

**Florida Department of Education
CURRICULUM FRAMEWORK**

Program Title: Electronic Business Enterprise
 Program Type: Job Preparatory
 Occupational Area: Business Technology Education
 Components: Core and Three Occupational Completion Points

	Secondary	PSAV
Program Number:	8200300	B070100
CIP Number:	0506120109	
Grade Level:	9-12, 30, 31	30, 31
Standard Length:	4 credits	600 hours
Certification:	BUS ED @ 4 1 @ 2 BUS DP@ 7 ELECT DP @ 7	BUS ED @ 4 1 @ 2
CSO:	BPA FBLA/PBA	BPA Phi Beta Lambda
Coop Method:	Yes	Yes
Apprenticeship:	No	No
Facility Code:	212	212
Basic Skills:		
Math		9
Language		9
Reading		9

I. **PURPOSE:** This program is designed to prepare students for employment as Information Technology Assistant, Customer Services Representative, Entrepreneur, and Web Assistant, and to provide supplemental training for persons previously or currently employed in any of these occupations.

The program offers a broad foundation of knowledge and skills to prepare students for employment in e-commerce service positions and entrepreneurship. The content includes planning and development, retail and Internet marketing, ethics, laws and regulations, web design, entrepreneurship, and systems and design of e-commerce enterprises.

The program focuses on broad, transferable skills, and stresses understanding and demonstration of the following elements of the e-commerce industry: planning, management, finance, marketing, Internet marketing, web site design and maintenance, customer service, and entrepreneurship.

II. **PROGRAM STRUCTURE:** This program is a planned sequence of instruction consisting of the Business Technology Education Core (Introduction to Information Technology - OCP A) and three additional occupational completion points. Secondary or postsecondary students who have previously completed the Business Technology Education Core will not have to repeat the core. A student who completes the applicable competencies at any occupational completion point may either continue with the training program or exit as an occupational completer.

The following diagram illustrates the e-commerce program structure:

E-Commerce Cluster
Secondary and Postsecondary Adult Vocational

OCP D	E-Commerce Web Assistant	SOC Code 15-1099 600 Hours E-Commerce Systems and Design
OCP C	E-Commerce Entrepreneur	SOC Code 13-1199 450 Hours E-Commerce Entrepreneurship
OCP B	E-Commerce Customer Service Representative	SOC Code 43-4051 300 Hours Intro to E- Commerce
OCP A	Information Technology Assistant	SOC Code 43-4000 150 Hours Intro to IT

When offered at the secondary level, this program consists of the following courses, which include the Business Technology Education Core:

- | | | |
|---|---------|--|
| A | 8207310 | Introduction to Information Technology |
| B | 8200340 | Introduction to E-Commerce |
| C | 8200350 | E-Commerce Entrepreneurship |
| D | 8200360 | E-Commerce Systems and Design |

III. **LABORATORY ACTIVITIES:** Laboratory activities are an integral part of this program and include the use of keyboarding systems, computers, computer software, and peripheral equipment. Access to the Internet is required. Therefore, telephone lines, modems, communications software, and an account with an Internet services provider are required.

IV. **SPECIAL NOTES:** Future Business Leaders of America (secondary) and Phi Beta Lambda (postsecondary) or Business Professionals of America (BPA) are the appropriate career student organizations for providing leadership learning experiences and for reinforcing specific vocational skills. Career student organizations, when provided, shall be an integral part of the vocational instructional program, and the activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, FAC.

Cooperative training - On-the-Job Training (OJT) is appropriate for this program. Whenever cooperative training - OJT is offered, the following are required for each student: a training plan signed by the student, the teacher and the employer, which includes instructional objectives and a list of on-the-job and in-school learning experiences; and a workstation that reflects equipment, skills, and tasks that are relevant to the occupation which the student has chosen as a career goal. The student must receive compensation for work performed.

In accordance with Rule 6A-10.040, FAC., the minimum basic skills grade levels required for postsecondary adult vocational students are: Mathematics 9.0,

Language 9.0, Reading 9.0. These grade level numbers correspond to a grade level equivalent to the score obtained on a state designated basic skills examination.

This program may be offered in courses. Vocational credit shall be awarded to the student on a transcript in accordance with Section 230.643 F.S.

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Adult students with disabilities must self-identify and request such services. Students with disabilities may need assignments and assessments, time demands and schedules learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file

The standard length of this program is 600 hours.

To be transferable statewide between institutions, this program must have been reviewed and a "transfer value" assigned to the curriculum content by the appropriate Statewide Course Numbering System discipline committee. This does not preclude institutions from developing specific program or course articulation agreements with each other.

The particular outcomes and student performance standards, which students with disabilities must master to earn credit, must be specified in the student's individual educational plan (IEP). Additional credits may be earned when outcomes and standards are mastered in accordance with the requirements indicated in subsequent IEPs. The job title for which the student is being trained must be designated in the IEP.

SCANS Competencies: Instructional strategies for this program must include methods that require students to identify, organize, and use resources appropriately; to work with each other cooperatively and productively; to acquire and use information; to understand social, organizational, and technological systems; and to work with a variety of tools and equipment. Instructional strategies must also incorporate the methods to improve students' personal qualities and high-order thinking skills.

21st Century Skills: Instructional strategies for this program must include methods that require students to acquire 1. Digital-Age Literacy - basic scientific, mathematical, and technological literacies - visual and information literacies - cultural literacy and global awareness; 2. Inventive Thinking - adaptability/ability to manage complexity - curiosity, creativity, and risk taking - higher order thinking and sound reasoning; 3. Effective Communication - teaming, collaboration, and interpersonal skills - personal and social responsibility - interactive communication; 4. High Productivity - ability to prioritize, plan and manage for results - effective use of real-world tools - relevant, high-quality products.

Equipment List: A generic equipment list is available for this program.

- V. INTENDED OUTCOMES: After completion of the following outcomes, the student will be able to:

Introduction to IT Competencies:

- 01.0 Demonstrate knowledge, skill, and application of information systems to accomplish job objectives and enhance workplace performance. [Student Performance Standards: 01.01, 01.02, 01.03, 01.04, 01.06, 01.07.]
- 02.0 Demonstrate Comprehension and communication skills. [Student Performance Standards: 02.03, 02.62, 02.63, 02.64, 02.65, 02.66.]
- 03.0 Use technology to enhance the effectiveness of communication skills. [Student Performance Standards: 03.03, 03.06.]
- 04.0 Develop an awareness of management functions and organizational structures as they relate to today's workplace and employer/employee roles. [Student Performance Standards: 04.01, 04.02.]
- 05.0 Practice quality performance in the learning environment and the workplace. [Student Performance Standards: 05.01, 05.02.]
- 06.0 Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance. [Student Performance Standards: 06.03.]
- 07.0 Apply mathematical operations and processes as well as financial planning strategies to commonly occurring situations in the workplace to accomplish job objectives and enhance workplace performance. [Student Performance Standards: 07.01, 07.02, 07.03.]
- 08.0 Assess personal strengths and weaknesses as they relate to job objectives, career exploration, personal development, and life goals. [Student Performance Standards: 08.02, 08.03.]
- 09.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals. [Student Performance Standards: 09.15, 09.16, 09.17, 09.18, 09.19, 09.20.]
- 10.0 Demonstrate human relations/interpersonal skills appropriate for the workplace. [Student Performance Standards: 10.01, 10.03.]
- 20.0 Participate in work-based learning experiences. [Student Performance Standards: 20.44, 20.46.]
- 41.0 Perform e-mail activities. [Student Performance Standards: 41.01, 41.02, 41.03, 41.04, 41.05, 41.06, 41.07, 41.08, 41.09, 41.10, 41.11, 41.12, 41.13.]
- 42.0 Demonstrate knowledge of different operating systems. [Student Performance Standards: 42.01, 42.10, 42.12, 42.14.]
- 55.0 Demonstrate proficiency navigating the internet, intranet, and the WWW. [Student Performance Standards: 55.01, 55.10, 55.11, 55.14, 55.15, 55.16, 55.17, 55.18.]
- 56.0 Demonstrate proficiency using HTML commands. [Student Performance Standards: 56.01, 56.02, 56.03, 56.04, 56.05, 56.06, 56.08, 56.17, 56.18, 56.19.]
- 57.0 Demonstrate proficiency in page design applicable to the WWW. [Student Performance Standards: 57.01, 57.02, 57.04, 57.05, 57.25, 57.26, 57.27.]
- 63.0 Demonstrate proficiency using specialized web design software. [Student Performance Standards: 63.01, 63.02.]
- 64.0 Develop an awareness of the information technology industry. [Student Performance Standards: 64.01, 64.04, 64.05.]
- 65.0 Develop an awareness of microprocessors and digital computers. [Student Performance Standards: 65.01, 65.02, 65.03, 65.04, 65.05, 65.06, 65.07, 65.08.]
- 66.0 Develop an awareness of programming languages. [Student Performance Standards: 66.01, 66.02, 66.03, 66.04.]
- 67.0 Develop an awareness of emerging technologies. [Student Performance Standards: 67.01, 67.02, 67.03.]

- 69.0 Demonstrate an understanding of the seven layers of the Open Systems Interface (OSI) model. [Student Performance Standards: 69.01, 69.02, 69.04, 69.06, 69.07, 69.08, 69.09, 69.11.]
- 70.0 Demonstrate proficiency using common software applications. [Student Performance Standards: 70.01, 70.02.]
- 71.0 Demonstrate proficiency using specialized software applications. [Student Performance Standards: 71.01, 71.02, 71.06.]

OCCUPATIONAL COMPLETION POINT - DATA CODE B

E-COMMERCE CUSTOMER SERVICE REPRESENTATIVE - SOC Code 43-4051

Intended outcomes of OCP A must be completed previously or concurrently. After completing the following competencies, the student will have achieved the occupational completion point of E-Commerce Customer Service Representative and the student will be able to:

- 72.0 Demonstrate knowledge of the Internet to enhance workplace performance. (Student Performance Standards: 72.01, 72.02, 72.03, 72.04, 72.05, 72.06, 72.07, 72.08, 72.09, 72.10, 72.11, 72.12)
- 73.0 Demonstrate knowledge of e-commerce principles. (Student Performance Standards: 73.01, 73.02, 73.03, 73.04, 73.05, 73.06, 73.07, 73.08, 73.09, 73.10, 73.11)
- 74.0 Develop an awareness of career opportunities and options in e-commerce and the criteria for entering those fields. (Student Performance Standards: 74.01, 74.02, 74.03, 74.04, 74.05, 74.06, 74.07, 74.08)
- 41.0 Perform e-mail activities. (Student Performance Standards: 41.14, 41.15, 41.16, 41.17, 41.18, 41.19, 41.20, 41.21, 41.22)
- 76.0 Identify the challenges and issues associated with e-commerce business models. (Student Performance Standards: 76.01, 76.02, 76.03, 76.04, 76.05, 76.06, 76.07, 76.08, 76.09, 76.10, 76.11, 76.12, 76.13, 76.14, 76.15, 76.16, 76.17)
- 77.0 Develop an online marketing plan. (Student Performance Standards: 77.01, 77.02, 77.03, 77.04, 77.05, 77.06, 77.07, 77.08, 77.09, 77.10, 77.11, 77.12, 77.13)
- 78.0 Demonstrate an awareness of the issues involved in a global/international e-commerce environment. (Student Performance Standards: 78.01, 78.02, 78.03, 78.04, 78.05, 78.06, 78.07)
- 79.0 Research the plan and design of an e-commerce web page. (Student Performance Standards: 79.01, 79.02, 79.03, 79.04, 79.05, 79.06, 79.07, 79.08, 79.09, 79.10, 79.11, 79.12, 79.13, 79.14, 79.15, 79.16, 79.17, 79.18, 79.19, 79.20, 79.21, 79.22, 79.23, 79.24)
- 80.0 Create an e-commerce web site. (Student Performance Standards: 80.01, 80.02, 80.03, 80.04, 80.05, 80.06, 80.07, 80.08, 80.09, 80.10, 80.11, 80.12, 80.13, 80.14, 80.15, 80.16)
- 81.0 Apply skills that will enhance the presentation, value and profitability of the web site. (Student Performance Standards: 81.01, 81.02, 81.03, 81.04, 81.05, 81.06, 81.07, 81.08, 81.09, 81.10, 81.11, 81.12, 81.13)

OCCUPATIONAL COMPLETION POINT - DATA CODE C

E-COMMERCE ENTREPRENEUR - SOC Code 13-1199

Intended outcomes of OCP A and OCP B must be completed previously or concurrently. After completing the following additional competencies the student will have achieved the occupational completion point of E-Commerce Entrepreneur and will be able to:

- 07.0 Apply mathematical operations and processes as well as financial planning strategies to commonly occurring situations in the workplace to accomplish job objectives and enhance workplace performance. (Student Performance Standards: 07.09, 07.10, 07.11, 07.12)
- 80.0 Create an e-commerce website. (Student Performance Standards: 80.17, 80.18, 80.19, 80.20, 80.21, 80.22, 80.23, 80.24, 80.25, 80.26, 80.27, 80.28, 80.29)
- 84.0 Develop and implement a business plan for an e-commerce site. (Student Performance Standards: 84.01, 84.02, 84.03, 84.04, 84.05, 84.06, 84.07, 84.08, 84.09, 84.10, 84.11, 84.12, 84.13, 84.14, 84.15)
- 85.0 Perform human resources management activities to build interpersonal skills with individuals and teams. (Student Performance Standards: 85.01, 85.02, 85.03, 85.04, 85.05, 85.06, 85.07, 85.08, 85.09, 85.10, 85.11)
- 86.0 Evaluate market expansion to the Internet and the effect of global access on e-commerce. (Student Performance Standards: 86.01, 86.02, 86.03, 86.04, 86.05, 86.06, 86.07, 86.08, 86.09)
- 87.0 Demonstrate knowledge of basic market research tools. (Student Performance Standards: 87.01, 87.02, 87.03, 87.04, 87.05, 87.06, 87.07, 87.08)
- 88.0 Demonstrate knowledge of data collection methods. (Student Performance Standards: 88.01, 88.02, 88.03, 88.04, 88.05, 88.06, 88.07, 88.08, 88.09, 88.10, 88.11, 88.12, 88.13, 88.14, 88.15)
- 89.0 Demonstrate knowledge of advertising principles. (Student Performance Standards: 89.01, 89.02, 89.03, 89.04, 89.05, 89.06, 89.07, 89.08, 89.09, 89.10, 89.11, 89.12, 89.13, 89.14)
- 90.0 Demonstrate proficiency in web site promotion of an e-commerce site. (Student Performance Standards: 90.01, 90.02, 90.03, 90.04, 90.05, 90.06, 90.07, 90.08, 90.09, 90.10)
- 91.0 Define the building blocks of a secure system. (Student Performance Standards: 91.01, 91.02, 91.03, 91.04, 91.05, 91.06, 91.07, 91.08, 91.09, 91.10)
- 92.0 Demonstrate knowledge, skill, management and application of an Internet advertising campaign. (Student Performance Standards: 92.01, 92.02, 92.03, 92.04, 92.05, 92.06, 92.07, 92.08, 92.09, 92.10)
- 93.0 Analyze financial data relevant to e-commerce decision making. (Student Performance Standards: 93.01, 93.02, 93.03, 93.04, 93.05, 93.06, 93.07, 93.08, 93.09, 93.10, 93.11)
- 94.0 Identify principles of pricing. (Student Performance Standards: 94.01, 94.02, 94.03, 94.04, 94.05, 94.06, 94.07, 94.08, 94.09, 94.10, 94.11, 94.12)
- 95.0 Identify principles of selling. (Student Performance Standards: 95.01, 95.02, 95.03, 95.04, 95.05, 95.06, 95.07, 95.08, 95.09, 95.10, 95.11, 95.12, 95.13, 95.14, 95.15, 95.16, 95.17)
- 96.0 Analyze electronic payment mechanisms. (Student Performance Standards: 96.01, 96.02, 96.03, 96.04, 96.05, 96.06, 96.07, 96.08, 96.09, 96.10, 96.11, 96.12, 96.13, 96.14, 96.15, 96.16, 96.17, 96.18, 96.19, 96.20, 96.21)
- 97.0 Analyze taxation issues relevant to e-commerce. (Student Performance Standards: 97.01, 97.02, 97.03, 97.04, 97.05, 97.06, 97.07, 97.08)
- 98.0 Describe mobile commerce. (Student Performance Standards: 98.01, 98.02, 98.03, 98.04, 98.05, 98.06)
- 99.0 Demonstrate an understanding of global concepts relevant to customer relationship management. (Student Performance Standards: 99.01)
- 100.0 Explain the role of quality, warranties and guarantees, and e-commerce usability in customer satisfaction. (Student Performance Standards: 100.01, 100.02, 100.03, 100.04, 100.05, 100.06, 100.07, 100.08, 100.09,

- 100.10, 100.11, 100.12, 100.13, 100.14, 100.15, 100.16, 100.17, 100.18,
100.19, 100.20, 100.21, 100.22, 100.23, 100.24, 100.25, 100.26)
101.0 Develop communication skills for an international audience. (Student
Performance Standards: 101.01, 101.02, 101.03, 101.04)

OCCUPATIONAL COMPLETION POINT - DATA CODE D
E-COMMERCE WEB ASSISTANT SOC Code 15-1099

Intended outcomes of OCP A, OCP B, and OCP C must be completed previously.
After completing the following additional competencies, the student will have
achieved the occupational completion point of E-Commerce Web Assistant and the
student will be able to:

- 102.0 Analyze the building blocks of a secure system. (Student Performance
Standards: 102.11, 102.12, 102.13, 102.14, 102.15, 102.16, 102.17,
102.18, 102.19, 102.20, 102.21)
- 103.0 Demonstrate an awareness of the issues and trends involved in an e-
commerce environment. (Student Performance Standards: 103.01, 103.02,
103.03, 103.04, 103.05, 103.06, 103.07, 103.08, 103.09, 103.10, 103.11)
- 104.0 Analyze effectiveness and proficiency of web site. (Student Performance
Standards: 104.01, 104.02, 104.03, 104.04, 104.05, 104.06, 104.07,
104.08, 104.09, 104.10, 104.11, 104.12, 104.13, 104.14, 104.15, 104.16,
104.17, 104.18)
- 105.0 Demonstrate knowledge of e-commerce legal issues. (Student Performance
Standards: 105.01, 105.02, 105.03, 105.04, 105.05, 105.06, 105.07,
105.08, 105.09)
- 106.0 Demonstrate knowledge of disaster protection methods. (Student
Performance Standards: 106.01, 106.02, 106.03, 106.04, 106.05)
- 107.0 Analyze methods of web hosting. (Student Performance Standards: 107.01,
107.02, 107.03, 107.04, 107.05, 107.06, 107.07, 107.08, 107.09, 107.10,
107.11, 107.12, 107.13, 107.14, 107.15, 107.16)
- 108.0 Analyze and demonstrate the application of e-commerce software packages.
(Student Performance Standards: 108.01, 108.02, 108.03, 108.04, 108.05,
108.06, 108.07, 108.08, 108.09, 108.10, 108.11, 108.12, 108.13, 108.14,
108.15, 108.16, 108.17, 108.18, 108.19)
- 109.0 Demonstrate knowledge of network components. (Student Performance
Standards: 109.01, 109.02, 109.03, 109.04, 109.05, 109.06, 109.07,
109.08, 109.09, 109.10, 109.11, 109.12, 109.13, 109.14)
- 110.0 Maintain an e-portfolio for job application purposes. (Student
Performance Standards: 110.01, 110.02, 110.03)

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Program Title: Electronic Support Services
Secondary Number: 8200300
Postsecondary Number: B200300

OCCUPATIONAL COMPLETION POINT - DATA CODE A - Information Technology Assistant
SOC Code 43-4000

Computing for College and Careers competencies :

INFORMATION SYSTEMS

01.0 DEMONSTRATE KNOWLEDGE, SKILL, AND APPLICATION OF INFORMATION SYSTEMS TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:

- 01.01 Develop keyboarding skills to enter and manipulate text and data. (LA.B.1.4.3)
- 01.02 Describe and use current and emerging computer technology and software to perform personal and business related tasks. (LA.B.2.4.4)
- 01.03 Identify and describe communications and networking systems used in workplace environments.
- 01.04 Use reference materials such as on-line help, vendor bulletin boards, tutorials, and manuals available for application software. (LA.B.2.4.4, LA.A.2.4.6)
- 01.05 Demonstrate basic computer file management skills. (LA.A.2.4.2, LA.B.2.4.4, LA.B.2.4.6)
- 01.06 Troubleshoot problems with computer hardware peripherals and other office equipment. (LA.D.2.4.4)
- 01.07 Describe ethical issues and problems associated with computers and information systems.
- 01.08 Apply ergonomic principles applicable to the configuration of computer workstations.

WORKPLACE COMMUNICATIONS

02.0 DEMONSTRATE COMPREHENSION AND COMMUNICATION SKILLS-The student will be able to:

- 02.01 Read and comprehend technical and non-technical reading assignments related to course content including trade journals, books, magazines and electronic sources.
- 02.02 Write clear and well-organized research papers, integrating a variety of information.
- 02.03 Prepare and deliver an oral report with appropriate materials to the class
- 02.04 Participate in large group discussions as a member and/or a leader.
- 02.05 Take notes, organize, summarize, and paraphrase ideas and details.
- 02.06 Accurately follow written and oral instructions.

02.07 Interpret data on graphs, charts, diagrams, and tables commonly used in this industry/occupation.

03.0 USE TECHNOLOGY TO ENHANCE THE EFFECTIVENESS OF COMMUNICATION SKILLS-
The student will be able to:

03.01 Select and use word processing software and accompanying features to enhance written business communications.
(LA.B.1.4.1)

03.02 Use the writing process to create and edit business documents appropriate to the subject matter, purpose, and audience.
(LA.B.1.4.1, LA.B.1.4.2, LA.B.1.4.3)

03.03 Use database, spreadsheet, presentation software, scheduling, and integrated software packages to enhance communication.
(LA.B.2.4.1, LA.B.2.4.2)

03.05 Use computer networks (e.g., Internet, on-line databases, e-mail) to facilitate collaborative or individual learning and communication.

03.06 Respond to and utilize information derived from multiple sources (e.g., written documents, instructions, e-mail, voice mail) to solve business problems and complete business tasks.

MANAGEMENT

04.0 DEVELOP AN AWARENESS OF MANAGEMENT FUNCTIONS AND ORGANIZATIONAL STRUCTURES AS THEY RELATE TO TODAY'S WORKPLACE AND EMPLOYER/EMPLOYEE ROLES-The student will be able to:

04.01 Explore, design, implement, and evaluate organizational structures and cultures for managing project teams.

04.02 Explore and demonstrate an awareness of current trends in business and the employee's role in maintaining productive business environments in today's global workplace.

04.03 Collaborate with individuals and teams to complete tasks and solve business-related problems and demonstrate initiative, courtesy, loyalty, honesty, cooperation, and punctuality as a team member.

05.0 PRACTICE QUALITY PERFORMANCE IN THE LEARNING ENVIRONMENT AND THE WORKPLACE-The student will be able to:

05.01 Assess personal, peer and group performance and identify and implement strategies for improvement (e.g., organizational skills, note taking/outlining, advance organizers, reasoning skills, problem-solving skills, and decision-making skills).

05.02 Develop criteria for assessing products and processes that incorporate effective business practices (e.g., time management, productivity, total quality management).

06.0 INCORPORATE APPROPRIATE LEADERSHIP AND SUPERVISION TECHNIQUES, CUSTOMER SERVICE STRATEGIES, AND STANDARDS OF PERSONAL ETHICS TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:

06.01 Demonstrate an awareness of quality service and the personal and professional standards required to establish an effective

- service-based culture in the workplace, business, or learning environment.
- 06.02 Identify, analyze, and implement managerial skills necessary for maintaining a high quality work environment, goals, and strategic planning in business settings.
 - 06.03 Follow accepted rules, regulations, policies, procedures, processes, and workplace safety.

MATHEMATICS AND FINANCE

07.0 APPLY MATHEMATICAL OPERATIONS AND PROCESSES AS WELL AS FINANCIAL PLANNING STRATEGIES TO COMMONLY OCCURRING SITUATIONS IN THE WORKPLACE TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:

- 07.01 Analyze, interpret, compile, and demonstrate the ability to present/communicate data in understandable and measurable terms using common statistical procedures. (MA.E.1.4.1, MA.E.A.4.2)
- 07.02 Use common standards of measurement including the metric system in solving work-related or business problems (e.g., length, weight, currency, time). (MA.B.3.4.1)
- 07.03 Select and use the correct mathematical processes and tools to solve complex problem situations that are typical of business settings and use formulas when appropriate. (MA.A.3.4.3)

JOB READINESS AND CAREER DEVELOPMENT

08.0 ASSESS PERSONAL STRENGTHS AND WEAKNESSES AS THEY RELATE TO JOB OBJECTIVES, CAREER EXPLORATION, PERSONAL DEVELOPMENT, AND LIFE GOALS-The student will be able to:

- 08.01 Assess, analyze, and reassess individual talents, aptitudes, interests, and personal characteristics as they relate to potential future careers in business environments.
- 08.02 Use personal assessment tools to identify personal strengths and weaknesses related to learning and work environments.
- 08.03 Analyze job and career requirements and relate career interests to opportunities in the global economy.

09.0 INCORPORATE KNOWLEDGE GAINED FROM INDIVIDUAL ASSESSMENT AND JOB/CAREER EXPLORATION TO DESIGN AN INDIVIDUAL CAREER PLAN THAT REFLECTS THE TRANSITION FROM SCHOOL TO WORK, LIFELONG LEARNING, AND PERSONAL AND PROFESSIONAL GOALS-The student will be able to:

- 09.01 Analyze personal skills and aptitudes in comparison with various business related job and career options.
- 09.02 Use career resources to develop an information base that reflects local and global business related occupations and opportunities for continuing education and workplace experience.
- 09.03 Demonstrate job-seeking skills required for entry-level employment (e.g., resume, application, interview, and follow-up). (LA.C.3.4.4)
- 09.04 Design and initiate a plan to facilitate growth and skill development related to anticipated job requirements and career expectations.

- 09.05 Refine and implement a plan to facilitate personal growth and skill development related to anticipated job requirements and career expectations.
- 09.06 Demonstrate an awareness of specific job requirements and career paths (e.g., requirements, characteristics needed) in business environments.
- 09.07 Demonstrate an awareness of the potential impact of local and global trends on career plans and life goals.
- 09.08 Build mentor relationships with local professionals in the industry.

HUMAN RELATIONS/INTERPERSONAL SKILLS

- 10.0 DEMONSTRATE HUMAN RELATIONS/INTERPERSONAL SKILLS APPROPRIATE FOR THE WORKPLACE-The student will be able to:
 - 10.01 Accept constructive criticism. (SS.B.1.4.5)
 - 10.02 Apply appropriate strategies to manage and resolve conflicts in work situations. (LA.D.1.4.2, SS.B.1.4.5)
 - 10.03 Demonstrate personal and interpersonal skills appropriate for the workplace (e.g., responsibility, dependability, punctuality, integrity, positive attitude, initiative, respect for self and others, professional dress, etc.).

ADMINISTRATIVE PROCEDURES

- 13.0 PERFORM FUNCTIONS AND RESPONSIBILITIES TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:
 - 13.02 Demonstrate knowledge of ethical behavior in a business environment (e.g., confidentiality of information, employee right to know, hiring practices, plagiarism, copyright violations, sexual harassment, mission statement, code of ethics, etc.).

NETWORK/SOFTWARE SUPPORT

- 41.0 PERFORM E-MAIL ACTIVITIES-The student will be able to:
 - 41.01 Describe e-mail capabilities and functions.
 - 41.09 Use the Internet to perform e-mail activities.
- 42.0 DEMONSTRATE OPERATING SYSTEMS-The student will be able to:
 - 42.01 Identify operating system file naming conventions.
 - 42.10 Demonstrate proficiency with file management and structure (e.g., folder creation, file creation, backup, copy, delete, open, save).
 - 42.12 Demonstrate a working knowledge of standard file formats.
 - 42.14 Explain the history and purpose of various operating systems (e.g., DOS, Windows, Mac, and Unix/Linux).

INFORMATION TECHNOLOGY

- 67.0 DEVELOP AN AWARENESS OF EMERGING TECHNOLOGIES-The student will be able to:

- 67.01 Compare and contrast various methods of evaluation for emerging technologies.
- 67.02 Demonstrate knowledge of the process of planning upgrades and changeovers.
- 67.03 Compare and contrast emerging technologies (e.g., wireless, wireless web, cell phones, portables/handhelds, smart appliances, home networks, peer-to-peer, etc.).

OR

Introduction to Information Technology competencies:

INFORMATION SYSTEMS

01.0 DEMONSTRATE KNOWLEDGE, SKILL, AND APPLICATION OF INFORMATION SYSTEMS TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:

- 01.01 Develop keyboarding skills to enter and manipulate text and data.
- 01.02 Describe and use current and emerging computer technology and software to perform personal and business related tasks.
- 01.03 Identify and describe communications and networking systems used in workplace environments.
- 01.04 Use reference materials such as on-line help, vendor bulletin boards, tutorials, and manuals available for application software.
- 01.05 Troubleshoot problems with computer hardware peripherals and other office equipment.
- 01.07 Describe ethical issues and problems associated with computers and information systems.

WORKPLACE COMMUNICATIONS

02.0 USE TECHNOLOGY TO APPLY AND ENHANCE COMMUNICATION SKILLS IN TECHNICAL READING, WRITING, SPEAKING, LISTENING, AND VIEWING-The student will be able to:

- 02.03 Use listening, speaking, telecommunication and nonverbal skills and strategies to communicate effectively with supervisors, co-workers, and customers.
- 02.62 Organize ideas and communicate oral and written messages appropriate for information technology environments.
- 02.63 Collaborate with individuals and teams to complete tasks and solve information technology problems.
- 02.64 Identify, define, and discuss professional information technology terminology appropriate for internal and external communications in an information technology environment.
- 02.65 Apply the writing process to the creation of appropriate documents following designated business formats.
- 02.66 Demonstrate an awareness of project management concepts and tools (e.g., timelines, deadlines, resource allocation, time management, delegation of tasks, collaboration, etc.).

03.0 USE TECHNOLOGY TO ENHANCE THE EFFECTIVENESS OF COMMUNICATION SKILLS-The student will be able to:

- 03.03 Use database, spreadsheet, presentation software, scheduling, and integrated software packages to enhance communication.
- 03.06 Respond to and utilize information derived from multiple sources (e.g., written documents, instructions, e-mail, voice mail) to solve business problems and complete business tasks.

MANAGEMENT

- 04.0 DEVELOP AN AWARENESS OF MANAGEMENT FUNCTIONS AND ORGANIZATIONAL STRUCTURES AS THEY RELATE TO TODAY'S WORKPLACE AND EMPLOYER/EMPLOYEE ROLES-The student will be able to:
 - 04.01 Explore, design, implement, and evaluate organizational structures and cultures. Explore and demonstrate an awareness of current trends in business and the employee's role in maintaining productive business environments in today's global workplace.
 - 04.02 Collaborate with individuals and teams to complete tasks and solve business-related problems and demonstrate initiative, courtesy, loyalty, honesty, cooperation, and punctuality as a team member.
- 05.0 PRACTICE QUALITY PERFORMANCE IN THE LEARNING ENVIRONMENT AND THE WORKPLACE-The student will be able to:
 - 05.01 Assess personal, peer and group performance and identify and implement strategies for improvement (e.g., organizational skills, note taking/outlining, advance organizers, reasoning skills, problem-solving skills, and decision-making skills).
 - 05.02 Develop criteria for assessing products and processes that incorporate effective business practices (e.g., time management, productivity, total quality management).
- 06.0 INCORPORATE APPROPRIATE LEADERSHIP AND SUPERVISION TECHNIQUES, CUSTOMER SERVICE STRATEGIES, AND STANDARDS OF PERSONAL ETHICS TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:
 - 06.03 Demonstrate awareness of the following workplace essentials: Quality customer service; business ethics; confidentiality of information; copyright violations; accepted workplace rules, regulations, policies, procedures, processes, and workplace safety, and appropriate attire and grooming.

MATHEMATICS AND FINANCE

- 07.0 APPLY MATHEMATICAL OPERATIONS AND PROCESSES AS WELL AS FINANCIAL PLANNING STRATEGIES TO COMMONLY OCCURRING SITUATIONS IN THE WORKPLACE TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:
 - 07.01 Analyze, interpret, compile, and demonstrate the ability to present/communicate data in understandable and measurable terms using common statistical procedures.
 - 07.02 Use common standards of measurement including the metric system in solving work-related or business problems (e.g., length, weight, currency, time).

- 07.03 Select and use the correct mathematical processes and tools to solve complex problem situations that are typical of business settings and use formulas when appropriate.

JOB READINESS AND CAREER DEVELOPMENT

- 08.0 ASSESS PERSONAL STRENGTHS AND WEAKNESSES AS THEY RELATE TO JOB OBJECTIVES, CAREER EXPLORATION, PERSONAL DEVELOPMENT, AND LIFE GOALS-The student will be able to:

- 08.02 Use personal assessment tools to identify personal strengths and weaknesses related to learning and work environments.
08.03 Analyze job and career requirements and relate career interests to opportunities in the global economy.

- 09.0 INCORPORATE KNOWLEDGE GAINED FROM INDIVIDUAL ASSESSMENT AND JOB/CAREER EXPLORATION TO DESIGN AN INDIVIDUAL CAREER PLAN THAT REFLECTS THE TRANSITION FROM SCHOOL TO WORK, LIFELONG LEARNING, AND PERSONAL AND PROFESSIONAL GOALS-The student will be able to:

- 09.15 Research, compare, and contrast information technology career clusters (e.g., characteristics needed, skills required, education required, industry certifications, advantages and disadvantages of information technology careers, the need for information technology workers, etc.).
09.16 Describe the variety of occupations and professions within the world of information technology including those where information technology is either in a primary focus or in a supportive role.
09.17 Describe job requirements for the variety of occupations and professions within the global world of information technology.
09.18 Analyze personal skills and aptitudes in comparison with information technology career opportunities.
09.19 Refine and implement a plan to facilitate personal growth and skill development related to information technology career opportunities.
09.20 Develop and maintain an electronic career portfolio, to include, but not limited to the Resume and Letter of Application.

- 10.0 DEMONSTRATE HUMAN RELATIONS/INTERPERSONAL SKILLS APPROPRIATE FOR THE WORKPLACE-The student will be able to:

- 10.01 Accept constructive criticism.
10.03 Demonstrate personal and interpersonal skills appropriate for the workplace (e.g., responsibility, dependability, punctuality, integrity, positive attitude, initiative, respect for self and others, professional dress, etc.).

WORK-BASED LEARNING

- 20.0 PARTICIPATE IN WORK-BASED LEARNING EXPERIENCES-The student will be able to:

- 20.44 Participate in work-based learning experiences in an information technology environment.
- 20.46 Discuss the use of technology in an information technology environment.

NETWORK/SOFTWARE SUPPORT

41.0 PERFORM E-MAIL ACTIVITIES—The student will be able to:

- 41.01 Describe e-mail capabilities and functions.
- 41.02 Identify components of an e-mail message.
- 41.03 Identify the components of an e-mail address.
- 41.04 Identify when to use different e-mail options.
- 41.05 Attach a file to an e-mail message.
- 41.06 Forward an e-mail message.
- 41.07 Use an address book.
- 41.08 Reply to an e-mail message.
- 41.09 Use the Internet to perform e-mail activities.
- 41.10 Identify the appropriate use of e-mail and demonstrate related e-mail etiquette.
- 41.12 Identify when to include information from an original e-mail message in a response.
- 41.13 Identify common problems associated with widespread use of e-mail.

42.0 DEMONSTRATE KNOWLEDGE OF DIFFERENT OPERATING SYSTEMS—The student will be able to:

- 42.01 Identify operating system file naming conventions.
- 42.10 Demonstrate proficiency with file management and structure (e.g., folder creation, file creation, backup, copy, delete, open, save).
- 42.12 Demonstrate a working knowledge of standard file formats.
- 42.14 Explain the history and purpose of various operating systems (e.g., DOS, Windows, Mac, and Unix/Linux).

WEB DESIGN

55.0 DEMONSTRATE PROFICIENCY NAVIGATING THE INTERNET, INTRANET, AND THE WWW—The student will be able to:

- 55.01 Identify and describe Web terminology.
- 55.10 Demonstrate proficiency in using the basic features of GUI browsers (e.g., setting bookmarks, basic configurations, e-mail configurations, address book).
- 55.11 Define Universal Resource Locators (URLs) and associated protocols (e.g., .com, .org, .edu, .gov, .net, .mil).
- 55.14 Describe and observe Internet/Intranet ethics and copyright laws and regulatory control.
- 55.15 Trace the evolution of the Internet from its inception to the present and into the future.
- 55.16 Demonstrate proficiency using search engines (e.g., Yahoo!, Google, Northern Light, Lycos, Excite, etc.).
- 55.17 Demonstrate proficiency using various web tools (e.g., downloading of files, transfer of files, telnet, PDF, etc.).
- 55.18 Identify effective Boolean search strategies.

- 56.0 DEMONSTRATE PROFICIENCY USING HTML COMMANDS-The student will be able to:
- 56.01 Identify elements of a Web page.
 - 56.02 Describe individual Web page layouts and content (e.g., writing for the Web, Web structure).
 - 56.03 Define basic HTML terminology.
 - 56.04 Analyze HTML source code developed by others.
 - 56.05 Create Web pages using basic HTML tags (e.g., links, lists, character styles, text alignment, and tables).
 - 56.06 Use storyboarding techniques for subsequent Web pages (e.g., linear, hierarchical).
 - 56.08 Edit and test HTML documents for accuracy and validity.
 - 56.17 Use basic functions of WYSIWYG editors.
 - 56.18 Use basic functions of HTML, DHTML, and XML editors and converters.
 - 56.19 Enhance web pages through the addition of images and graphics including animation.
- 57.0 DEMONSTRATE PROFICIENCY IN PAGE DESIGN APPLICABLE TO THE WWW-The student will be able to:
- 57.01 Develop an awareness of acceptable Web page design, including index pages in relation to the rest of the Web site.
 - 57.02 Describe and apply color theory as it applies to Web page design (e.g., background and text color).
 - 57.04 Access and digitize graphics through various resources (e.g., scanner, digital cameras, on-line graphics, clipart, CD ROMs).
 - 57.05 Use image design software to create and edit images.
 - 57.25 Demonstrate proficiency in publishing to the Internet.
 - 57.26 Demonstrate proficiency in adding downloadable forms to web pages.
 - 57.27 Explain the need for web-based applications.
- 63.0 DEMONSTRATE PROFICIENCY USING SPECIALIZED WEB DESIGN SOFTWARE-The student will be able to:
- 63.01 Compare and contrast various specialized web design software (e.g., Flash, Shockwave, GoLive, Director, etc.).
 - 63.02 Demonstrate use of various specialized web design software (e.g., Flash, Shockwave, GoLive, Director, etc.).

INFORMATION TECHNOLOGY

- 64.0 DEVELOP AN AWARENESS OF THE INFORMATION TECHNOLOGY INDUSTRY-The student will be able to:
- 64.01 Explain how information technology impacts the operation and management of business and society.
 - 64.04 Explain the emergence of e-commerce and e-government and the potential impact on business and society.
 - 64.05 Explain the emergence of a paperless society.
- 65.0 DEVELOP AN AWARENESS OF MICROPROCESSORS AND DIGITAL COMPUTERS-The student will be able to:

- 65.01 Describe the evolution of the digital computer.
 - 65.02 Explain the general architecture of a microcomputer system.
 - 65.03 Explain the evolution of microprocessors.
 - 65.04 Explain software hierarchy and its impact on microprocessors.
 - 65.05 Explain the need for and use of peripherals.
 - 65.06 Demonstrate proficiency using peripherals.
 - 65.07 Identify the basic concepts of computer maintenance and upgrades.
 - 65.08 Differentiate between diagnosing and troubleshooting.
- 66.0 DEVELOP AN AWARENESS OF PROGRAMMING LANGUAGES-The student will be able to:
- 66.01 Explain the history of programming languages.
 - 66.02 Explain the need for and use of compilers.
 - 66.03 Explain how compilers work.
 - 66.04 Identify the three types of programming design approaches (e.g., top-down, structured, and object-oriented).
- 67.0 DEVELOP AN AWARENESS OF EMERGING TECHNOLOGIES-The student will be able to:
- 67.01 Compare and contrast various methods of evaluation for emerging technologies.
 - 67.02 Demonstrate knowledge of the process of planning upgrades and changeovers.
 - 67.03 Compare and contrast emerging technologies and describe how they impact business in the global marketplace (e.g., wireless, wireless web, cell phones, portables/handhelds, smart appliances, home networks, peer-to-peer, etc.).
- 69.0 DEMONSTRATE AN UNDERSTANDING OF THE SEVEN LAYERS OF THE OPEN SYSTEMS INTERFACE (OSI) MODEL-The student will be able to:
- 69.01 Describe the evolution of OSI from its inception to the present and into the future.
 - 69.02 Explain the interrelations of the seven layers of the Open Systems Interface (OSI) as it relates to hardware and software.
 - 69.04 Identify types of networks and how they work.
 - 69.06 Identify the role of servers and clients on a network.
 - 69.07 Identify benefits and risks of networked computing.
 - 69.08 Identify the relationship between computer networks and other communications networks (i.e. telephone systems).
 - 69.09 Identify Intranets, Extranets and how they relate to the Internet.
 - 69.11 Demonstrate basic understanding of network administration.

SOFTWARE APPLICATIONS

- 70.0 DEMONSTRATE PROFICIENCY USING COMMON SOFTWARE APPLICATIONS-The student will be able to:
- 70.01 Compare and contrast the appropriate use of various software applications (e.g., word processing, desktop publishing,

- graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music, etc.).
- 70.02 Demonstrate proficiency in the use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music, etc.).

71.0 DEMONSTRATE PROFICIENCY USING SPECIALIZED SOFTWARE APPLICATIONS-
The student will be able to:

- 71.01 Compare and contrast the appropriate use of specialized software applications (e.g., (OLTP, Computer Aided Design, Computer Aided Manufacturing, 3D animation process control, materials management, etc.).
- 71.02 Demonstrate awareness of specialized software applications (e.g., OLTP, Computer Aided Design, Computer Aided Manufacturing, 3D animation, process control, materials management, etc.)
- 71.06 Demonstrate the ability to incorporate digital sound.

OCCUPATIONAL COMPLETION POINT - DATA CODE B

E-Commerce Customer Service Representative SOC Code 43-4051

72.0 DEMONSTRATE KNOWLEDGE OF THE INTERNET TO ENHANCE WORKPLACE PERFORMANCE-The student will be able to:

- 72.01 Explain the history of the Internet and development of e-commerce.
- 72.02 Discuss the social, economic, and political impact of the Internet on society.
- 72.03 Explain the relationship between the Internet and the World Wide Web.
- 72.04 Identify accepted Internet etiquette (i.e., netiquette).
- 72.05 Identify and describe Web terminology.
- 72.06 Identify the differences between the Internet, Intranet and WWW.
- 72.07 Describe and demonstrate the use of the different methods by which information may be accessed on the Internet/Intranet (browser, FTP, gopher, telnet, server).
- 72.08 Explain the main elements of Web Browsers (example: status bar, refresher button, toolbar tabs, scroll bars, location field, title bar, bookmarks).
- 72.09 Copy information from the Internet/Intranet, save, and print using a Web browser.
- 72.10 Identify and use search engines to locate information.
- 72.11 Define Web robot/bot/spider and identify its advantages.
- 72.12 Explain the difference between a search engine and a web directory.

73.0 DEMONSTRATE KNOWLEDGE OF E-COMMERCE PRINCIPLES.-The student will be able to:

- 73.01 Define Electronic Commerce (e-commerce).
- 73.02 Explain domain name and why it is important to e-commerce sites.
- 73.03 Identify and describe the difference between 'brick-and-mortar' and 'click-and-mortar' businesses.

- 73.04 Describe business-to-business e-commerce.
- 73.05 Describe business-to-consumer e-commerce.
- 73.06 Define the scope of business-to-consumer e-commerce.
- 73.07 Identify the components of a successful business-to-consumer e-commerce site.
- 73.08 Identify and discuss issues associated with business-to-consumer e-commerce.
- 73.09 Describe the difference between e-tailing and wholesaling.
- 73.10 Explain how e-commerce is similar to and/or different from traditional commerce.
- 73.11 Identify types of businesses most likely to succeed online.

74.0 DEVELOP AN AWARENESS OF CAREER OPPORTUNITIES AND OPTIONS IN E-COMMERCE AND THE CRITERIA FOR ENTERING THOSE FIELDS—The student will be able to:

- 74.01 Identify entry-level positions in e-commerce.
- 74.02 Identify education, skills, and training requirements for possible career pathways in e-commerce.
- 74.03 Identify present and future employment opportunities.
- 74.04 Compare salary ranges and benefit packages.
- 74.05 Design a personal career ladder in e-commerce with a timeline for career advancement.
- 74.06 Identify professional organizations in the area of e-commerce.
- 74.07 Define the role of a webmaster.
- 74.08 Identify job titles and describe the job functions of a web development team.

41.0 PERFORM E-MAIL ACTIVITIES.—The student will be able to:

- 41.14 Describe e-mail capabilities and functions.
- 41.15 Explain how to setup an e-mail address.
- 41.16 Explain the rules for using e-mail on the Internet.
- 41.17 Describe the issues involved in sending and receiving documents as e-mail attachments.
- 41.18 Use the Internet to perform e-mail activities.
- 41.19 Utilize all applicable e-mail options and functions (forward, reply, attach, address book).
- 41.20 Organize and manage e-mail messages.
- 41.21 Explain some abbreviations, acronyms and emoticons used in e-mail.
- 41.22 Explain the purpose of an e-mail signature and how to create one.

76.0 IDENTIFY THE CHALLENGES AND ISSUES ASSOCIATED WITH E-COMMERCE BUSINESS MODELS —The student will be able to:

- 76.01 Explain the scope of e-commerce and how it relates to business operations.
- 76.02 Explain how the self-serve economy impacts e-commerce.
- 76.03 Discuss the global impact of e-commerce.
- 76.04 Identify ways e-commerce sites can develop and enhance customer relationships to encourage repeat business and brand loyalty.
- 76.05 Explain why the main purpose of any e-commerce site is to transform surfers into customers.

- 76.06 Identify the range of costs associated with developing an e-commerce site.
- 76.07 Identify security issues involved in developing a site (firewalls, sniffer programs, hacking, viruses, encryption, SSL, TSL, digital certificates).
- 76.08 Explain why web site design is critical to the success of an e-commerce venture.
- 76.09 Discuss advantages/disadvantages of using an e-commerce developer or an in-house web team to design and maintain a site.
- 76.10 Define SET and compare it to SSL.
- 76.11 Explain how PGP works.
- 76.12 Define Structured Query Language (SQL).
- 76.13 Explain how SQL enables users on the Internet.
- 76.14 Define electronic payment.
- 76.15 Discuss customer security and privacy issues when providing financial information on the Internet.
- 76.16 Explain different payment methods available for online purchase (credit card, e-check, e-cash, smart card, electronic wallets, virtual credit cards).
- 76.17 Explain the Electronic Funds Transfer Act and its application to online payments.

77.0 DEVELOP AN ONLINE MARKETING PLAN—The student will be able to:

- 77.01 Identify trends in e-marketing.
- 77.02 Define marketing-related terms.
- 77.03 Describe the affect of e-mail and spamming on marketing in e-commerce sites.
- 77.04 Identify legal, ethical and privacy issues in online marketing.
- 77.05 Explain target marketing and niche marketing in relation to e-commerce.
- 77.06 Describe customer profiling and related issues.
- 77.07 Identify the various types of advertising options in e-commerce (links, banner ads, affiliate programs, pop-up windows, viral marketing, newsgroup postings).
- 77.08 Describe electronic marketing techniques.
- 77.09 Identify types of and describe the use of databases in e-commerce sites.
- 77.10 Explain how electronic catalogs work Internet sales.
- 77.11 Explain database-driven system and describe its advantages over a static catalog.
- 77.12 Analyze e-commerce solutions including shopping carts, electronic malls, order entry systems, full cost display and smart cards.
- 77.13 Identify, define and discuss shipping options for an e-commerce web site.

78.0 DEMONSTRATE AN AWARENESS OF THE ISSUES INVOLVED IN A GLOBAL/INTERNATIONAL E-COMMERCE ENVIRONMENT—The student will be able to:

- 78.01 Define and discuss the advantages of global/international e-commerce.
- 78.02 Describe the implications of trade barriers on global e-commerce.

- 78.03 Describe the effect of currency exchange rates on international e-commerce.
- 78.04 Identify cultural attitudes and practices in the USA that could inhibit successful business operations in another country.
- 78.05 Describe changes in American business practices required for success in the global marketplace.
- 78.06 Identify and discuss import, export, and international tax laws and their affect on e-commerce trade.
- 78.07 Analyze multi-cultural influences on global e-commerce.

79.0 RESEARCH THE PLAN AND DESIGN OF AN E-COMMERCE WEB PAGE—The student will be able to:

- 79.01 Research web site design principles and explain how each contributes towards an effective web site.
- 79.02 Compare and contrast positive and negative features of different web sites.
- 79.03 Identify elements of a web page.
- 79.04 Plan the goals, structure and design of the web site.
- 79.05 Determine business goals for the e-commerce site.
- 79.06 Determine product assortment, incentive, pricing, payment and shipping options.
- 79.07 Develop a storyboard for the web site.
- 79.08 Explain the importance of loading time as an element of web site design.
- 79.09 Define HTML, DHTML, XML, VRML, WEB PAGE DESIGN SOFTWARE and how each can be effectively used in creating an e-commerce web site.
- 79.10 Explain the role of browsers in reading files on the World Wide Web (text only, frames, no frames, hypertext).
- 79.11 Identify how different browsers affect the look of a web page.
- 79.12 Explain various scripting languages (JavaScript, Visual Basic).
- 79.13 Visit a web site and indicate ASP scripts.
- 79.14 Visit web sites with site maps and critique the organization, simplicity, clarity, and impact on the surfer.
- 79.15 Visit web sites and critique the contents organization, interest, related links, and whether or not it was entertaining to the surfer.
- 79.16 Visit web sites and critique the FAQ page/s for clarity and organization.
- 79.17 Explain the economic impact of having surfers and customers use FAQ's.
- 79.18 Explain how bandwidths affect data transmission and on-screen image.
- 79.19 Discuss software availability in web site design.
- 79.20 Identify, describe and explain the use of a variety of design tools including navigation bars, hyperlinks and navigation aids.
- 79.21 Explain how the proper use and placement of each element is critical to the site's impact to attract surfers and potential customers.
- 79.22 Explain how content presentation determines if surfers become customers.

- 79.23 Discuss reasons why surfers visit web sites and may become eventual customers.
- 79.24 Evaluate online catalog implementation methodologies.

80.0 CREATE AN E-COMMERCE WEB SITE—The student will be able to:

- 80.01 Create a business for an e-commerce site.
- 80.02 Create a web page.
- 80.03 Create and apply a custom theme and a solid color background.
- 80.04 Create a logo.
- 80.05 Add clip art, graphics, images and/or photos and text.
- 80.06 Add animation to text and objects using DHTML.
- 80.07 Utilize navigation aids and plug-ins.
- 80.08 Add graphic buttons.
- 80.09 Add form elements.
- 80.10 Add graphics as a form button.
- 80.11 Link buttons and forms.
- 80.12 Embed audio and video files.
- 80.13 Add a host counter to display the number of times the web page has been visited.
- 80.14 Organize information using frames.
- 80.15 Launch the web browser and view the page created.
- 80.16 Test the website for effectiveness (loading time, graphics, link integrity).

81.0 APPLY SKILLS THAT WILL ENHANCE THE PRESENTATION, VALUE AND PROFITABILITY OF THE WEB SITE—The student will be able to:

- 81.01 Develop site personality (create useful site content).
- 81.02 Discuss the advantages and disadvantages of outsourcing vs. an in-house team to create and manage the e-commerce site.
- 81.03 Determine customer service options (e.g., e-mail, phone, fax).
- 81.04 Determine the terms and conditions of sale, including warranties, after-sales service, and privacy assurances.
- 81.05 Explain client-side application.
- 81.06 Explain the purpose of forms in e-commerce web sites.
- 81.07 Design forms for e-commerce web sites using different procedures for constructing forms (HTML tags, Software programs).
- 81.08 Use JavaScript to validate data in form fields.
- 81.09 Use programming tools to make web site more powerful and interactive.
- 81.10 Explain the difference between dynamic and static web programming.
- 81.11 Use programming language to support multi-tasking and exception handling.
- 81.12 Create a site map and explain its importance.
- 81.13 Create a Frequently Asked Questions Page.

OCCUPATIONAL COMPLETION POINT DATA CODE C
E-Commerce Entrepreneur - SOC Code 13-1199.99

07.0 APPLY MATHEMATICAL OPERATIONS AND PROCESSES AS WELL AS FINANCIAL PLANNING STRATEGIES TO COMMONLY OCCURRING SITUATIONS IN THE WORKPLACE TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE—The student will be able to:

- 07.09 Monitor expense accounts.
- 07.10 Prepare and interpret balance sheets, income statements, cash-flow statements, change-in-equity statements, forecasts, break-even analyses and budgets.
- 07.11 Document the impact of financial analysis on the strategic planning process.
- 07.12 Revise short-term and long-term strategic plans based on financial analyses.

80.0 CREATE AN E-COMMERCE WEBSITE—The student will be able to:

- 80.17 Edit web pages.
- 80.18 Use appropriate file names for the Internet.
- 80.19 Explain optimization of files for load time.
- 80.20 Differentiate between pixels and KB as it relates to graphic size.
- 80.21 Explain the purpose of Common Gateway Interface (CGI) script and Active Server Pages (ASP) in e-commerce web sites.
- 80.22 Demonstrate the use of Java Applets in an e-commerce site.
- 80.23 Define Java Script and explain its role in e-commerce sites.
- 80.24 Demonstrate the use of data-processing tools to perform specific tasks with information that customers enter into a web site.
- 80.25 Explain the use of Common Gateway Interface script in processing data on web sites.
- 80.26 Explain the use of Active Server Pages (ASP) in processing data in web sites.
- 80.27 Define ActiveX and indicate its advantages/disadvantages.
- 80.28 Locate a host site that offers free web space.
- 80.29 Upload web pages to the Internet.

84.0 DEVELOP AND IMPLEMENT A BUSINESS PLAN FOR AN E-COMMERCE SITE—The student will be able to:

- 84.01 Identify types of businesses most likely to succeed online.
- 84.02 Identify the range of costs associated with developing an e-commerce site.
- 84.03 Identify the risks/rewards associated with online business.
- 84.04 Identify legal and political environments that affect e-commerce.
- 84.05 Describe the process of obtaining a business license for an e-commerce site.
- 84.06 Distinguish between trademark and copyright.
- 84.06 Identify federal legislation protecting competition.
- 84.07 Explain the concepts and benefits of e-business systems.
- 84.08 Describe and explain the use of e-business systems to achieve the goals of Enterprise Resource Planning (ERP).
- 84.09 Define the purpose of and describe the major components included in a business plan.
- 84.10 Develop a basic business plan.
- 84.11 Evaluate the plan using milestones and benchmarks.
- 84.12 Develop overall marketing objectives.
- 84.13 Evaluate online catalog implementation methodologies.
- 84.14 Coordinate and plan an evaluation of promotional activities.

85.0 PERFORM HUMAN RESOURCES MANAGEMENT ACTIVITIES TO BUILD INTERPERSONAL SKILLS WITH INDIVIDUALS AND TEAMS--The student will be able to:

- 85.01 Compare personal interests and skills with those needed by an entrepreneur.
- 85.02 Determine motives for becoming an entrepreneur.
- 85.03 Examine characteristics of online entrepreneurs.
- 85.04 Explain ethical and legal issues faced by e-commerce professionals.
- 85.05 Explain the social implications of decisions made and actions taken as an e-commerce professional.
- 85.06 Identify the major functions and activities of management.
- 85.07 Explain the role of authority, accountability, and responsibility in task management.
- 85.08 Describe current and emerging e-commerce management trends.
- 85.09 Analyze the interdependence of empathetic listening, synergy, and consensus building.
- 85.10 Promote teamwork, leadership, empowerment, and strategies for fostering creativity.
- 85.11 Define the roles within the group in the decision-making process.

86.0 EVALUATE MARKET EXPANSION TO THE INTERNET AND THE EFFECT OF GLOBAL ACCESS ON E-COMMERCE--The student will be able to:

- 86.01 Evaluate the impact of multiple time zones, languages, currencies, social, and cultural issues on e-commerce.
- 86.02 Analyze the concept of personalization in e-commerce.
- 86.03 Identify e-commerce site components that influence branding (logo, graphic style, online customer service, product information, site navigation, testing, core values).
- 86.04 Integrate logos, slogans, URL, etc., throughout offline and online publications and advertising.
- 86.05 Identify products, which are most likely to succeed in an e-commerce venture.
- 86.06 Compare and contrast traditional product development with online product development.
- 86.07 Explain the need for differing development cycles for online products.
- 86.08 Describe rapid release marketing introduction strategies.
- 86.09 Explain the Gutenberg Diagonal and its international implications.

87.0 DEMONSTRATE KNOWLEDGE OF BASIC MARKET RESEARCH TOOLS--The student will be able to:

- 87.01 Identify the steps of market research.
- 87.02 Describe market research as both a formal and informal process.
- 87.03 Identify common market research activities and the type of information each provides.
- 87.04 Explain the role of ethics in marketing research.
- 87.05 Explain internal/external research and the advantages/disadvantages of each.
- 87.06 Explain factors limiting market research (objectives, level of commitment, resources available).

- 87.07 Develop a sampling plan (who, how many, how chosen).
- 87.08 Establish means to identify customer base and marketing profile.

88.0 DEMONSTRATE KNOWLEDGE OF DATA COLLECTION METHODS--The student will be able to:

- 88.01 Explain the differences in data generated from surveys and questionnaires collected over the telephone, by mail, online, and in person.
- 88.02 Explain the purpose and types of observational research and focus groups.
- 88.03 Determine priorities for and potential sources of information that should be gathered.
- 88.04 Explain target audience/user group as a key information source.
- 88.05 Conduct interviews with selected human information sources.
- 88.06 Gather information from selected print and electronic sources.
- 88.07 Determine the accuracy and completeness of the information gathered.
- 88.08 Define Electronic Data Interchange (EDI).
- 88.09 Identify the benefits and essential elements of EDI.
- 88.10 Define EDI transaction sets and data elements.
- 88.11 Describe the different standards governing EDI transactions.
- 88.12 Define data mining.
- 88.13 Identify basic tools and techniques of data mining.
- 88.14 Explain the use of data mining in Customer Relationship Management (CRM).
- 88.15 Identify ethical issues of data mining.

89.0 DEMONSTRATE KNOWLEDGE OF ADVERTISING PRINCIPLES--The student will be able to:

- 89.01 Publicize e-commerce site through non-Internet means such as mail, press release, broadcast media, print media, and specialty advertising.
- 89.02 Prepare a display advertisement for an e-commerce product or service.
- 89.03 Create offline ads for an e-commerce product or service.
- 89.04 Create online ads for an e-commerce product or service.
- 89.05 Write a news release to promote an e-commerce business.
- 89.06 Analyze the nature of direct advertising strategies (direct mail, e-mail, automated callers, faxes, catalogs).
- 89.07 Identify factors affecting the cost of e-mail advertising.
- 89.08 Identify factors affecting the cost of newspaper ads, magazine ads, radio ads, television ads, direct mail advertising, outdoor ads, and Internet advertising.
- 89.09 Differentiate between publicity and public relations.
- 89.10 Describe the impact of the Internet on publicity.
- 89.11 Identify niche advertising.
- 89.12 Discuss the role of online communities.
- 89.13 Examine the use, sources, and costs of databases in advertising.
- 89.14 Identify the difference between business-to-business and business-to-consumer advertising.

90.0 DEMONSTRATE PROFICIENCY IN WEB SITE PROMOTION OF AN E-COMMERCE SITE--The student will be able to:

- 90.01 Research site development methodology.
- 90.02 Demonstrate site registration with search engines, shopping bots, and Web directories.
- 90.03 Identify processes to improve visibility in search engines (meta tags, titling, keyword repetition, content management, site design, and link popularity).
- 90.04 Evaluate legal effects of registration (spamming, duplication).
- 90.05 Establish and manage links with other sites.
- 90.06 Determine methods to generate hit analysis data.
- 90.07 Determine whether to offer response incentives.
- 90.08 Determine what type of response incentives to offer.
- 90.09 Use design elements and principles to facilitate use and buying decision.
- 90.10 Provide company information and update frequently.

91.0 DEFINE THE BUILDING BLOCKS OF A SECURE SYSTEM--The student will be able to:

- 91.01 Define terms associated with system security (user authentication, data origin authentication, confidentiality, data integrity, non-repudiation, peer authentication, message digests).
- 91.02 Describe security and privacy issues in e-business systems.
- 91.03 Explain the difference between security and privacy.
- 91.04 Explain how Internet and Intranet sites become vulnerable to attack.
- 91.05 Identify security issues associated with business-to-consumer e-commerce.
- 91.06 Describe Intrusion Detection System, misuse intrusion, and anomaly intrusion.
- 91.07 Explain transaction security.
- 91.08 Explain security-related agencies and software.
- 91.09 Explain how privacy affects personalization.
- 91.10 Identify security and payment processing issues involved in developing a site (SSL, Digital Certificates, SET Protocol, Cyber Cash).

92.0 DEMONSTRATE KNOWLEDGE, SKILL, MANAGEMENT AND APPLICATION OF AN INTERNET ADVERTISING CAMPAIGN--The student will be able to:

- 92.01 Analyze the types, advantages, and disadvantages of Internet advertising (interacting personally and wireless network).
- 92.02 Evaluate locations for ad placement (search engines, directories, specialty websites, sponsorship websites).
- 92.03 Identify factors affecting the cost of e-mail advertising and banner ads (click-through pricing, bartering, Internet Advertising Bureau rate cards, audience demographics).
- 92.04 Identify standard sizes for Internet ads.
- 92.05 Identify file formats for graphic ads.
- 92.06 Define goal of Internet ads (banners, buttons).
- 92.07 Create Internet ads using layers to create simple animation, a tagline, and design features to gain attention.
- 92.08 Create design that encourages customer order.

- 92.09 Place Internet ads, evaluate results, and cost effectiveness.
- 92.10 Compare potential effectiveness with other Internet strategies.

93.0 ANALYZE FINANCIAL DATA RELEVANT TO E-COMMERCE DECISION MAKING--The student will be able to:

- 93.01 Explain the critical nature of banking relationships.
- 93.02 Explain the purpose and importance of obtaining business financing.
- 93.03 Describe sources of financing for businesses.
- 93.04 Describe electronic financial services.
- 93.05 Use the Internet to locate sources of financing for businesses.
- 93.06 Examine the costs of owning/running a server.
- 93.07 Examine the costs of using an Internet Service Provider (ISP).
- 93.08 Examine costs related to e-commerce (site design, maintenance, and support).
- 93.09 Explain costs of interfacing with existing databases, order systems, and accounting systems.
- 93.10 Explain profitability in e-commerce sites.
- 93.11 Explain the financial implications of outsourcing vs. internal development.

94.0 IDENTIFY PRINCIPLES OF PRICING--The student will be able to:

- 94.01 Explain the nature and scope of the pricing function, the role of business ethics and the use of technology in pricing.
- 94.02 Identify the basic considerations consumers and businesses weigh in accepting a price.
- 94.03 Explain how supply, demand, and price are related.
- 94.04 Research and analyze competitors' prices.
- 94.05 Evaluate psychological and discount pricing techniques.
- 94.06 Describe geographic and promotional pricing techniques.
- 94.07 Calculate product cost, break-even point, and elasticity of demand.
- 94.08 Evaluate difficulties in applying traditional pricing strategies to e-commerce.
- 94.09 Evaluate characteristics, goals, advantages and disadvantages of cost-based pricing, demand-based, competition-based, product mix, product change, segmented (customer segmented, location, time), and the impact of e-commerce on pricing strategies.
- 94.10 Evaluate the relationship between shipping costs and prices in online sales.
- 94.11 Evaluate the impact of pricing errors in e-commerce.
- 94.12 Explain real-time pricing in the online environment.

95.0 IDENTIFY PRINCIPLES OF SELLING--The student will be able to:

- 95.01 Explain the purpose, importance and business ethics of selling.
- 95.02 Describe the nature of selling regulations.
- 95.03 Describe the use of technology in the selling function.
- 95.04 Identify the benefits of site/online sales.

- 95.05 Explain the role of customer service as a component of selling relationships.
- 95.06 Identify key factors in building a clientele.
- 95.07 Identify incentives for sales staff.
- 95.08 Identify types of sales promotion (coupons, premiums, sweepstakes) and it can be used in e-commerce.
- 95.09 Determine when sales promotion activities are the best promotional tool.
- 95.10 Generate a sales promotion plan for an e-commerce site.
- 95.11 Calculate the costs of sales promotion activities.
- 95.12 Identify return on investment of sales promotion activities.
- 95.13 Create an electronic sales presentation with an integrated Internet link.
- 95.14 Evaluate effectiveness of integration.
- 95.15 Use on-line strategies for follow-up.
- 95.16 Examine automated follow-up.
- 95.17 Prepare and evaluate sales reports.

96.0 ANALYZE ELECTRONIC PAYMENT MECHANISMS—The student will be able to:

- 96.01 Identify e-cash terminology.
- 96.02 Describe stored-value cards, online checks and electronic wallets.
- 96.03 Define realtime processing.
- 96.04 Explain the purpose of auto e-mail.
- 96.05 Describe risks and costs involved with credit card use online.
- 96.06 Identify the advantages/disadvantages of electronic/digital cash.
- 96.07 Evaluate the impact of multiple currencies on e-commerce.
- 96.08 Describe electronic funds transfer at point of sale (EFT/POS).
- 96.09 Describe direct data entry transmissions and financial electronic data interchanges (F-EDI).
- 96.10 Describe the characteristics of successful payment systems.
- 96.11 Identify future trends in and risks associated with electronic payment systems.
- 96.12 Differentiate between the payment systems applicable for business-to-consumer, business-to-business, and consumer-to-consumer transactions.
- 96.13 Describe a transaction-processing service.
- 96.14 Explain Internet Transaction Brokers (ITBs).
- 96.15 Explain the Electronic Funds Transfer Act and its application to online payments.
- 96.16 Describe a turnkey system.
- 96.17 Define Merchant Account Provider (MAP).
- 96.18 Identify costs associated with a merchant service and/or third-party verifier agreement.
- 96.19 Locate an online application for a merchant account.
- 96.20 Define related terms (Card Not Present (CNP), Mail Order/Telephone Order (MOTO), real time and digital certificate).
- 96.21 Explain verification activities.

97.0 ANALYZE TAXATION ISSUES RELEVANT TO E-COMMERCE—The student will be able to:

- 97.01 Define permanent establishment.
- 97.02 Explain permanent establishment issues in e-commerce.
- 97.03 Identify the issues of digital downloads.
- 97.04 Describe international issues.
- 97.05 Identify global taxation solutions.
- 97.06 Explain Value Added Tax.
- 97.07 Explain the Internet Tax Freedom Act (ITFA).
- 97.08 Determine payment options that comply with legal regulations regarding sales taxes.

98.0 DESCRIBE MOBILE COMMERCE—The student will be able to:

- 98.01 Define mobile-commerce.
- 98.02 Define related terms (personal digital assistant, micro browser, Wireless Application Protocol/WAP).
- 98.03 Identify m-commerce payment methods.
- 98.04 Identify the challenges associated with M-Commerce.
- 98.05 Compare WML with HTML.
- 98.06 Identify attributes of mobile communications and how each will affect mobile commerce.

99.0 DEMONSTRATE AN UNDERSTANDING OF GLOBAL CONCEPTS RELEVANT TO CUSTOMER RELATIONSHIP MANAGEMENT (CRM)—The student will be able to:

- 99.01 Identify ways an e-commerce site can be used to develop and enhance customer relationships to encourage repeat business and brand loyalty.

100.0 EXPLAIN THE ROLE OF QUALITY, WARRANTIES AND GUARANTEES, AND E-COMMERCE USABILITY IN CUSTOMER SATISFACTION—The student will be able to:

- 100.0 Identify ways of keeping in touch with customers after the sale.
- 100.0 Explain the correlation between customer retention and acquisition costs.
- 100.0 Explain the use of CRM software in business-to-consumer and business-to-business operations.
- 100.0 Describe the influence of culture on consumer behavior.
- 100.0 Determine training needs for traditional sales staff for use on an e-commerce site.
- 100.0 Provide customer training for use of on-line buying.
- 100.0 Facilitate a customer service policy.
- 100.0 Explain the purpose of a call center for an online business.
- 100.0 Explain click-through rates and the role of visit duration on click decision.
- 100.1 Explain why and how consumer decision-making is influenced online.
- 100.1 Explain and evaluate the impact of online customer support.
- 100.1 Explain the 80/20 rule of customer support.
- 100.1 Use online methods to receive and respond to customers' questions (e-mail, mailbots, auto responder).
- 100.1 Enable consumer to choose communication vehicle (call home, work, cell, fax, e-mail).
- 100.1 Create Frequently Asked Questions (FAQs).
- 100.1 Use file libraries and archives.

- 100.17 Project a professional image (appearance, voice, grammar, word usage, enunciation, nonverbal communication).
- 100.18 Interact with customers and colleagues in a professional manner (prompt, friendly, courteous, respectful, helpful, knowledgeable, clear).
- 100.19 Explain how the Communications Decency Act applies to e-commerce issues.
- 100.20 Evaluate how online forums can promote customer relations.
- 100.21 Conduct conferences and surveys.
- 100.22 Use sales promotion (free samples, contests).
- 100.23 Provide links to complementary sites.
- 100.24 Discuss the benefits of an extranet.
- 100.25 Describe how Value Added Networks (VANs) operate.
- 100.26 Explain VAN-based EDI and Internet EDI.

101.0 DEVELOP COMMUNICATION SKILLS FOR AN INTERNATIONAL AUDIENCE—The student will be able to:

- 101.01 Identify the customs of the recipient that impact communication.
- 101.02 Find answers to questions related to international communications using available human, print, and electronic sources.
- 101.03 Prepare documents in correct style for international communications.
- 101.04 Use appropriate message and delivery in oral communications.

OCCUPATIONAL COMPLETION POINT - DATA CODE D

E-Commerce Web Assistant - SOC Code 15-1099.99

102.0 ANALYZE THE BUILDING BLOCKS OF A SECURE SYSTEM—The student will be able to:

- 102.01 Define system and network security.
- 102.02 Describe the different types of Internet security.
- 102.03 Explain and identify anti-virus programs.
- 102.04 Explain the difference between security and privacy.
- 102.05 List the principal protocols used in Internet security.
- 102.06 Explain Intrusion Detection System.
- 102.07 Define security-related terms.
- 102.08 Explain how a user identification and password provide security one-commerce sites.
- 102.09 Explain encryption, decryption, private key encryption and public key encryption.
- 102.10 Explain the difference between the two types of key encryptions.
- 102.11 Identify and explain data transmission technology and how it is used in web pages (SSL, TLS, SET).
- 102.12 Describe a SET enabled browser and a SET enabled server.
- 102.13 Explain the use of digital signatures and certificates.
- 102.14 Describe the certificate life cycle.
- 102.15 Develop a privacy policy that considers what information is being collected with and without the user's (IP address, personal data, demographics); why the data is needed (customization, administration, communication); when is it collected (forms, cookies, other locations); who will use the information (suppliers, sell or lease to others, third

parties); where will the information be housed (on-site, sent to data base); how can the data be removed or modified.

- 102.16 Describe procedures for maintaining the confidentiality of client information.
- 102.17 Explain why information is a competitive resource.
- 102.18 Explain the importance of data warehouses.
- 102.19 Discuss application security measures.
- 102.20 Describe the various messaging security techniques.
- 102.21 Define a Virtual Private Network and explain its features, its components, and how it is deployed.

103.0 DEMONSTRATE AN AWARENESS OF THE ISSUES AND TRENDS INVOLVED IN AN E-COMMERCE ENVIRONMENT—The student will be able to:

- 103.01 Discuss issues and trends impacting the economy and the success of e-commerce web sites.
- 103.02 Discuss reasons for slow productivity despite advancing technology.
- 103.03 Discuss the advantages/disadvantages of removing bugs from software already installed in information systems.
- 103.04 Discuss solutions to ease the shortage of technology workers.
- 103.05 Discuss factors faced by e-commerce companies when seeking funding.
- 103.06 Research current trends and issues impacting e-commerce nationally and globally.
- 103.07 Explain how the Communications Decency Act applies to e-commerce issues.
- 103.08 Research and discuss privacy issues faced by employees and consumers in today's electronic society.
- 103.09 Identify developing ethical and legal issues in e-commerce.
- 103.10 Explain the social, ethical, and legal implications of decisions made and actions taken as an e-commerce professional.
- 103.11 Discuss the advantages/disadvantages of affiliate programs.

104.0 ANALYZE EFFECTIVENESS AND PROFICIENCY OF WEB SITE--The student will be able to:

- 104.01 Explain why the website design is critical to the success of an e-commerce venture.
- 104.02 Define System Development Life Cycle (SDLC).
- 104.03 Explain the five major phases of a SDLC (Planning, Analysis, Design, Implementation, and Support).
- 104.04 Research and discuss activities performed during the planning, analysis, design, implementation, and support phase.
- 104.05 Discuss the necessity to correct major errors during the System Development Life Cycle (SDLC) of an e-commerce site.
- 104.06 Explain potential costs involved in correcting problems not caught during the SDLC.
- 104.07 Explain the use of web statistics in planning, management, marketing and developing/revising promotional strategy.
- 104.08 Determine site profitability over time.
- 104.09 Assess the impact of site on costs.

- 104.10 Determine if the site increases quality of customer service, builds brand and improves business image.
- 104.11 Explain advantage decision support systems (e.g., airlines use it to sum up flight history, aircraft wear, reduce traffic congestion).
- 104.12 Create an evaluation plan to measure the effectiveness of the Web site (page counters, logs, search engines, asking visitors how they found the site).
- 104.13 Determine methods to generate hit analysis data.
- 104.14 Evaluate sources of raw data for statistical web site analysis (HTTP server logs, web server hardware and operating system logs, network monitor logs, user registration databases, and third-party web site analysis services).
- 104.15 Calculate and analyze site effectiveness based on statistical hits and clickstream data.
- 104.16 Compose a report of relevant data that includes charts or graphs and presents conclusions.
- 104.17 Implement financial analysis techniques in decision making.
- 104.18 Implement non-financial analysis techniques in decision making.

105.0 DEMONSTRATE KNOWLEDGE OF E-COMMERCE LEGAL ISSUES—The student will be able to:

- 105.01 Explain the legal use of digital signatures for electronic contracting.
- 105.02 Discuss laws pertaining to security and privacy of data collected.
- 105.03 Explain consumer protection law.
- 105.04 Explain court jurisdictional issues related to e-commerce.
- 105.05 Identify the liability for invasion of privacy.
- 105.06 Describe confidentiality issues and their liability implications.
- 105.07 Explain legal and ethical issues related to consumer privacy.
- 105.08 Identify federal legislation protecting competition.
- 108.09 Identify major federal food and drug legislation affecting marketing strategies.

106.0 DEMONSTRATE KNOWLEDGE OF DISASTER PROTECTION METHODS—The student will be able to:

- 106.01 Identify the purpose of a server accelerator card.
- 106.02 Define noise, spike, brownout, and blackout.
- 106.03 Research ways to protect hardware from system failure.
- 106.04 Explain UPS and the importance of having one.
- 106.05 Discuss types of backups to prevent data loss.

107.0 ANALYZE METHODS OF WEB HOSTING--The student will be able to:

- 107.01 Compare the advantages/disadvantages and costs of self-hosting vs. web hosting.
- 107.02 Compare the advantages/disadvantages of using web development and design services.
- 107.03 Identify the qualities of server providers (uptime, technical support, connection time).

- 107.04 Identify and describe hardware necessary for web site hosting.
- 107.05 Design a sample business system architecture for a self-hosting web site.
- 107.06 Examine the requirements of Web, Commerce, Transaction and Database servers used in e-commerce.
- 107.07 Examine costs related to e-commerce (site design, maintenance and support).
- 107.08 Plan how to establish a domain name.
- 107.09 Upload files to the server.
- 107.10 Explain server capacity to support site options and user traffic.
- 107.11 Explain the process to e-commerce-enable a website.
- 107.12 Collect/analyze usage statistics.
- 107.13 Select hosting company based on set criteria.
- 107.14 Test site with different browsers.
- 107.15 Register site with various search engines/portals.
- 107.16 Revise design to reflect user feedback.

108.0 ANALYZE AND DEMONSTRATE THE APPLICATION OF E-COMMERCE SOFTWARE PACKAGES—The student will be able to:

- 108.01 Analyze project management software.
- 108.02 Evaluate software packages for Internet ads management.
- 108.03 Explain the use of CRM software in business-to-consumer and business-to-business-operations.
- 108.04 Identify the key functions of systems software.
- 108.05 Explain and identify widely used software applications (browsers, word processing, database management, spreadsheet development, CRM applications, web content development).
- 108.06 Identify new and emerging classes of software.
- 108.07 Identify software used in e-commerce.
- 108.08 Identify storefront software packages.
- 108.09 Identify selection criteria used for software purchases.
- 108.10 Identify differences between implementing an e-commerce site with an off-the-shelf software package vs. freeware CGI solutions.
- 108.11 Outline and explain business application tools and processes that can be used as part of a company's e-commerce solution.
- 108.12 Define site template.
- 108.13 Identify types of editor software used as a source of templates (HTML, Word Processor, WYSIWYG).
- 108.14 Identify advantages/disadvantages of using templates.
- 108.15 Identify online services that provide templates.
- 108.16 Identify storefront hosting services.
- 108.17 Differentiate between site templates and store templates.
- 108.18 Create an example site using a site template.
- 108.19 Create an example site using a store template.

109.0 DEMONSTRATE KNOWLEDGE OF NETWORK COMPONENTS—The student will be able to:

- 109.01 Identify the four components of a network operating system (server platform, network services software, network redirection software, communications software).

- 109.02 Define fat client and thin client.
- 109.03 Interpret basic networking terminology.
- 109.04 Identify the different types of Wide-Area Network (WAN) connections.
- 109.05 Describe point-to-point (PPP) interconnection.
- 109.06 Identify basic telecommunications services (satellite, circuit switching, packet switching, wireless).
- 109.07 Differentiate between local exchange carriers and interexchange carriers.
- 109.08 Define local access and transport areas.
- 109.09 Identify packet carriers and their services.
- 109.10 Identify the role of telecommunications tariffs.
- 109.11 Explain the role of the router in connecting to the Internet.
- 109.12 Explain the role of a Channel Service Unit/Data Service Unit.
- 109.13 Identify basic telecommunication bandwidths.
- 109.14 Describe the basics of ISDN, X.400, and DSL technologies.

110.0 MAINTAIN AN E-PORTFOLIO FOR JOB APPLICATION PURPOSES—The student will be able to:

- 110.01 Plan, design, and create e-commerce websites that include a theme, backgrounds, content, categories and product, text, graphics, graphic buttons, graphics as a form button, hyperlinks, form elements, company and contact information, navigation bars, navigation aids, a company logo, audio and video files, a host counter, frames.
- 110.02 Prepare and submit a résumé to use for online job applications.
- 110.03 Prepare and submit a letter of application online.

**Florida Department of Education
STUDENT PERFORMANCE STANDARDS**

Course Number: 8207310
Course Title: Introduction to Information Technology
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to provide an introduction to information technology concepts and careers as well as the impact information technology has on the world, people, and industry and basic web design concepts. The content includes information technology career research; operating systems and software applications; electronic communications including e-mail and Internet services; basic web commands and design; and emerging technologies. After successful completion of Introduction to Information Technology, students will have met Occupational Completion Point - Data Code A, General Office - SOC Code 43-9061.

INFORMATION SYSTEMS

02.0 DEMONSTRATE KNOWLEDGE, SKILL, AND APPLICATION OF INFORMATION SYSTEMS TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:

- 01.01 Develop keyboarding skills to enter and manipulate text and data.
- 01.02 Describe and use current and emerging computer technology and software to perform personal and business related tasks.
- 01.03 Identify and describe communications and networking systems used in workplace environments.
- 01.04 Use reference materials such as on-line help, vendor bulletin boards, tutorials, and manuals available for application software.
- 01.05 Troubleshoot problems with computer hardware peripherals and other office equipment.
- 01.07 Describe ethical issues and problems associated with computers and information systems.

WORKPLACE COMMUNICATIONS

02.0 DEMONSTRATE COMPREHENSION AND COMMUNICATION SKILLS-The student will be able to:

- 02.03 Use listening, speaking, telecommunication and nonverbal skills and strategies to communicate effectively with supervisors, co-workers, and customers.
- 02.62 Organize ideas and communicate oral and written messages appropriate for information technology environments.
- 02.63 Collaborate with individuals and teams to complete tasks and solve information technology problems.
- 02.64 Identify, define, and discuss professional information technology terminology appropriate for internal and external communications in an information technology environment.
- 02.65 Apply the writing process to the creation of appropriate documents following designated business formats.
- 02.66 Demonstrate an awareness of project management concepts and tools (e.g., timelines, deadlines, resource allocation, time management, delegation of tasks, collaboration, etc.).

03.0 USE TECHNOLOGY TO ENHANCE THE EFFECTIVENESS OF COMMUNICATION SKILLS-The student will be able to:

03.03 Use database, spreadsheet, presentation software, scheduling, and integrated software packages to enhance communication.

03.06 Respond to and utilize information derived from multiple sources (e.g., written documents, instructions, e-mail, voice mail) to solve business problems and complete business tasks.

MANAGEMENT

04.0 DEVELOP AN AWARENESS OF MANAGEMENT FUNCTIONS AND ORGANIZATIONAL STRUCTURES AS THEY RELATE TO TODAY'S WORKPLACE AND EMPLOYER/ EMPLOYEE ROLES-The student will be able to:

04.01 Explore, design, implement, and evaluate organizational structures and cultures. Explore and demonstrate an awareness of current trends in business and the employee's role in maintaining productive business environments in today's global workplace.

04.02 Collaborate with individuals and teams to complete tasks and solve business-related problems and demonstrate initiative, courtesy, loyalty, honesty, cooperation, and punctuality as a team member.

05.0 PRACTICE QUALITY PERFORMANCE IN THE LEARNING ENVIRONMENT AND THE WORKPLACE-The student will be able to:

05.01 Assess personal, peer and group performance and identify and implement strategies for improvement (e.g., organizational skills, note taking/outlining, advance organizers, reasoning skills, problem-solving skills, and decision-making skills).

05.02 Develop criteria for assessing products and processes that incorporate effective business practices (e.g., time management, productivity, total quality management).

06.0 INCORPORATE APPROPRIATE LEADERSHIP AND SUPERVISION TECHNIQUES, CUSTOMER SERVICE STRATEGIES, AND STANDARDS OF PERSONAL ETHICS TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:

06.03 Demonstrate awareness of the following workplace essentials: Quality customer service; business ethics; confidentiality of information; copyright violations; accepted workplace rules, regulations, policies, procedures, processes, and workplace safety, and appropriate attire and grooming.

MATHEMATICS AND FINANCE

07.0 APPLY MATHEMATICAL OPERATIONS AND PROCESSES AS WELL AS FINANCIAL PLANNING STRATEGIES TO COMMONLY OCCURRING SITUATIONS IN THE WORKPLACE TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE-The student will be able to:

07.01 Analyze, interpret, compile, and demonstrate the ability to present/communicate data in understandable and measurable terms using common statistical procedures.

07.02 Use common standards of measurement including the metric system in solving work-related or business problems (e.g., length, weight, currency, time).

- 07.03 Select and use the correct mathematical processes and tools to solve complex problem situations that are typical of business settings and use formulas when appropriate.

JOB READINESS AND CAREER DEVELOPMENT

- 08.0 ASSESS PERSONAL STRENGTHS AND WEAKNESSES AS THEY RELATE TO JOB OBJECTIVES, CAREER EXPLORATION, PERSONAL DEVELOPMENT, AND LIFE GOALS-The student will be able to:
 - 08.02 Use personal assessment tools to identify personal strengths and weaknesses related to learning and work environments.
 - 08.03 Analyze job and career requirements and relate career interests to opportunities in the global economy.
- 09.0 INCORPORATE KNOWLEDGE GAINED FROM INDIVIDUAL ASSESSMENT AND JOB/CAREER EXPLORATION TO DESIGN AN INDIVIDUAL CAREER PLAN THAT REFLECTS THE TRANSITION FROM SCHOOL TO WORK, LIFELONG LEARNING, AND PERSONAL AND PROFESSIONAL GOALS-The student will be able to:
 - 09.15 Research, compare, and contrast information technology career clusters (e.g., characteristics needed, skills required, education required, industry certifications, advantages and disadvantages of information technology careers, the need for information technology workers, etc.).
 - 09.16 Describe the variety of occupations and professions within the world of information technology including those where information technology is either in a primary focus or in a supportive role.
 - 09.17 Describe job requirements for the variety of occupations and professions within the global world of information technology.
 - 09.18 Analyze personal skills and aptitudes in comparison with information technology career opportunities.
 - 09.19 Refine and implement a plan to facilitate personal growth and skill development related to information technology career opportunities.
 - 09.20 Develop and maintain an electronic career portfolio, to include, but not limited to the Resume and Letter of Application.
- 10.0 DEMONSTRATE HUMAN RELATIONS/INTERPERSONAL SKILLS APPROPRIATE FOR THE WORKPLACE-The student will be able to:
 - 10.01 Accept constructive criticism.
 - 10.03 Demonstrate personal and interpersonal skills appropriate for the workplace (e.g., responsibility, dependability, punctuality, integrity, positive attitude, initiative, respect for self and others, professional dress, etc.).

WORK-BASED LEARNING

- 20.0 PARTICIPATE IN WORK-BASED LEARNING EXPERIENCES-The student will be able to:
 - 20.44 Participate in work-based learning experiences in an information technology environment.
 - 20.46 Discuss the use of technology in an information technology environment.

NETWORK/SOFTWARE SUPPORT

- 41.0 PERFORM E-MAIL ACTIVITIES-The student will be able to:

- 41.01 Describe e-mail capabilities and functions.
- 41.02 Identify components of an e-mail message.
- 41.03 Identify the components of an e-mail address.
- 41.04 Identify when to use different e-mail options.
- 41.05 Attach a file to an e-mail message.
- 41.06 Forward an e-mail message.
- 41.07 Use an address book.
- 41.08 Reply to an e-mail message.
- 41.09 Use the Internet to perform e-mail activities.
- 41.10 Identify the appropriate use of e-mail and demonstrate related e-mail etiquette.
- 41.12 Identify when to include information from an original e-mail message in a response.
- 41.13 Identify common problems associated with widespread use of e-mail.

42.0 DEMONSTRATE KNOWLEDGE OF DIFFERENT OPERATING SYSTEMS—The student will be able to:

- 42.01 Identify operating system file naming conventions.
- 42.10 Demonstrate proficiency with file management and structure (e.g., folder creation, file creation, backup, copy, delete, open, save).
- 42.12 Demonstrate a working knowledge of standard file formats.
- 42.14 Explain the history and purpose of various operating systems (e.g., DOS, Windows, Mac, and Unix/Linux).

WEB DESIGN

55.0 DEMONSTRATE PROFICIENCY NAVIGATING THE INTERNET, INTRANET, AND THE WWW—The student will be able to:

- 55.01 Identify and describe Web terminology.
- 55.10 Demonstrate proficiency in using the basic features of GUI browsers (e.g., setting bookmarks, basic configurations, e-mail configurations, address book).
- 55.11 Define Universal Resource Locators (URLs) and associated protocols (e.g., .com, .org, .edu, .gov, .net, .mil).
- 55.14 Describe and observe Internet/Intranet ethics and copyright laws and regulatory control.
- 55.15 Trace the evolution of the Internet from its inception to the present and into the future.
- 55.16 Demonstrate proficiency using search engines (e.g., Yahoo!, Google, Northern Light, Lycos, Excite, etc.).
- 55.17 Demonstrate proficiency using various web tools (e.g., downloading of files, transfer of files, telnet, PDF, etc.).
- 55.18 Identify effective Boolean search strategies.

56.0 DEMONSTRATE PROFICIENCY USING HTML COMMANDS—The student will be able to:

- 56.01 Identify elements of a Web page.
- 56.02 Describe individual Web page layouts and content (e.g., writing for the Web, Web structure).
- 56.03 Define basic HTML terminology.
- 56.04 Analyze HTML source code developed by others.
- 56.05 Create Web pages using basic HTML tags (e.g., links, lists, character styles, text alignment, and tables).
- 56.06 Use storyboarding techniques for subsequent Web pages (e.g., linear, hierarchical).

- 56.08 Edit and test HTML documents for accuracy and validity.
- 56.17 Use basic functions of WYSIWYG editors.
- 56.18 Use basic functions of HTML, DHTML, and XML editors and converters.
- 56.19 Enhance web pages through the addition of images and graphics including animation.

57.0 DEMONSTRATE PROFICIENCY IN PAGE DESIGN APPLICABLE TO THE WWW-The student will be able to:

- 57.01 Develop an awareness of acceptable Web page design, including index pages in relation to the rest of the Web site.
- 57.02 Describe and apply color theory as it applies to Web page design (e.g., background and text color).
- 57.04 Access and digitize graphics through various resources (e.g., scanner, digital cameras, on-line graphics, clipart, CD ROMs).
- 57.05 Use image design software to create and edit images.
- 57.25 Demonstrate proficiency in publishing to the Internet.
- 57.26 Demonstrate proficiency in adding downloadable forms to web pages.
- 57.27 Explain the need for web-based applications.

63.0 DEMONSTRATE PROFICIENCY USING SPECIALIZED WEB DESIGN SOFTWARE-The student will be able to:

- 63.01 Compare and contrast various specialized web design software (e.g., Flash, Shockwave, GoLive, Director, etc.).
- 63.02 Demonstrate use of various specialized web design software (e.g., Flash, Shockwave, GoLive, Director, etc.).

INFORMATION TECHNOLOGY

64.0 DEVELOP AN AWARENESS OF THE INFORMATION TECHNOLOGY INDUSTRY-The student will be able to:

- 64.01 Explain how information technology impacts the operation and management of business and society.
- 64.04 Explain the emergence of e-commerce and e-government and the potential impact on business and society.
- 64.05 Explain the emergence of a paperless society.

65.0 DEVELOP AN AWARENESS OF MICROPROCESSORS AND DIGITAL COMPUTERS-The student will be able to:

- 65.01 Describe the evolution of the digital computer.
- 65.02 Explain the general architecture of a microcomputer system.
- 65.03 Explain the evolution of microprocessors.
- 65.04 Explain software hierarchy and its impact on microprocessors.
- 65.05 Explain the need for and use of peripherals.
- 65.06 Demonstrate proficiency using peripherals.
- 65.07 Identify the basic concepts of computer maintenance and upgrades.
- 65.08 Differentiate between diagnosing and troubleshooting.

66.0 DEVELOP AN AWARENESS OF PROGRAMMING LANGUAGES-The student will be able to:

- 66.01 Explain the history of programming languages.
- 66.02 Explain the need for and use of compilers.
- 66.03 Explain how compilers work.

66.04 Identify the three types of programming design approaches (e.g., top-down, structured, and object-oriented).

67.0 DEVELOP AN AWARENESS OF EMERGING TECHNOLOGIES-The student will be able to:

67.01 Compare and contrast various methods of evaluation for emerging technologies.

67.02 Demonstrate knowledge of the process of planning upgrades and changeovers.

67.03 Compare and contrast emerging technologies and describe how they impact business in the global marketplace (e.g., wireless, wireless web, cell phones, portables/handhelds, smart appliances, home networks, peer-to-peer, etc.).

69.0 DEMONSTRATE AN UNDERSTANDING OF THE SEVEN LAYERS OF THE OPEN SYSTEMS INTERFACE (OSI) MODEL-The student will be able to:

69.01 Describe the evolution of OSI from its inception to the present and into the future.

69.02 Explain the interrelations of the seven layers of the Open Systems Interface (OSI) as it relates to hardware and software.

69.04 Identify types of networks and how they work.

69.06 Identify the role of servers and clients on a network.

69.07 Identify benefits and risks of networked computing.

69.08 Identify the relationship between computer networks and other communications networks (i.e. telephone systems).

69.09 Identify Intranets, Extranets and how they relate to the Internet.

69.11 Demonstrate basic understanding of network administration.

SOFTWARE APPLICATIONS

70.0 DEMONSTRATE PROFICIENCY USING COMMON SOFTWARE APPLICATIONS-The student will be able to:

70.01 Compare and contrast the appropriate use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music, etc.).

70.02 Demonstrate proficiency in the use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music, etc.).

71.0 DEMONSTRATE PROFICIENCY USING SPECIALIZED SOFTWARE APPLICATIONS-The student will be able to:

71.01 Compare and contrast the appropriate use of specialized software applications (e.g., (OLTP, Computer Aided Design, Computer Aided Manufacturing, 3D animation process control, materials management, etc.).

71.02 Demonstrate awareness of specialized software applications (e.g., OLTP, Computer Aided Design, Computer Aided Manufacturing, 3D animation, process control, materials management, etc.)

71.06 Demonstrate the ability to incorporate digital sound.

**Florida Department of Education
STUDENT PERFORMANCE STANDARDS**

Secondary Course Number: 8200340
Course Title: Introduction to Electronic-Commerce
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to provide an introduction to Electronic-Commerce (E-Commerce). This course covers topics such as history and evolution of e-commerce; e-commerce business models; impact of e-commerce in the world economy; security and tax issues in e-commerce; and e-commerce web site design, development and maintenance. OCP B - E-Commerce Web Assistant SOC Code - 43-4051

72.0 DEMONSTRATE KNOWLEDGE OF THE INTERNET TO ENHANCE WORKPLACE PERFORMANCE—The student will be able to:

- 72.01 Explain the history of the Internet and development of e-commerce.
- 72.02 Discuss the social, economic, and political impact of the Internet on society.
- 72.03 Explain the relationship between the Internet and the World Wide Web.
- 72.04 Identify accepted Internet etiquette (i.e., netiquette).
- 72.05 Identify and describe Web terminology.
- 72.06 Identify the differences between the Internet, Intranet and WWW.
- 72.07 Describe and demonstrate the use of the different methods by which information may be accessed on the Internet/Intranet (browser, FTP, gopher, telnet, server).
- 72.08 Explain the main elements of Web Browsers (example: status bar, refresher button, toolbar tabs, scroll bars, location field, title bar, bookmarks).
- 72.09 Copy information from the Internet/Intranet, save, and print using a Web browser.
- 72.10 Identify and use search engines to locate information.
- 72.11 Define Web robot/bot/spider and identify its advantages.
- 72.12 Explain the difference between a search engine and a web directory.

73.0 DEMONSTRATE KNOWLEDGE OF E-COMMERCE PRINCIPLES—The student will be able to:

- 73.01 Define Electronic Commerce (e-commerce).
- 73.02 Explain domain name and why it is important to e-commerce sites.
- 73.03 Identify and describe the difference between 'brick-and-mortar' and 'click-and-mortar' businesses.
- 73.04 Describe business-to-business e-commerce.
- 73.05 Describe business-to-consumer e-commerce.
- 73.06 Define the scope of business-to-consumer e-commerce.
- 73.07 Identify the components of a successful business-to-consumer e-commerce site.
- 73.08 Identify and discuss issues associated with business-to-consumer e-commerce.
- 73.09 Describe the difference between e-tailing and wholesaling.
- 73.10 Explain how e-commerce is similar to and/or different from traditional commerce.
- 73.11 Identify types of businesses most likely to succeed online.

- 74.0 DEVELOP AN AWARENESS OF CAREER OPPORTUNITIES AND OPTIONS IN E-COMMERCE AND THE CRITERIA FOR ENTERING THOSE FIELDS—The student will be able to:**
- 74.01 Identify entry-level positions in e-commerce.
 - 74.02 Identify education, skills, and training requirements for possible career pathways in e-commerce.
 - 74.03 Identify present and future employment opportunities.
 - 74.04 Compare salary ranges and benefit packages.
 - 74.05 Design a personal career ladder in e-commerce with a time-line for career advancement.
 - 74.06 Identify professional organizations in the area of e-commerce.
 - 74.07 Define the role of a webmaster.
 - 74.08 Identify job titles and describe the job functions of a web development team.
- 41.0 PERFORM E-MAIL ACTIVITIES.—The student will be able to:**
- 41.14 Describe e-mail capabilities and functions.
 - 41.15 Explain how to setup an e-mail address.
 - 41.16 Explain the rules for using e-mail on the Internet.
 - 41.17 Describe the issues involved in sending and receiving documents as e-mail attachments.
 - 41.18 Use the Internet to perform e-mail activities.
 - 41.19 Utilize all applicable e-mail options and functions (forward, reply, attach, address book).
 - 41.20 Organize and manage e-mail messages.
 - 41.21 Explain some abbreviations, acronyms and emoticons used in e-mail.
 - 41.22 Explain the purpose of an e-mail signature and how to create one.
- 76.0 IDENTIFY THE CHALLENGES AND ISSUES ASSOCIATED WITH E-COMMERCE BUSINESS MODELS — The student will be able to:**
- 76.01 Explain the scope of e-commerce and how it relates to business operations.
 - 76.02 Explain how the self-serve economy impacts e-commerce.
 - 76.03 Discuss the global impact of e-commerce.
 - 76.04 Identify ways e-commerce sites can develop and enhance customer relationships to encourage repeat business and brand loyalty.
 - 76.05 Explain why the main purpose of any e-commerce site is to transform surfers into customers.
 - 76.06 Identify the range of costs associated with developing an e-commerce site.
 - 76.07 Identify security issues involved in developing a site (firewalls, sniffer programs, hacking, viruses, encryption, SSL, TLS, digital certificates).
 - 76.08 Explain why web site design is critical to the success of an e-commerce venture.
 - 76.09 Discuss advantages/disadvantages of using an e-commerce developer or an in-house web team to design and maintain a site.
 - 76.10 Define SET and compare it to SSL.
 - 76.11 Explain how PGP works.
 - 76.12 Define Structured Query Language (SQL).
 - 76.13 Explain how SQL enables users on the Internet.
 - 76.14 Define electronic payment.
 - 76.15 Discuss customer security and privacy issues when providing financial information on the Internet.

- 76.16 Explain different payment methods available for online purchase (credit card, e-check, e-cash, smart card, electronic wallets, virtual credit cards).
- 76.17 Explain the Electronic Funds Transfer Act and its application to online payments.

77.0 DEVELOP AN ONLINE MARKETING PLAN—The student will be able to:

- 77.01 Identify trends in e-marketing.
- 77.02 Define marketing-related terms.
- 77.03 Describe the affect of e-mail and spamming on marketing in e-commerce sites.
- 77.04 Identify legal, ethical and privacy issues in online marketing.
- 77.05 Explain target marketing and niche marketing in relation to e-commerce.
- 77.06 Describe customer profiling and related issues.
- 77.07 Identify the various types of advertising options in e-commerce (links, banner ads, affiliate programs, pop-up windows, viral marketing, newsgroup postings).
- 77.08 Describe electronic marketing techniques.
- 77.09 Identify types of and describe the use of databases in e-commerce sites.
- 77.10 Explain how electronic catalogs work Internet sales.
- 77.11 Explain database-driven system and describe its advantages over a static catalog.
- 77.12 Analyze e-commerce solutions including shopping carts, electronic malls, order entry systems, full cost display and smart cards.
- 77.13 Identify, define and discuss shipping options for an e-commerce web site.

78.0 DEMONSTRATE AN AWARENESS OF THE ISSUES INVOLVED IN A GLOBAL/INTERNATIONAL E-COMMERCE ENVIRONMENT—The student will be able to:

- 78.01 Define and discuss the advantages of global/international e-commerce.
- 78.02 Describe the implications of trade barriers on global e-commerce.
- 78.03 Describe the effect of currency exchange rates on international e-commerce.
- 78.04 Identify cultural attitudes and practices in the USA that could inhibit successful business operations in another country.
- 78.05 Describe changes in American business practices required for success in the global marketplace.
- 78.06 Identify and discuss import, export, and international tax laws and their affect on e-commerce trade.
- 78.08 Analyze multi-cultural influences on global e-commerce.

79.0 RESEARCH THE PLAN AND DESIGN OF AN E-COMMERCE WEB PAGE—The student will be able to:

- 79.01 Research web site design principles and explain how each contributes towards an effective web site.
- 79.02 Compare and contrast positive and negative features of different web sites.
- 79.03 Identify elements of a web page.
- 79.04 Plan the goals, structure and design of the web site.
- 79.05 Determine business goals for the e-commerce site.
- 79.06 Determine product assortment, incentive, pricing, payment and shipping options.
- 79.07 Develop a storyboard for the web site.
- 79.08 Explain the importance of loading time as an element of web site design.

79.09 Define HTML, DHTML, XML, VRML, WEB PAGE DESIGN SOFTWARE and how each can be effectively used in creating an e-commerce web site.

80.0 CREATE AN E-COMMERCE WEB SITE—The student will be able to:

- 80.01 Create a business for an e-commerce site.
- 80.02 Create a web page.
- 80.03 Create and apply a custom theme and a solid color background.
- 80.04 Create a logo.
- 80.05 Add clip art, graphics, images and/or photos and text.
- 80.06 Add animation to text and objects using DHTML.
- 80.07 Utilize navigation aids and plug-ins.
- 80.08 Add graphic buttons.
- 80.09 Add form elements.
- 80.10 Add graphics as a form button.
- 80.11 Link buttons and forms.
- 80.12 Embed audio and video files.
- 80.13 Add a host counter to display the number of times the web page has been visited.
- 80.14 Organize information using frames.
- 80.15 Launch the web browser and view the page created.
- 80.16 Test the website for effectiveness (loading time, graphics, link integrity).

81.0 APPLY SKILLS THAT WILL ENHANCE THE PRESENTATION, VALUE AND PROFITABILITY OF THE WEB SITE—The student will be able to:

- 81.01 Develop site personality (create useful site content).
- 81.02 Discuss the advantages and disadvantages of outsourcing vs. an in-house team to create and manage the e-commerce site.
- 81.03 Determine customer service options (e.g., e-mail, phone, fax).
- 81.04 Determine the terms and conditions of sale, including warranties, after-sales service, and privacy assurances.
- 81.05 Explain client-side application.
- 81.06 Explain the purpose of forms in e-commerce web sites.
- 81.07 Design forms for e-commerce web sites using different procedures for constructing forms (HTML tags, Software programs).
- 81.08 Use JavaScript to validate data in form fields.
- 81.09 Use programming tools to make web site more powerful and interactive.
- 81.10 Explain the difference between dynamic and static web programming.
- 81.11 Use programming language to support multi-tasking and exception handling.
- 81.12 Create a site map and explain its importance.
- 81.13 Create a Frequently Asked Questions Page.

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Secondary Course Number: 8200350
Course Title: E-Commerce Entrepreneurship
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to provide the tools necessary to create an e-commerce site by developing, analyzing and implementing a business plan. This course covers topics such as business plan development and implementation, human resources, marketing, Internet advertisement, financial management, pricing and selling of product or service, payment methods, mobile commerce, and customer service. OCP C - E-Commerce Entrepreneur SOC Code 13-1199

08.0 APPLY MATHEMATICAL OPERATIONS AND PROCESSES AS WELL AS FINANCIAL PLANNING STRATEGIES TO COMMONLY OCCURRING SITUATIONS IN THE WORKPLACE TO ACCOMPLISH JOB OBJECTIVES AND ENHANCE WORKPLACE PERFORMANCE--The student will be able to:

- 08.13 Monitor expense accounts.
- 08.14 Prepare and interpret balance sheets, income statements, cash-flow statements, change-in-equity statements, forecasts, break-even analyses and budgets.
- 08.15 Document the impact of financial analysis on the strategic planning process.
- 08.16 Revise short-term and long-term strategic plans based on financial analyses.

80.0 CREATE AN E-COMMERCE WEBSITE--The student will be able to:

- 80.17 Edit web pages.
- 80.18 Use appropriate file names for the Internet.
- 80.19 Explain optimization of files for load time.
- 80.20 Differentiate between pixels and KB as it relates to graphic size.
- 80.21 Explain the purpose of Common Gateway Interface (CGI) script and Active Server Pages (ASP) in e-commerce web sites.
- 80.22 Demonstrate the use of Java Applets in an e-commerce site.
- 80.23 Define Java Script and explain its role in e-commerce sites.
- 80.24 Demonstrate the use of data-processing tools to perform specific tasks with information that customers enter into a web site.
- 80.25 Explain the use of Common Gateway Interface script in processing data on web sites.
- 80.26 Explain the use of Active Server Pages (ASP) in processing data in web sites.
- 80.27 Define ActiveX and indicate its advantages/disadvantages.
- 80.28 Locate a host site that offers free web space.
- 80.29 Upload web pages to the Internet.

84.0 DEVELOP AND IMPLEMENT A BUSINESS PLAN FOR AN E-COMMERCE SITE--The student will be able to:

- 84.01 Identify types of businesses most likely to succeed online.
- 84.02 Identify the range of costs associated with developing an e-commerce site.

- 84.03 Identify the risks/rewards associated with online business.
- 84.04 Identify legal and political environments that affect e-commerce.
- 84.05 Describe the process of obtaining a business license for an e-commerce site.
- 84.06 Distinguish between trademark and copyright.
- 84.06 Identify federal legislation protecting competition.
- 84.07 Explain the concepts and benefits of e-business systems.
- 84.08 Describe and explain the use of e-business systems to achieve the goals of Enterprise Resource Planning (ERP).
- 84.09 Define the purpose of and describe the major components included in a business plan.
- 84.10 Develop a basic business plan.
- 84.11 Evaluate the plan using milestones and benchmarks.
- 84.12 Develop overall marketing objectives.
- 84.13 Evaluate online catalog implementation methodologies.
- 84.14 Coordinate and plan an evaluation of promotional activities.

85.0 PERFORM HUMAN RESOURCES MANAGEMENT ACTIVITIES TO BUILD INTERPERSONAL SKILLS WITH INDIVIDUALS AND TEAMS—The student will be able to:

- 85.01 Compare personal interests and skills with those needed by an entrepreneur.
- 85.02 Determine motives for becoming an entrepreneur.
- 85.03 Examine characteristics of online entrepreneurs.
- 85.04 Explain ethical and legal issues faced by e-commerce professionals.
- 85.05 Explain the social implications of decisions made and actions taken as an e-commerce professional.
- 85.06 Identify the major functions and activities of management.
- 85.07 Explain the role of authority, accountability, and responsibility in task management.
- 85.08 Describe current and emerging e-commerce management trends.
- 85.09 Analyze the interdependence of empathetic listening, synergy, and consensus building.
- 85.10 Promote teamwork, leadership, empowerment, and strategies for fostering creativity.
- 85.11 Define the roles within the group in the decision-making process.

86.0 EVALUATE MARKET EXPANSION TO THE INTERNET AND THE EFFECT OF GLOBAL ACCESS ON E-COMMERCE--The student will be able to:

- 86.01 Evaluate the impact of multiple time zones, languages, currencies, social, and cultural issues on e-commerce.
- 86.02 Analyze the concept of personalization in e-commerce.
- 86.03 Identify e-commerce site components that influence branding (logo, graphic style, online customer service, product information, site navigation, testing, core values).
- 86.04 Integrate logos, slogans, URL, etc., throughout offline and online publications and advertising.
- 86.05 Identify products, which are most likely to succeed in an e-commerce venture.
- 86.06 Compare and contrast traditional product development with online product development.
- 86.07 Explain the need for differing development cycles for online products.
- 86.08 Describe rapid release marketing introduction strategies.
- 86.09 Explain the Gutenberg Diagonal and its international implications.

87.0 DEMONSTRATE KNOWLEDGE OF BASIC MARKET RESEARCH TOOLS--The student will be able to:

- 87.01 Identify the steps of market research.
- 87.02 Describe market research as both a formal and informal process.
- 87.03 Identify common market research activities and the type of information each provides.
- 87.04 Explain the role of ethics in marketing research.
- 87.05 Explain internal/external research and the advantages/disadvantages of each.
- 87.06 Explain factors limiting market research (objectives, level of commitment, resources available).
- 87.07 Develop a sampling plan (who, how many, how chosen).
- 87.08 Establish means to identify customer base and marketing profile.

88.0 DEMONSTRATE KNOWLEDGE OF DATA COLLECTION METHODS--The student will be able to:

- 88.01 Explain the differences in data generated from surveys and questionnaires collected over the telephone, by mail, online, and in person.
- 88.02 Explain the purpose and types of observational research and focus groups.
- 88.03 Determine priorities for and potential sources of information that should be gathered.
- 88.04 Explain target audience/user group as a key information source.
- 88.05 Conduct interviews with selected human information sources.
- 88.06 Gather information from selected print and electronic sources.
- 88.07 Determine the accuracy and completeness of the information gathered.
- 88.08 Define Electronic Data Interchange (EDI).
- 88.09 Identify the benefits and essential elements of EDI.
- 88.10 Define EDI transaction sets and data elements.
- 88.11 Describe the different standards governing EDI transactions.
- 88.12 Define data mining.
- 88.13 Identify basic tools and techniques of data mining.
- 88.14 Explain the use of data mining in Customer Relationship Management (CRM).
- 88.15 Identify ethical issues of data mining.

89.0 DEMONSTRATE KNOWLEDGE OF ADVERTISING PRINCIPLES--The student will be able to:

- 89.01 Publicize e-commerce site through non-Internet means such as mail, press release, broadcast media, print media, and specialty advertising.
- 89.02 Prepare a display advertisement for an e-commerce product or service.
- 89.03 Create offline ads for an e-commerce product or service.
- 89.04 Create online ads for an e-commerce product or service.
- 89.05 Write a news release to promote an e-commerce business.
- 89.06 Analyze the nature of direct advertising strategies (direct mail, e-mail, automated callers, faxes, catalogs).
- 89.07 Identify factors affecting the cost of e-mail advertising.
- 89.08 Identify factors affecting the cost of newspaper ads, magazine ads, radio ads, television ads, direct mail advertising, outdoor ads, and Internet advertising.
- 89.09 Differentiate between publicity and public relations.
- 89.10 Describe the impact of the Internet on publicity.
- 89.11 Identify niche advertising.
- 89.12 Discuss the role of online communities.
- 89.13 Examine the use, sources, and costs of databases in advertising.
- 89.14 Identify the difference between business-to-business and business-to-consumer advertising.

90.0 DEMONSTRATE PROFICIENCY IN WEB SITE PROMOTION OF AN E-COMMERCE SITE--The student will be able to:

- 90.01 Research site development methodology.
- 90.02 Demonstrate site registration with search engines, shopping bots, and Web directories.
- 90.03 Identify processes to improve visibility in search engines (meta tags, titling, keyword repetition, content management, site design, and link popularity).
- 90.04 Evaluate legal effects of registration (spamming, duplication).
- 90.05 Establish and manage links with other sites.
- 90.06 Determine methods to generate hit analysis data.
- 90.07 Determine whether to offer response incentives.
- 90.08 Determine what type of response incentives to offer.
- 90.09 Use design elements and principles to facilitate use and buying decision.
- 90.10 Provide company information and update frequently.

91.0 DEFINE THE BUILDING BLOCKS OF A SECURE SYSTEM--The student will be able to:

- 91.01 Define terms associated with system security (user authentication, data origin authentication, confidentiality, data integrity, non-repudiation, peer authentication, message digests).
- 91.02 Describe security and privacy issues in e-business systems.
- 91.03 Explain the difference between security and privacy.
- 91.04 Explain how Internet and Intranet sites become vulnerable to attack.
- 91.05 Identify security issues associated with business-to-consumer e-commerce.
- 91.06 Describe Intrusion Detection System, misuse intrusion, and anomaly intrusion.
- 91.07 Explain transaction security.
- 91.08 Explain security-related agencies and software.
- 91.09 Explain how privacy affects personalization.
- 91.10 Identify security and payment processing issues involved in developing a site (SSL, Digital Certificates, SET Protocol, Cyber Cash).

92.0 DEMONSTRATE KNOWLEDGE, SKILL, MANAGEMENT AND APPLICATION OF AN INTERNET ADVERTISING CAMPAIGN--The student will be able to:

- 92.01 Analyze the types, advantages, and disadvantages of Internet advertising (interacting personally and wireless network).
- 92.02 Evaluate locations for ad placement (search engines, directories, specialty websites, sponsorship websites).
- 92.03 Identify factors affecting the cost of e-mail advertising and banner ads (click-through pricing, bartering, Internet Advertising Bureau rate cards, audience demographics).
- 92.04 Identify standard sizes for Internet ads.
- 92.05 Identify file formats for graphic ads.
- 92.06 Define goal of Internet ads (banners, buttons).
- 92.07 Create Internet ads using layers to create simple animation, a tagline, and design features to gain attention.
- 92.08 Create design that encourages customer order.
- 92.09 Place Internet ads, evaluate results, and cost effectiveness.
- 92.10 Compare potential effectiveness with other Internet strategies.

93.0 ANALYZE FINANCIAL DATA RELEVANT TO E-COMMERCE DECISION MAKING--The student will be able to:

- 93.01 Explain the critical nature of banking relationships.
- 93.02 Explain the purpose and importance of obtaining business financing.
- 93.03 Describe sources of financing for businesses.
- 93.04 Describe electronic financial services.
- 93.05 Use the Internet to locate sources of financing for businesses.
- 93.06 Examine the costs of owning/running a server.
- 93.07 Examine the costs of using an Internet Service Provider (ISP).
- 93.08 Examine costs related to e-commerce (site design, maintenance, and support).
- 93.09 Explain costs of interfacing with existing databases, order systems, and accounting systems.
- 93.10 Explain profitability in e-commerce sites.
- 93.11 Explain the financial implications of outsourcing vs. internal development.

94.0 IDENTIFY PRINCIPLES OF PRICING—The student will be able to:

- 94.01 Explain the nature and scope of the pricing function, the role of business ethics and the use of technology in pricing.
- 94.02 Identify the basic considerations consumers and businesses weigh in accepting a price.
- 94.03 Explain how supply, demand, and price are related.
- 94.04 Research and analyze competitors' prices.
- 94.05 Evaluate psychological and discount pricing techniques.
- 94.06 Describe geographic and promotional pricing techniques.
- 94.07 Calculate product cost, break-even point, and elasticity of demand.
- 94.08 Evaluate difficulties in applying traditional pricing strategies to e-commerce.
- 94.09 Evaluate characteristics, goals, advantages and disadvantages of cost-based pricing, demand-based, competition-based, product mix, product change, segmented (customer segmented, location, time), and the impact of e-commerce on pricing strategies.
- 94.10 Evaluate the relationship between shipping costs and prices in online sales.
- 94.11 Evaluate the impact of pricing errors in e-commerce.
- 94.12 Explain real-time pricing in the online environment.

95.0 IDENTIFY PRINCIPLES OF SELLING—The student will be able to:

- 95.01 Explain the purpose, importance and business ethics of selling.
- 95.02 Describe the nature of selling regulations.
- 95.03 Describe the use of technology in the selling function.
- 95.04 Identify the benefits of site/online sales.
- 95.05 Explain the role of customer service as a component of selling relationships.
- 95.06 Identify key factors in building a clientele.
- 95.07 Identify incentives for sales staff.
- 95.08 Identify types of sales promotion (coupons, premiums, sweepstakes) and it can be used in e-commerce.
- 95.09 Determine when sales promotion activities are the best promotional tool.
- 95.10 Generate a sales promotion plan for an e-commerce site.
- 95.11 Calculate the costs of sales promotion activities.
- 95.12 Identify return on investment of sales promotion activities.
- 95.13 Create an electronic sales presentation with an integrated Internet link.
- 95.14 Evaluate effectiveness of integration.
- 95.15 Use on-line strategies for follow-up.
- 95.16 Examine automated follow-up.

95.17 Prepare and evaluate sales reports.

96.0 ANALYZE ELECTRONIC PAYMENT MECHANISMS—The student will be able to:

- 96.01 Identify e-cash terminology.
- 96.02 Describe stored-value cards, online checks and electronic wallets.
- 96.03 Define realtime processing.
- 96.04 Explain the purpose of auto e-mail.
- 96.05 Describe risks and costs involved with credit card use online.
- 96.06 Identify the advantages/disadvantages of electronic/digital cash.
- 96.07 Evaluate the impact of multiple currencies on e-commerce.
- 96.08 Describe electronic funds transfer at point of sale (EFT/POS).
- 96.09 Describe direct data entry transmissions and financial electronic data interchanges (F-EDI).
- 96.10 Describe the characteristics of successful payment systems.
- 96.11 Identify future trends in and risks associated with electronic payment systems.
- 96.12 Differentiate between the payment systems applicable for business-to-consumer, business-to-business, and consumer-to-consumer transactions.
- 96.13 Describe a transaction-processing service.
- 96.14 Explain Internet Transaction Brokers (ITBs).
- 96.15 Explain the Electronic Funds Transfer Act and its application to online payments.
- 96.16 Describe a turnkey system.
- 96.17 Define Merchant Account Provider (MAP).
- 96.18 Identify costs associated with a merchant service and/or third-party verifier agreement.
- 96.19 Locate an online application for a merchant account.
- 96.20 Define related terms (Card Not Present (CNP), Mail Order/Telephone Order (MOTO), real time and digital certificate).
- 96.21 Explain verification activities.

97.0 ANALYZE TAXATION ISSUES RELEVANT TO E-COMMERCE—The student will be able to:

- 97.01 Define permanent establishment.
- 97.02 Explain permanent establishment issues in e-commerce.
- 97.03 Identify the issues of digital downloads.
- 97.04 Describe international issues.
- 97.05 Identify global taxation solutions.
- 97.06 Explain Value Added Tax.
- 97.07 Explain the Internet Tax Freedom Act (ITFA).
- 97.08 Determine payment options that comply with legal regulations regarding sales taxes.

98.0 DESCRIBE MOBILE COMMERCE—The student will be able to:

- 98.01 Define mobile-commerce.
- 98.02 Define related terms (personal digital assistant, micro browser, Wireless Application Protocol/WAP).
- 98.03 Identify m-commerce payment methods.
- 98.04 Identify the challenges associated with M-Commerce.
- 98.05 Compare WML with HTML.
- 98.06 Identify attributes of mobile communications and how each will affect mobile commerce.

99.0 DEMONSTRATE AN UNDERSTANDING OF GLOBAL CONCEPTS RELEVANT TO CUSTOMER RELATIONSHIP MANAGEMENT (CRM)—The student will be able to:

99.01 Identify ways an e-commerce site can be used to develop and enhance customer relationships to encourage repeat business and brand loyalty.

100.0 EXPLAIN THE ROLE OF QUALITY, WARRANTIES AND GUARANTEES, AND E-COMMERCE USABILITY IN CUSTOMER SATISFACTION—The student will be able to:

- 100.01 Identify ways of keeping in touch with customers after the sale.
- 100.02 Explain the correlation between customer retention and acquisition costs.
- 100.03 Explain the use of CRM software in business-to-consumer and business-to-business operations.
- 100.04 Describe the influence of culture on consumer behavior.
- 100.05 Determine training needs for traditional sales staff for use on an e-commerce site.
- 100.06 Provide customer training for use of on-line buying.
- 100.07 Facilitate a customer service policy.
- 100.08 Explain the purpose of a call center for an online business.
- 100.09 Explain click-through rates and the role of visit duration on click decision.
- 100.10 Explain why and how consumer decision-making is influenced online.
- 100.11 Explain and evaluate the impact of online customer support.
- 100.12 Explain the 80/20 rule of customer support.
- 100.13 Use online methods to receive and respond to customers' questions (e-mail, mailbots, auto responder).
- 100.14 Enable consumer to choose communication vehicle (call home, work, cell, fax, e-mail).
- 100.15 Create Frequently Asked Questions (FAQs).
- 100.16 Use file libraries and archives.
- 100.17 Project a professional image (appearance, voice, grammar, word usage, enunciation, nonverbal communication).
- 100.18 Interact with customers and colleagues in a professional manner (prompt, friendly, courteous, respectful, helpful, knowledgeable, clear).
- 100.19 Explain how the Communications Decency Act applies to e-commerce issues.
- 100.20 Evaluate how online forums can promote customer relations.
- 100.21 Conduct conferences and surveys.
- 100.22 Use sales promotion (free samples, contests).
- 100.23 Provide links to complementary sites.
- 100.24 Discuss the benefits of an extranet.
- 100.25 Describe how Value Added Networks (VANs) operate.
- 100.26 Explain VAN-based EDI and Internet EDI.

101.0 DEVELOP COMMUNICATION SKILLS FOR AN INTERNATIONAL AUDIENCE—The student will be able to:

- 101.01 Identify the customs of the recipient that impact communication.
- 101.02 Find answers to questions related to international communications using available human, print, and electronic sources.
- 101.03 Prepare documents in correct style for international communications.
- 101.04 Use appropriate message and delivery in oral communications.

**Florida Department of Education
STUDENT PERFORMANCE STANDARDS**

Secondary Course Number: 8200360
Course Title: E-Commerce Systems Analysis and Design
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to provide a systematic overview of analysis and design factors, as well as trends and issues impacting the effectiveness, efficiency and profitability of e-commerce web sites. OCP D - E-Commerce Customer Service
 SOC Code - 15-1099

102.0 ANALYZE THE BUILDING BLOCKS OF A SECURE SYSTEM—The student will be able to:

- 102.01 Define system and network security.
- 102.02 Describe the different types of Internet security.
- 102.03 Explain and identify anti-virus programs.
- 102.04 Explain the difference between security and privacy.
- 102.05 List the principal protocols used in Internet security.
- 102.06 Explain Intrusion Detection System.
- 102.07 Define security-related terms.
- 102.08 Explain how a user identification and password provide security one-commerce sites.
- 102.09 Explain encryption, decryption, private key encryption and public key encryption.
- 102.10 Explain the difference between the two types of key encryptions.
- 102.11 Identify and explain data transmission technology and how it is used in web pages (SSL, TLS, SET).
- 102.12 Describe a SET enabled browser and a SET enabled server.
- 102.13 Explain the use of digital signatures and certificates.
- 102.14 Describe the certificate life cycle.
- 102.15 Develop a privacy policy that considers *what* information is being collected with and without the user's (IP address, personal data, demographics); *why* the data is needed (customization, administration, communication); *when* is it collected (forms, cookies, other locations); *who* will use the information (suppliers, sell or lease to others, third parties); *where* will the information be housed (on-site, sent to data base); *how* can the data be removed or modified.
- 102.16 Describe procedures for maintaining the confidentiality of client information.
- 102.17 Explain why information is a competitive resource.
- 102.18 Explain the importance of data warehouses.
- 102.19 Discuss application security measures.
- 102.20 Describe the various messaging security techniques.
- 102.21 Define a Virtual Private Network and explain its features, its components, and how it is deployed.

103.0 DEMONSTRATE AN AWARENESS OF THE ISSUES AND TRENDS INVOLVED IN AN E-COMMERCE ENVIRONMENT—The student will be able to:

- 103.01 Discuss issues and trends impacting the economy and the success of e-commerce web sites.
- 103.02 Discuss reasons for slow productivity despite advancing technology.

- 103.03 Discuss the advantages/disadvantages of removing bugs from software already installed in information systems.
- 103.04 Discuss solutions to ease the shortage of technology workers.
- 103.05 Discuss factors faced by e-commerce companies when seeking funding.
- 103.06 Research current trends and issues impacting e-commerce nationally and globally.
- 103.07 Explain how the Communications Decency Act applies to e-commerce issues.
- 103.08 Research and discuss privacy issues faced by employees and consumers in today's electronic society.
- 103.09 Identify developing ethical and legal issues in e-commerce.
- 103.10 Explain the social, ethical, and legal implications of decisions made and actions taken as an e-commerce professional.
- 103.11 Discuss the advantages/disadvantages of affiliate programs.

104.0 ANALYZE EFFECTIVENESS AND PROFICIENCY OF WEB SITE--The student will be able to:

- 104.01 Explain why the website design is critical to the success of an e-commerce venture.
- 104.02 Define System Development Life Cycle (SDLC).
- 104.03 Explain the five major phases of a SDLC (Planning, Analysis, Design, Implementation, and Support).
- 104.04 Research and discuss activities performed during the planning, analysis, design, implementation, and support phase.
- 104.05 Discuss the necessity to correct major errors during the System Development Life Cycle (SDLC) of an e-commerce site.
- 104.06 Explain potential costs involved in correcting problems not caught during the SDLC.
- 104.07 Explain the use of web statistics in planning, management, marketing and developing/revising promotional strategy.
- 104.08 Determine site profitability over time.
- 104.09 Assess the impact of site on costs.
- 104.10 Determine if the site increases quality of customer service, builds brand and improves business image.
- 104.11 Explain advantage decision support systems (e.g., airlines use it to sum up flight history, aircraft wear, reduce traffic congestion).
- 104.12 Create an evaluation plan to measure the effectiveness of the Web site (page counters, logs, search engines, asking visitors how they found the site).
- 104.13 Determine methods to generate hit analysis data.
- 104.14 Evaluate sources of raw data for statistical web site analysis (HTTP server logs, web server hardware and operating system logs, network monitor logs, user registration databases, and third-party web site analysis services).
- 104.15 Calculate and analyze site effectiveness based on statistical hits and clickstream data.
- 104.16 Compose a report of relevant data that includes charts or graphs and presents conclusions.
- 104.17 Implement financial analysis techniques in decision making.
- 104.18 Implement non-financial analysis techniques in decision making.

105.0 DEMONSTRATE KNOWLEDGE OF E-COMMERCE LEGAL ISSUES--The student will be able to:

- 105.01 Explain the legal use of digital signatures for electronic contracting.
- 105.02 Discuss laws pertaining to security and privacy of data collected.
- 105.03 Explain consumer protection law.
- 105.04 Explain court jurisdictional issues related to e-commerce.

- 105.05 Identify the liability for invasion of privacy.
- 105.06 Describe confidentiality issues and their liability implications.
- 105.07 Explain legal and ethical issues related to consumer privacy.
- 105.08 Identify federal legislation protecting competition.
- 108.09 Identify major federal food and drug legislation affecting marketing strategies.

106.0 DEMONSTRATE KNOWLEDGE OF DISASTER PROTECTION METHODS—The student will be able to:

- 106.01 Identify the purpose of a server accelerator card.
- 106.02 Define noise, spike, brownout, and blackout.
- 106.03 Research ways to protect hardware from system failure.
- 106.04 Explain UPS and the importance of having one.
- 106.05 Discuss types of backups to prevent data loss.

107.0 ANALYZE METHODS OF WEB HOSTING--The student will be able to:

- 107.01 Compare the advantages/disadvantages and costs of self-hosting vs. web hosting.
- 107.02 Compare the advantages/disadvantages of using web development and design services.
- 107.03 Identify the qualities of server providers (uptime, technical support, connection time).
- 107.04 Identify and describe hardware necessary for web site hosting.
- 107.05 Design a sample business system architecture for a self-hosting web site.
- 107.06 Examine the requirements of Web, Commerce, Transaction and Database servers used in e-commerce.
- 107.07 Examine costs related to e-commerce (site design, maintenance and support).
- 107.08 Plan how to establish a domain name.
- 107.09 Upload files to the server.
- 107.10 Explain server capacity to support site options and user traffic.
- 107.11 Explain the process to e-commerce-enable a website.
- 107.12 Collect/analyze usage statistics.
- 107.13 Select hosting company based on set criteria.
- 107.14 Test site with different browsers.
- 107.15 Register site with various search engines/portals.
- 107.16 Revise design to reflect user feedback.

108.0 ANALYZE AND DEMONSTRATE THE APPLICATION OF E-COMMERCE SOFTWARE PACKAGES—The student will be able to:

- 108.01 Analyze project management software.
- 108.02 Evaluate software packages for Internet ads management.
- 108.03 Explain the use of CRM software in business-to-consumer and business-to-business-operations.
- 108.04 Identify the key functions of systems software.
- 108.05 Explain and identify widely used software applications (browsers, word processing, database management, spreadsheet development, CRM applications, web content development).
- 108.06 Identify new and emerging classes of software.
- 108.07 Identify software used in e-commerce.
- 108.08 Identify storefront software packages.
- 108.09 Identify selection criteria used for software purchases.

- 108.10 Identify differences between implementing an e-commerce site with an off-the-shelf software package vs. freeware CGI solutions.
- 108.11 Outline and explain business application tools and processes that can be used as part of a company's e-commerce solution.
- 108.12 Define site template.
- 108.13 Identify types of editor software used as a source of templates (HTML, Word Processor, WYSIWYG).
- 108.14 Identify advantages/disadvantages of using templates.
- 108.15 Identify online services that provide templates.
- 108.16 Identify storefront hosting services.
- 108.17 Differentiate between site templates and store templates.
- 108.18 Create an example site using a site template.
- 108.19 Create an example site using a store template.

109.0 DEMONSTRATE KNOWLEDGE OF NETWORK COMPONENTS—The student will be able to:

- 109.01 Identify the four components of a network operating system (server platform, network services software, network redirection software, communications software).
- 109.02 Define fat client and thin client.
- 109.03 Interpret basic networking terminology.
- 109.04 Identify the different types of Wide-Area Network (WAN) connections.
- 109.05 Describe point-to-point (PPP) interconnection.
- 109.06 Identify basic telecommunications services (satellite, circuit switching, packet switching, wireless).
- 109.07 Differentiate between local exchange carriers and interexchange carriers.
- 109.08 Define local access and transport areas.
- 109.09 Identify packet carriers and their services.
- 109.10 Identify the role of telecommunications tariffs.
- 109.11 Explain the role of the router in connecting to the Internet.
- 109.12 Explain the role of a Channel Service Unit/Data Service Unit.
- 109.13 Identify basic telecommunication bandwidths.
- 109.14 Describe the basics of ISDN, X.400, and DSL technologies.

110.0 MAINTAIN AN E-PORTFOLIO FOR JOB APPLICATION PURPOSES—The student will be able to:

- 110.01 Plan, design, and create e-commerce websites that include a theme, backgrounds, content, categories and product, text, graphics, graphic buttons, graphics as a form button, hyperlinks, form elements, company and contact information, navigation bars, navigation aids, a company logo, audio and video files, a host counter, frames.
- 110.02 Prepare and submit a résumé to use for online job applications.
- 110.03 Prepare and submit a letter of application online.