d. Develop and present a project plan for identifying, evaluating, selecting, purchasing, installing, and supporting an information system. PWR1.1.b</li> </ul>	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR1.1.b-Postsecondary &amp; Workforce Readiness, Content Knowledge , Literacy - Write clearly and coherently for a variety of purposes and audiences</p> <p>PWR2.1.b-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Conduct research using acceptable research methods</p>
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**High School Expectations**

<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MAIT.01.14 Security, Privacy, and Risk Management: Design and implement security, privacy, and risk management policies and procedures for information technology.</li> </ul>	
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<p><b>Evidence Outcomes - Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
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<ul style="list-style-type: none"> <li>a. Implement procedures used to recover information from failures and security breaches (e.g., malware, viral infection). SST03.04.b</li> <li>b. Implement controls to prevent loss of integrity of data and other information resources. SST03.04.b</li> <li>c. Identify and select controls for personnel, facilities, data, communications systems and applications appropriate to specific risks. RWC04.10.c, SST03.04.b</li> <li>d. Design and implement a security plan for an information system, including communications systems. PWR1.1.b, RWC04.10.c, SST03.04.b</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b>  RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p>SST03.04.b-Social Studies, Economics, Design, analyze, and apply a financial plan based on short- and long-term financial goals (PFL) - Analyze financial information for accuracy, relevance, and steps for identity protection</p>
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	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR1.1.b-Postsecondary &amp; Workforce Readiness, Content Knowledge , Literacy - Write clearly and coherently for a variety of purposes and audiences</p>
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**High School Expectations**

<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MAIT.01.15 Ethical and Legal Issues: Describe, analyze, develop, and follow policies for managing ethical and legal issues in</li> </ul>	
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organizations and in a technology-based society.

**Evidence Outcomes - Students can:**

- a. Implement organization policies and procedures dealing with legal and ethical issues. PWR2.5.c, RWC04.10.c
- b. Analyze legal and ethical dilemmas within the framework of current laws and legislation (e.g., virus development, hacking, threats, phishing). PWR2.5.c, RWC04.10.c
- c. Read, interpret, and adhere to software license agreements and legal mandates. PWR2.7.c, RWC04.10.c
- d. Write organization policy for the legal and ethical use of information (e.g., code of ethics). PWR2.5.c

**21<sup>st</sup> Century Skills and Readiness Competencies**

**Academic Content Knowledge Alignment:**  
RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem

**Learning & Behavioral Skills (Inquiry, Application in Society & Technology & Nature of...):**

PWR2.5.c-Postsecondary & Workforce Readiness, Learning and Behavior Skills, Civic Responsibility - Balance personal freedom with the interests of a community

PWR2.7.c-Postsecondary & Workforce Readiness, Learning and Behavior Skills, Personal Responsibility - Behave honestly and ethically

**High School Expectations**

**Concepts and skills students know include:**

- MAIT.01.16 Technical Support and Training: Develop the technical and interpersonal skills and knowledge to train and support the user community.

**Evidence Outcomes - Students can:**

- a. Develop technical writing, digital communication, and presentation skills to work effectively with globally and culturally diverse individuals. PWR1.1.b, PWR2.4.b
- b. Use a logical and structured approach to isolate and identify problem sources and resolve problems. RWC04.10.c
- c. Identify, evaluate, and use resources (e.g., hardware, software, and online) for problem identification and resolution. RWC04.03.c
- d. Train end users to recognize and solve typical information technology problems.
- e. Develop training materials for users. PWR1.1.b, RWC01.01.f
- f. Plan, design, deliver, and evaluate user training. PWR1.1.b, RWC01.01.f, RWC04.10.c

**21<sup>st</sup> Century Skills and Readiness Competencies**

**Academic Content Knowledge Alignment:**  
RWC01.01.f - Oral Expression and Listening - Effective speaking in formal and informal settings requires appropriate use of methods and audience awareness - Select appropriate technical or specialized language

RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources

RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem

	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR1.1.b-Postsecondary &amp; Workforce Readiness, Content Knowledge , Literacy - Write clearly and coherently for a variety of purposes and audiences</p> <p>PWR2.4.b-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Global and Cultural Awareness - Interact effectively with and respect the diversity of different individuals, groups, and cultures</p>
<b>High School Expectations</b>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>MAIT.01.17 Information Technology and Business Functions: Describe the information technology components of business functions and explain their interrelationships.</li> </ul>	
<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Identify and explain the major components of marketing and sales information technologies and their interrelationships. RWC04.10.c</li> <li>b. Identify and explain the major components of Accounting and finance information technologies and their interrelationships. RWC04.10.c</li> <li>c. Identify and explain the major components of manufacturing and logistics information technologies and their interrelationships. RWC04.10.c</li> <li>d. Identify and explain the major components of research and development information technologies and their interrelationships. RWC04.10.c</li> <li>e. Identify and explain the major components of human resource management information technologies and their interrelationships. RWC04.10.c</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b>  RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b></p>
<b>High School Expectations</b>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>MAIT.01.18 Explore positions and career paths in information technology</li> </ul>	

<b>Evidence Outcomes - Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Identify common tasks performed by information technology workers.</li> <li>b. Describe education, experience skills, and personal requirements for careers in information technology. PWR2.7.f</li> <li>c. Describe the impact of technological change on information technology positions and the resulting need for lifelong learning and retraining. PWR2.7.e</li> <li>d. Experience an information technology career (e.g., internship, volunteer, entry level job). PWR2.7.e</li> <li>e. Identify the benefits of industry certifications and higher education pathways for various information technology fields. PWR2.7.e, PWR2.7.f, RWC04.10.c</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b>  RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p>
	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.7.e-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Personal Responsibility - Understand the relevance of learning to postsecondary and workforce readiness</p> <p>PWR2.7.f-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Personal Responsibility - Demonstrate awareness of and evaluate career options</p>