

Business Information Technology Pathway

Career Cluster: Management and Administration

Cluster Big Idea:

- Organization

Cluster Enduring Understandings:

- Organization provides the framework for management.
- Management requires effective relationships and succinct communications.
- Managing a business requires an understanding of all business functions.

Cluster Essential Questions:

- How is business organized effectively?
- How is each employee responsible for an effective organization?
- What makes an effective manager?

Pathway Big Idea:

- Organization

Pathway Enduring Understandings:

- Information technology promotes business success.
- Information technology is constantly changing.
- Employees must be both technically and business oriented in order to achieve success.

Pathway Essential Questions:

- How do changes in information technology impact a business?
- How do businesses accommodate changes in information technology?

Standard Statement: Students will apply management theories and functions to achieve organizational goals.

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Pathway Knowledge and Skills (what students should know and be able to do):

| Knowledge | Skills |
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| The complete process of creating a Web site from start to finish, including coding and hosting | Apply various web coding and scripting languages |
| The design and function of computer hardware | How to set up and maintain a networking system |
| Theories of computer programming | Technical writing |
| Internet programming platform issues | Apply scripting codes |
| Various scripting languages | Create effective Web sites |
| Elements of effective Web design | Analyze and refine applications based on business needs |
| Developmental and maintenance steps for business Web sites | Understand the structure of a network system |
| Computer system component operations and structures | Diagnose computer and network glitches |
| Programming theory | Conduct technical research |
| Networking concepts | Design and write technical documents |
| Application development | |
| System setup and maintenance procedures | |
| Terminology | |

Pathway Careers: **Technical Support:** Analyst, Call Center Support Representative, Content Manager; **Customer:** Liaison, Service Representative, Service Professional; **Help Desk:** Specialist, Technician, PC Support Specialist, PC Systems Coordinator, Sales Support Technician; **Technical:** Account Manager, Support Representative, E-Business Specialist, Business Analyst, Project Leader

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Instructional Area: Business Law

| Performance Element BIT.01: Examine the diversity of laws and regulations surrounding business in the United States. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Describe legal issues affecting businesses.</p> <p>Describe the nature of legally binding contracts.</p> <p>Discuss the nature of debtor-creditor relationships.</p> <p>Explain types of business ownership.</p> | <p>Explain the nature of contract exclusivity.</p> <p>Describe methods used to protect intellectual property.</p> | <p>Review the commerce laws and regulations that facilitate business operations.</p> <p>Review tax laws and regulations in order to adhere to governmental requirements.</p> <p>Identify the basic torts relating to business enterprises.</p> <p>Explain the nature of agency relationships.</p> <p>Discuss the nature of environmental law.</p> <p>Discuss the role of administrative law.</p> |
| Performance Element BIT.02: Explore the importance of ethical and legal behavior in administration services. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Explain the need for professional and ethical standards in administration services.</p> <p>Evaluate the responsibility of individuals to apply ethical standards.</p> | <p>Contrast consequences of unprofessional or unethical behavior.</p> <p>Discuss the legal ramifications of breaching rules and regulations.</p> <p>Discuss the nature of contract suspensions.</p> <p>Explain the nature of contract terminations.</p> |

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Instructional Area: Customer Relations

| Performance Element BIT.03: Foster positive relationships with customers to enhance company image. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Explain the nature of positive customer relationships.</p> <p>Demonstrate a customer-service mind-set.</p> <p>Reinforce service orientation through communication.</p> <p>Respond to customer inquiries.</p> <p>Explain business policies to customers.</p> | <p>Explain the role of employees in customer relations.</p> <p>Interpret business policies to customers/clients.</p> <p>Handle customer complaints.</p> | <p>Determine ways to reinforce company image through employee promise.</p> <p>Analyze management’s role in customer relations.</p> |

Instructional Area: Economics

| Performance Element BIT.04: Understand fundamental economic concepts to obtain a foundation for employment in business. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Distinguish between economic goods and economic services.</p> <p>Explain the concept of economic resources.</p> <p>Describe the concepts of economics and economic activities.</p> <p>Determine economic utilities created by business activities.</p> <p>Explain the principles of supply and demand.</p> <p>Describe the functions of prices in markets.</p> | <p>Explain the types of economic systems.</p> <p>Discuss the concept of private enterprise.</p> <p>Identify factors affecting business profit.</p> <p>Determine factors affecting business risk.</p> | <p>Illustrate the concept of competition.</p> <p>Evaluate how markets function.</p> |

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| Performance Element BIT.05: Understand the nature of business and how business contributes to society. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Explain the role of business in society.</p> <p>Describe types of business activities.</p> <p>Discuss the global environment in which businesses operate.</p> <p>Explain the nature of business ethics.</p> | <p>Explain how accounting impacts business.</p> <p>Explain the concept of fiscal policies.</p> <p>Interpret the relationship between government and business.</p> <p>Describe the nature of taxes.</p> <p>Forecast the impact of business activity cycles.</p> | <p>Describe the effects of fiscal and monetary policies.</p> <p>Explain the impact of the law of diminishing returns.</p> <p>Evaluate the nature of cost-benefit analysis.</p> <p>Analyze relationships between total revenue, marginal revenue, output, and profit.</p> <p>Measure the impact of cultural and social environments on global trade.</p> |

Instructional Area: Financial Analysis

| Performance Element BIT.06: Understand the fundamental principles of money needed to make financial exchanges. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Explain the role of finance in business.</p> <p>Explain forms of financial exchange (e.g., cash, credit, debit, and electronic funds transfer).</p> <p>Identify types of currency (e.g., paper money, coins, banknotes, government bonds, and treasury notes).</p> <p>Describe sources of income (e.g., wages and salaries, interest, rent, dividends, and transfer payments).</p> <p>Explain the time value of money.</p> | <p>Explain the nature of business reporting requirements.</p> <p>Understand basic accounting procedures.</p> <p>Explain types of business ownership.</p> <p>Describe functions of money (e.g., medium of exchange, unit of measure, and store of value).</p> | <p>Explain the purpose and importance of credit.</p> <p>Explain legal responsibilities associated with financial exchanges.</p> |

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| Performance Element BIT.07: Acquire foundational knowledge regarding the nature and scope of financing and credit. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Explain the nature of financial needs (e.g., college, retirement, wills, and insurance).</p> <p>Set financial goals.</p> <p>Develop a personal budget.</p> <p>Describe types of financial services providers.</p> <p>Describe the concept of insurance.</p> <p>Explain the concept of accounting.</p> <p>Explain the need for accounting standards, such as Generally Accepted Accounting Principles (GAAP).</p> <p>Describe the nature of budgets.</p> | <p>Implement accounting procedures to track money flow.</p> <p>Discuss the credit process.</p> <p>Explain legal responsibilities associated with financial exchanges.</p> <p>Describe the nature of budgets.</p> <p>Explain the purpose and importance of obtaining business credit.</p> <p>Determine financing needed for business operations.</p> | <p>Identify speculative business risks.</p> |
| Performance Element BIT.08: Manage personal finances to achieve financial goals. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Explain the nature of tax liabilities.</p> <p>Interpret a pay stub.</p> <p>Read and reconcile bank statements.</p> <p>Maintain financial records.</p> <p>Demonstrate the wise use of credit.</p> | <p>Validate credit history.</p> <p>Protect against identity theft.</p> <p>Prepare personal income tax forms.</p> | |

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| Performance Element BIT.09: Understand the use of financial services providers in the achievement of financial goals. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Describe types of financial services providers. | Explain types of investments. Describe the nature of budgets. Discuss considerations in selecting a financial services provider. | Explain the nature of capital investment. Establish investment goals and objectives. |
| Performance Element BIT.10: Implement accounting procedures to track money flow and determine financial status. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Explain the concept of accounting. Explain the need for accounting standards, such as Generally Accepted Accounting Principles (GAAP). Implement basic accounting procedures. | Describe the nature of cash flow statements. Prepare cash flow statements. Evaluate the nature of balance sheets. Analyze the nature of income statements. | |
| Performance Element BIT.11: Identify potential business threats and opportunities to protect the financial well-being of a business. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Describe the concept of insurance. | Investigate insurance coverage. Evaluate insurance losses. | Explain the nature of risk management. Discuss reasons to integrate risk management into business operations Discuss the nature of enterprise risk management (ERM) Integrate risk management into business operations |

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| Performance Element BIT.12: Manage financial resources to ensure solvency. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Describe the nature of budgets. | Explain the nature of operating budgets. Develop a company or department budget. | Forecast sales. Calculate financial ratios. Interpret financial statements. |
| Performance Element BIT.13: Utilize cost accounting methods to guide business decisions pertaining to quality. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Discuss the implications of quality costs. | Calculate quality costs (e.g. prevention, appraisal, failure). |
| Performance Element BIT.14: Implement suitable internal accounting controls to ensure the proper recording of financial transactions. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Explain the purpose of internal accounting controls. Determine the components of internal accounting control procedures for a business. | Maintain internal accounting controls. |

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Instructional Area: Human Resource Management

| Performance Element BIT.15: Illustrate how staff growth and development can increase productivity and employee satisfaction. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Discuss the nature of human resource management.</p> | <p>Orient new employees.</p> <p>Explain the role of training and human resource development.</p> <p>Explain the nature of management or supervisory training.</p> <p>Coach employees.</p> <p>Maintain an ongoing discussion of issues related to compensation.</p> <p>Supervise staff.</p> <p>Ensure equitable opportunities for employees.</p> <p>Help employees to prioritize their work responsibilities.</p> <p>Delegate work to others.</p> <p>Coordinate the efforts of cross-functional teams to achieve project or company goals.</p> <p>Manage collaborative efforts.</p> <p>Harmonize tasks, projects, and employees in the context of business priorities.</p> <p>Handle employee complaints and grievances.</p> <p>List ways to motivate members of a team.</p> <p>Promote innovation.</p> <p>Conduct planning meetings.</p> <p>Explain staff training methods.</p> | <p>Determine hiring needs.</p> <p>Screen job applications and résumés.</p> <p>Interview job applicants.</p> <p>Discuss employee compensation.</p> <p>Select and hire new employees.</p> <p>Conduct exit interviews.</p> <p>Dismiss or fire employees.</p> <p>Maintain human resource records.</p> <p>Explain issues associated with the payroll process.</p> <p>Explain the nature of remedial action.</p> |

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| | Assess employee performance. Implement organizational skills (e.g., create staff schedules). | |
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Instructional Area: Marketing

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| Performance Element BIT.16: Understand the role and function of marketing in business and how marketing facilitates economic exchanges with customers. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Explain marketing and its importance in a global economy. Describe marketing functions and related activities. Explain the role of promotion as a marketing function. Explain types of promotion. Explain the nature and scope of selling. | | |
| Performance Element BIT.17: Acquire foundational knowledge of customer and business behavior to understand what motivates decision making. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Explain customer and business buying behavior. Describe the need for marketing information. | Identify a company's unique selling proposition. Identify internal and external service standards. Discuss methods employees can use to motivate decision making. Identify information monitored for marketing decision making. Describe data collection methods (e.g., | |

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| | <p>observations, mail, telephone, Internet, discussion groups, interviews, and scanners).</p> <p>Explain the concept of marketing strategies.</p> <p>Identify product opportunities.</p> | |
| <p>Performance Element BIT.18: Understand data collection methods and evaluate their appropriateness for the research issue in question.</p> | | |
| <p>Performance Indicators:</p> | | |
| <p>Core Level</p> | <p>Mid Level</p> | <p>Exit Level</p> |
| | <p>Identify information monitored for marketing decision making.</p> <p>Describe data collection methods (e.g., observations, mail, telephone, Internet, discussion groups, interviews, and scanners).</p> <p>Explain the concept of marketing strategies.</p> <p>Explain the concept of market and market identification.</p> <p>Explain the nature of marketing plans.</p> <p>Explain factors that affect pricing decisions.</p> <p>Identify product opportunities.</p> <p>Identify methods and techniques used to generate a product idea.</p> <p>Generate product ideas.</p> | |

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Instructional Area: Operations

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| Performance Element BIT.19: Understand operation's role and function in business to value its contribution to a company. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Explain the nature of operations. | | |
| Performance Element BIT.20: Understand the health and safety regulations that help support a safe work environment. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Describe health and safety regulations in business. Explain procedures for reporting noncompliance with health and safety regulations. Follow instructions for the safe use of equipment, tools, and machinery. Follow safety precautions. | Maintain a safe work environment. Explain procedures for handling accidents. Handle and report emergency situations. | Identify potential safety issues. Establish safety policies and procedures. Explain routine security precautions. Follow established security policies and procedures. Protect company information and intangibles. |
| Performance Element BIT.21: Implement purchasing activities to obtain business supplies, equipment, and services. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Explain the nature and scope of purchasing. | Manage the bid process in purchasing. Select vendors. Place orders and reorders. Maintain an inventory of supplies. | Maintain vendor/supplier relationships. Conduct vendor/supplier search. |

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| Performance Element BIT.22: Understand the role and function of production in business and recognize the need for production in a company. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Explain the concept of production.</p> <p>Describe production activities.</p> | <p>Utilize quality-control methods at work.</p> <p>Describe the crucial elements of a quality culture.</p> <p>Describe the role of management in the achievement of quality.</p> <p>Establish efficient operating systems.</p> <p>Explain the role of employees in expense control.</p> <p>Control the use of supplies.</p> <p>Identify quality-control measures.</p> <p>Explain the nature of overhead and operating costs.</p> | <p>Negotiate service and maintenance contracts.</p> <p>Negotiate a lease or purchase of a facility.</p> <p>Develop expense control plans.</p> <p>Use budgets to control operations.</p> |
| Performance Element BIT.23: Develop policies and procedures to protect workplace security. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Identify potential security issues.</p> | <p>Establish policies to protect company information and intangibles.</p> <p>Establish policies to maintain a non-hostile work environment.</p> <p>Establish policies and procedures to maintain the physical security of the work environment.</p> |

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| Performance Element BIT.24: Develop knowledge of business projects and project management to facilitate business operations. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Explain the nature of a project life cycle.</p> <p>Discuss the use of project-based plans within an organization.</p> | <p>Describe the nature of project management.</p> <p>Explain common project inputs and outputs.</p> <p>Evaluate standard project management processes.</p> |
| Performance Element BIT.25: Maintain property and equipment to facilitate ongoing business activities. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | <p>Identify routine activities for maintaining business facilities and equipment.</p> <p>Plan a maintenance program.</p> |
| Performance Element BIT.26: Apply risk-management policies and procedures for technology to minimize loss. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Adhere to technology safety and security policies (e.g., acceptable use policy, web page policies).</p> <p>Apply ergonomic techniques to technology tasks.</p> <p>Adhere to laws pertaining to computer crime, fraud, and abuse.</p> | <p>Follow procedures used to restart and recover from situations (e.g., system failure, virus infection).</p> <p>Follow policies to prevent loss of data integrity.</p> <p>Adhere to organization’s policies for technology use.</p> |

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| Performance Element BIT.27: Utilize project management processes to develop and maintain a business project. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Initiate a project. Prepare a preliminary project scope statement for a project. Determine project goals. Determine project strategy. | Plan and monitor a project. Determine a project’s scope. Develop a project schedule. Establish integrated change control measures. Determine the roles and responsibilities of team members. Manage project team. Track team performance. Close a project. Preserve project records. |
| Performance Element BIT.28: Utilize project management processes to control the costs of a business project. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Manage project costs. Revise project budget as necessary. | |

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| Performance Element BIT.29: Utilize project management processes to minimize business project errors and expedite workflow. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Manage project quality. Determine the quality control standards relevant to the project. Resolve negative quality control results. |
| Performance Element BIT.30: Develop an understanding of business analysis to improve business functions and activities. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Discuss the nature of business analysis. Explain the purpose of business analysis. Compare the connection between business analysis and business process management. | Describe steps in business process improvement (BPI). Analyze types of requirements (e.g. business, system, functional, nonfunctional). |
| Performance Element BIT.31: Gather requirements to improve business functions. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Plan the requirements development process. Determine requirements stakeholders. Set the scope of requirements. Develop strategies for gathering requirements. | Elicit requirements from stakeholders in a project. Facilitate focus groups. Participate in job shadowing. |

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| Performance Element BIT.32: Use business analysis techniques to determine requirements for business improvement/enhancement. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Analyze requirements. Determine the attributes of requirements. Document requirements. Create requirements specifications. |
| Performance Element BIT.33: Communicate requirements effectively to ensure that stakeholders understand the requirements and how they will be implemented. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Create a requirements package. Conduct a requirements presentation. |
| Performance Element BIT.34: Assist in the implementation of requirements to improve business functions and activities. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Evaluate the appropriateness of a proposed solution/requirement. Support the implementation of a solution/requirement. Assess the impact of the solution/requirement. |

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| Performance Element BIT.35: Implement knowledge of management strategies to improve the performance and competitive advantage of the organization. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | <p>Explain the nature of knowledge management.</p> <p>Explain the role of organizational culture in knowledge management implementation.</p> <p>Determine factors causing loss of organizational knowledge.</p> <p>Implement strategies to manage knowledge.</p> |
| Performance Element BIT.36: Implement quality-control processes to minimize errors and to expedite workflow. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Explain the nature of quality management.</p> <p>Discuss the need for continuous improvement of the quality process.</p> <p>Identify quality-control measures.</p> <p>Utilize quality control methods at work.</p> <p>Describe crucial elements of a quality culture.</p> | <p>Describe the role of management in the achievement of quality.</p> <p>Develop continuous-improvement strategies.</p> <p>Develop a plan/program for quality achievement.</p> <p>Determine reliability factors impacting the quality of a product/service.</p> <p>Test product/services for quality.</p> <p>Establish efficient operating systems.</p> |

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Instructional Area: Strategic Management

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| Performance Element BIT.37: Recognize the role and function of management and understand the contribution of management to business success. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Explain the concept of management. Explain the nature of business plans. | Develop business goals and objectives. Define business mission. Identify the nature of managerial ethics. | Conduct an organizational strengths, weaknesses, opportunities, and threats (SWOT) analysis. Explain external planning considerations. Develop an action plan. Develop a business plan. |
| Performance Element BIT.38: Investigate the strategic relationship between information management and business to aid in business planning. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Explain the strategic role of information systems/information communication technology within an organization. Determine risks and rewards of developing a strategic role for information systems/information communication technology. | Integrate information systems planning with business planning. |

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Instructional Area: Business Application Programming

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| Performance Element BIT.39: Demonstrate knowledge of Internet programming basics. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Recognize the importance of Internet programming standards.</p> <p>Demonstrate knowledge of standard Internet programming coding.</p> <p>Demonstrate knowledge of special Internet programming feature codes.</p> <p>Differentiate between various versions of Internet programming.</p> | <p>Demonstrate knowledge of how to produce an Internet application using standard programs.</p> <p>Identify authoring programs specifically designed for Internet programming production.</p> <p>Compare and contrast features, strengths, and weaknesses of different authoring programs.</p> <p>Identify cross-platform issues.</p> <p>Investigate new and emerging trends related to Internet programming.</p> |
| Performance Element BIT.40: Apply knowledge of Web programming. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Demonstrate knowledge of the purpose of Web content-delivery enablers (e.g., CGI, API, and SSI).</p> <p>Demonstrate knowledge of how to interface a client or server.</p> <p>Demonstrate knowledge of client-side processing and its advantages and disadvantages.</p> <p>Identify security issues related to client-side processing.</p> <p>Identify standard scripting languages (e.g., JavaScript, Visual Basic Script, and ActiveX).</p> | <p>Demonstrate knowledge of the uses and advantages and disadvantages of various scripting languages.</p> <p>Demonstrate knowledge of how to use a scripting language to program a Web site.</p> <p>Demonstrate knowledge of how to use advanced communication protocols.</p> <p>Comply with transfer control protocol (TCP) and Internet protocol (IP).</p> |

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| Performance Element BIT.41: Apply knowledge of Web hosting. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Compare the advantages and disadvantages of running your own server versus using a server provider.</p> <p>Identify hardware requirements for a server.</p> <p>Identify software options for a server.</p> | <p>Evaluate server providers.</p> <p>Establish a domain name.</p> <p>Upload files to a server.</p> <p>Publicize the Web site (i.e., submit announcements to major search engines).</p> <p>Collect and analyze Web-site usage statistics.</p> |
| Performance Element BIT.42: Demonstrate knowledge of programming language concepts. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Demonstrate knowledge of the concept of physical representation of digitized information (e.g., data, text, image, and voice).</p> <p>Demonstrate knowledge of the hardware-software connection.</p> <p>Demonstrate knowledge of the concepts of data and procedural representation.</p> <p>Demonstrate knowledge of the function and operation of compilers and interpreters.</p> | <p>Demonstrate knowledge of the basic principles used to analyze a programming language.</p> <p>Demonstrate knowledge of the basics of structured, object-oriented, and event-driven programming.</p> <p>Demonstrate knowledge of how a programming language can support multitasking and exception handling.</p> <p>Demonstrate knowledge of current key business programming languages (e.g., C, C++, Visual Basic, Java, RPG, COBOL, and Assembler) and the environments in which they are used.</p> |

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| Performance Element BIT.43: Demonstrate knowledge of the stages of program development. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Identify the uses of program design tools. Demonstrate knowledge of structured and modular programming. | Demonstrate knowledge of the information system (IS) life cycle. |
| Performance Element BIT.44: Demonstrate knowledge of technical documentation associated with software development. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Use appropriate reference materials to secure needed information. Analyze specifications. Identify constraints. Identify input and output (I/O) requirements. | Prepare logic using a program flowchart. |

Instructional Area: Hardware and Software Configurations

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| Performance Element BIT.45: Demonstrate knowledge of central processing unit (CPU) components. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Demonstrate knowledge of chip configuration and structure. Demonstrate knowledge of the functions of internal components (e.g., motherboards, coprocessor boards, and memory devices). | Demonstrate knowledge of the characteristics and operation of controller and network interface cards. Demonstrate knowledge of circuits, logic elements, and switching theory, including minimization concepts and implementation of functions. |

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| Performance Element BIT.46: Identify computer system components. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Identify primary PC components and the functions of each.</p> <p>Demonstrate knowledge of how hardware components interact and conflicts arise.</p> <p>Use manufacturer references (e.g., procedural manuals, documentation, standards, and work flowcharts) to access information.</p> <p>Secure supplies and resources.</p> | <p>Respond to error messages and symptoms of hardware failures.</p> <p>Advanced Level (Optional):</p> <p>Install boards to support peripherals.</p> <p>Connect peripherals to the central processing unit (CPU).</p> <p>Employ appropriate safety precautions when working with PCs.</p> <p>Configure and verify the operation system.</p> <p>Document system installation activities.</p> <p>Back up system configuration.</p> <p>Test all applications.</p> |
| Performance Element BIT.47: Troubleshoot computer systems. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Identify priorities and interrupts at a systems level.</p> <p>Test a system using diagnostic tools and software.</p> <p>Identify problems in the operating system and related hardware.</p> <p>Differentiate between hardware and software failure.</p> <p>Optimize the hard drive.</p> <p>Gather information from the user regarding his or her computer problems.</p> | <p>Demonstrate the use of volatile and nonvolatile memory.</p> <p>Advanced Level (Optional):</p> <p>Repair and replace malfunctioning hardware.</p> <p>Update flash memory (i.e., BIOS).</p> <p>Repair and replace volatile and nonvolatile memory.</p> <p>Reinstall software as needed.</p> <p>Recover data and files.</p> |

Business Information Technology Pathway

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| | | Restore the system to normal operating standards. |
| Performance Element BIT.48: Interpret basic networking terminology. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Differentiate between Local Area Networks (LANs), Metropolitan Area Networks (MANs), and Wide Area Networks (WANs).</p> <p>Demonstrate knowledge of how to turn LANs into MANs and WANs.</p> | <p>Identify the basic point-to-point network topologies (e.g., star, ring, tree, network, and irregular).</p> <p>Demonstrate knowledge of packet-switching techniques.</p> <p>Identify the basic broadcast topologies (e.g., star, ring, and bus).</p> |
| Performance Element BIT.49: Demonstrate knowledge of the basics of network architecture. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Demonstrate knowledge of the characteristics and uses of network components (e.g., hub, switches, routers, and firewall).</p> <p>Differentiate between a physical and a logical topology.</p> <p>Demonstrate a basic knowledge of Open Systems Interconnection (OSI) modeling.</p> | <p>Demonstrate knowledge of LAN transmission methods, standards, and protocols.</p> <p>Demonstrate knowledge of various frame types and formats.</p> |

Business Information Technology Pathway

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| Performance Element BIT.50: Demonstrate knowledge of the general characteristics of network operating systems. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Identify the purposes of a network operating system (NOS).</p> <p>Differentiate between NOSs and data distribution systems.</p> <p>Identify how the four components of an NOS (i.e., server platform, network services software, network redirection software, and communications software) support network operations.</p> | <p>Define the criteria used to evaluate a network operating system (NOS).</p> <p>Identify how protocols are supported.</p> <p>Identify licensing requirements.</p> <p>Demonstrate knowledge of the characteristics of the client and server models.</p> <p>Analyze the advantages and disadvantages of the client and server models.</p> <p>Demonstrate knowledge of a typical program function call.</p> <p>Identify the properties of open systems.</p> <p>Demonstrate knowledge of LAN connectivity issues.</p> |
| Performance Element BIT.51: Demonstrate knowledge of network applications. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Demonstrate knowledge of how disk storage is shared across a network.</p> <p>Demonstrate knowledge of how processing power is shared across a network.</p> | <p>Demonstrate knowledge of application-specific servers (e.g., database, print, communications, terminal, fax, and security).</p> <p>Identify the advantages of sharing the backup and management of PCs across a network.</p> <p>Identify software licensing requirements and categories.</p> |

Business Information Technology Pathway

Instructional Area: Network Administration

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| Performance Element BIT.52: Manage backup and recovery, both on- and off-site. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Implement backup procedures in accordance with a regular schedule. Implement recovery procedures as needed. |
| Performance Element BIT.53: Troubleshoot problems. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Demonstrate knowledge of basic troubleshooting steps. Minimize the impact of problems on productivity (i.e., minimize downtime). |
| Performance Element BIT.54: Evaluate problem-solving processes and outcomes. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Evaluate outcomes to determine whether the problem was solved as intended. Evaluate whether the process was applied in an efficient and responsible manner. Assess the validity and usefulness of the outcomes. Determine any necessary follow-up actions. |

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| Performance Element BIT.55: Perform general system administrative tasks. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Facilitate the delivery of technical services. Set up and maintain user accounts on multiple systems. Participate in the evaluation, analysis, and recommendation of technical computing products. Document performance problems. Prepare required reports. Maintain technical industry knowledge. |

Instructional Area: Technical Writing

| Performance Element BIT.56: Evaluate technical writing requirements. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Define/prioritize communication needs. Specify project objectives. Determine the size and specifics of the work to be completed. Estimate time, materials, and capabilities needed to complete assignment. Evaluate strengths and weaknesses of completed project. | |

Business Information Technology Pathway

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| Performance Element BIT.57: Conduct technical research. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <ul style="list-style-type: none"> Identify target audience. Define research questions. Determine priorities for the information that should be gathered. Identify potential sources of information. Target audience/user group as a key information source. Identify subject-matter experts. | <ul style="list-style-type: none"> Evaluate potential sources of information based on established criteria (e.g., affordability, relevance). Conduct interviews with selected human information sources. Gather information from selected print and electronic sources. Determine the accuracy and completeness of the information gathered. |
| Performance Element BIT.58: Design technical documentation. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <ul style="list-style-type: none"> Define purpose of documentation. Specify standards for documentation, including critical success criteria. Identify delivery options. Evaluate cost-effectiveness of each delivery option. Select tools appropriate for task purpose. Plan information flow. | <ul style="list-style-type: none"> Select writing style and tone appropriate for given documentation. Determine level of detail needed. Identify visuals appropriate for given documentation. Provide feedback on design to development team/individual. |

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| Performance Element BIT.59: Write technical reports. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | <p>Determine audience.</p> <p>Access needed information using standard references and sources.</p> <p>Identify type of report needed.</p> <p>Compile relevant data.</p> <p>Organize data into charts and graphs.</p> <p>Analyze data.</p> <p>Draw conclusions from data analysis.</p> <p>Outline report.</p> <p>Draft report.</p> <p>Edit report (e.g., check spelling, grammar, punctuation, sentence structure, accuracy of content).</p> <p>Review report with peers.</p> <p>Revise report as needed based on peer feedback</p> <p>Proofread revised report.</p> <p>Present reports.</p> |

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Instructional Area: Application Development

| Performance Element BIT.60: Conduct needs analysis. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Define business problem to be solved by the application (e.g., through interview process). Identify scope of project. Access needed information using company procedural manuals, references, documentation, and standards. Define business information requirements. Align information system (IS) design with the business process. Determine hardware and software needs. Interpret source data, charts, and graphs. | Review organizational structure. Interpret existing operating documents and procedures for the system. Observe existing procedures. Document existing procedures. Document possible alternative solutions. Identify processing requirements. Define variables. Analyze specifications. Present findings and recommendations to users and management (e.g., work plan, project estimate). |

Instructional Area: Information System Analysis and Design

| Performance Element BIT.61: Initiate a system project. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | Identify the phases in a system project. Select basic fact-gathering techniques to be used. Define the scope of the systems project. Conduct a preliminary investigation. |

Business Information Technology Pathway

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| Performance Element BIT 62: Evaluate applications within the information system. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | | <p>Design a framework for evaluating information system functions.</p> <p>Design a framework for evaluating individual applications.</p> <p>Recommend new features or enhancements to existing tools.</p> |

Instructional Area: Business Professionals of America (BPA)

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| Performance Element BIT.63: Participate in professional activities to develop career skills and an awareness of employer expectations. |
| Performance Element BIT.64: Participate in civic activities and provide service to the chapter, school, community, or country. |
| Performance Element BIT.65: Participate in fiscal planning to help the organization finance its activities. |
| Performance Element BIT.66: Participate in entrepreneurial activities to gain knowledge of free enterprise. |

Business Information Technology Pathway

Performance Elements 67-84 should be integrated into all Instructional Areas.

Career Development

| Performance Element BIT.67: Develop personality traits that foster career advancement. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Identify desirable personality traits that are important for business professionals.</p> <p>Exhibit self-confidence.</p> <p>Demonstrate interest and enthusiasm.</p> <p>Demonstrate initiative.</p> <p>Demonstrate responsible behavior.</p> <p>Demonstrate honesty and integrity.</p> <p>Demonstrate ethical work habits.</p> <p>Maintain a positive attitude.</p> <p>Demonstrate self-control.</p> <p>Explain how feedback aids personal growth.</p> <p>Adjust to change.</p> <p>Respect the privacy of others.</p> <p>Show empathy for others.</p> <p>Exhibit cultural sensitivity.</p> | <p>Use appropriate assertiveness.</p> <p>Persuade others.</p> <p>Enlist others to work toward a shared vision.</p> <p>Explain the need for innovation skills.</p> <p>Make decisions.</p> <p>Demonstrate problem-solving skills.</p> <p>Demonstrate appropriate creativity.</p> <p>Use time-management skills.</p> | <p>Determine personal vision.</p> |

Business Information Technology Pathway

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| Performance Element BIT.68: Acquire self-development skills to enhance relationships and improve efficiency in the work environment. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Maintain appropriate personal appearance.</p> <p>Set personal goals.</p> <p>Explain the need for innovation skills.</p> <p>Make decisions.</p> <p>Demonstrate problem-solving skills.</p> <p>Demonstrate appropriate creativity.</p> <p>Use time-management skills.</p> | <p>Recognize personal biases and stereotypes.</p> <p>Assess personal strengths and weaknesses.</p> <p>Use conflict-resolution skills.</p> <p>Motivate team members.</p> <p>Explain the concept of leadership.</p> | <p>Explain the nature of effective communication.</p> <p>Explain ethical considerations when releasing information.</p> <p>Encourage team building.</p> <p>Review the skills needed to find jobs and obtain employment.</p> <p>Participate in career planning to enhance the potential for job success.</p> |
| Performance Element BIT.69: Acquire knowledge of business information technology and implement job seeking skills to make informed career choices. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Utilize job-search strategies.</p> <p>Complete a job application.</p> <p>Interview for a job.</p> <p>Write a follow-up letter after a job interview.</p> <p>Write a letter of application.</p> <p>Prepare a résumé.</p> <p>Use networking techniques to identify employment opportunities.</p> <p>Describe ways to obtain work experience (e.g., volunteer activities or internships).</p> <p>Explain the need for an employee to engage in</p> | <p>Assess personal interests and skills needed for success in business.</p> <p>Demonstrate adaptability.</p> <p>Explain the nature of administrative services.</p> <p>Analyze employer expectations in the business environment.</p> <p>Identify sources of career information.</p> <p>Explain employment opportunities in business.</p> <p>Explain career opportunities in business information technology.</p> <p>Explain professional responsibilities in business information technology.</p> | <p>Compile career opportunities in administrative services.</p> <p>Employ career-advancement strategies in business information technology.</p> <p>Participate in professional organizations in business information technology.</p> <p>Describe certifications in business information technology.</p> |

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| <p>ongoing education.</p> <p>Explain possible advancement patterns for jobs.</p> <p>Identify the skills needed to enhance career progression.</p> <p>Utilize resources that can contribute to professional development (e.g., trade journals or periodicals, professional or trade associations, classes or seminars, trade shows, and mentors).</p> | <p>Discuss the role and responsibilities of project managers.</p> <p>Describe the role and responsibilities of business analysts.</p> | |
| Performance Element BIT.70: Understand and follow company rules and regulations to maintain employment. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Adhere to company policies.</p> <p>Follow rules of conduct.</p> <p>Follow chain of command.</p> | |
| Performance Element BIT.71: Achieve organizational goals to contribute to company growth. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Determine the nature of organizational goals.</p> <p>Define employee’s role in meeting organizational goals.</p> | <p>Establish performance standards to meet organizational goals.</p> <p>Monitor progress in achieving organizational goals.</p> |

Business Information Technology Pathway

Communication Skills

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| Performance Element BIT.72: Read to acquire meaning and apply the information to a task. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Identify sources that provide relevant, valid written material. Extract relevant information from written materials. Apply written directions to achieve tasks. | | Analyze company resources to ascertain policies and procedures. |
| Performance Element BIT.73: Apply active listening skills and demonstrate an understanding of what someone has said. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Explain communication techniques that support and encourage a speaker. Follow oral directions. Demonstrate active listening skills. | | |
| Performance Element BIT 74: Apply verbal skills to obtain and convey information. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| Explain the nature of effective verbal communication. Ask relevant questions. Interpret nonverbal cues. Provide legitimate responses to inquiries. Give verbal directions. Employ communication styles that are appropriate | | |

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| for the target audience. Defend ideas objectively. Handle telephone calls in a professional manner. Participate in group discussions. Create oral presentations. | | |
| Performance Element BIT.75: Record information to maintain and present a report of business activity. | | |
| Performance Indicators: Core Level Mid Level Exit Level | | |
| Utilize note-taking strategies. Organize information. Select and use appropriate graphic aids. | | |
| Performance Element BIT.76: Write internal and external business correspondence to convey and obtain information effectively. | | |
| Performance Indicators: Core Level Mid Level Exit Level | | |
| Explain the nature of effective written communication. Select and utilize appropriate formats for professional writing. Edit and revise written work to remain consistent with professional standards. Write professional e-mails. Write business letters. Write informational messages. Write inquiries. Write persuasive messages. Prepare simple written reports. | Design informational messages. Generate inquiries. Choose appropriate channels for workplace communication. | Update employees on business and economic trends. Write executive summaries. Write management reports. |

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| Performance Element BIT.77: Build interpersonal skills and use them with team members. | | |
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| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | <p>Explain the nature of positive customer relationships.</p> <p>Demonstrate a customer-service mind-set.</p> <p>Reinforce service orientation through communication.</p> <p>Demonstrate an understanding of group dynamics.</p> <p>Promote teamwork, leadership, and empowerment.</p> <p>Identify strategies for fostering creativity.</p> | <p>Demonstrate self-discipline, self-worth, a positive attitude, and integrity.</p> <p>Demonstrate flexibility and a willingness to learn new skills and acquire knowledge.</p> <p>Exhibit commitment to a company.</p> |

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Information Management

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| Performance Element BIT.78: Utilize information technology tools to manage and perform administrative services work responsibilities. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Identify ways in which technology impacts business.</p> <p>Explain the role of information systems.</p> <p>Discuss principles of computer systems.</p> <p>Identify basic operating systems.</p> <p>Use a basic operating system.</p> <p>Describe the scope of the Internet.</p> <p>Demonstrate basic e-mail functions.</p> <p>Describe personal information management applications and productivity applications.</p> <p>Demonstrate advanced Internet search skills.</p> <p>Demonstrate basic word processing skills.</p> <p>Demonstrate basic presentation applications.</p> <p>Demonstrate basic database applications.</p> <p>Demonstrate basic spreadsheet applications.</p> <p>Use an integrated business software application package.</p> | <p>Analyze the impact of technology on administrative services.</p> <p>Apply software to automate services.</p> | <p>Determine types of technology needed by a company or agency.</p> |
| Performance Element BIT.79: Use information literacy skills to increase workplace efficiency and effectiveness. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| <p>Explain legal issues associated with the use of information.</p> | <p>Describe the nature of business records.</p> | <p>Describe current business trends.</p> |

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| Assess information needs. Obtain needed information efficiently. Evaluate the quality and source of information. Apply information to accomplish a task. Store information for future use. | Maintain customer records. Manage information sources (e.g., where to look, what exists, and how to manage data). | Monitor internal records for business information. |
| Performance Element BIT.80: Design computer systems to enhance usability. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Explain issues involved in designing systems for different environments. | Employ usability engineering methods. Design and publish a multimedia website. |
| Performance Element BIT.81: Create and access databases to acquire information for business decision-making. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Explain the principles of data analysis. Explain the nature of tools that can be used to access information in the database system. Access information in the database system. Manipulate data in the database management system. | Analyze company's data requirements. Design a database to meet business requirements. Identify database trends. |
| Performance Element BIT.82: Apply data mining methods to acquire pertinent information for business decision-making. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Discuss the nature of data mining. Describe data mining tools and techniques. Discuss the importance of ethics in data mining. | Demonstrate basic data mining techniques. Interpret data mining findings. |

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| Performance Element BIT.83: Utilize computer's operating system to manage and perform work responsibilities. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Move files in the computer operating system. Create directories. | |
| Performance Element BIT.84: Utilize technology to support business strategies and operations. | | |
| Performance Indicators: | | |
| Core Level | Mid Level | Exit Level |
| | Explain methods used to develop the technological infrastructure. Identify the management information requirements of an organization. | Discuss the nature of enterprise architecture. Align technology with business needs. |