Kentucky Career and Technical Education
Curriculum Alignment Resource

Advanced Computer and Technology Applications

Project Launched October 2011

Advanced Computer and Technology Applications

Course Description:

This course is designed to provide students an advanced-level experience with practical applications through hands-on instruction. Course content will include understanding of carious hardware, software, operating systems, care/operations, administrative applications, and employability skills. The software includes advanced business applications using word processing, presentation, spreadsheets, database management, desktop publishing, and electronic communication. Leadership development will be provided through FBLA. Upon completion of this course, a student will be ready to take the core level tests for MOS Certification and/or the Administrative Support Skill Standard Assessment.

Suggested Prerequisite: Computer and Technology Applications

Grade Level: 11-12	**Credit: 1.0**

Technical Content / Process

Students will:

1. identify, describe, and use different types of electronic communications and apply business communication and netiquette skills to create, send, receive, and reply to electronic communication, including e-mail and telephone.
2. demonstrate employability and social skills relative to the career cluster (includes cell phone, Internet netiquette, introductions, and grammar).
3. compose and illustrate an oral report using appropriate visual aids (presentation software, etc).
4. demonstrate advance computer applications to create, edit, save, revise, and print word processing documents, spreadsheets and related charts, database files, reports, and presentations.
5. show advanced software integration skills to create new documents through the use of word processing, spreadsheets and related charts, database files, reports, and presentations.
6. demonstrate advanced skills to design, create, edit, save, and print desktop publishing documents which include text, graphics, borders, shadings, watermarks, columns, and nameplates using principles of layout and design.
7. demonstrate advanced skills to utilize the mail merge feature of a software program.
8. demonstrate advanced skills to apply financial and database functions to spreadsheets including formulas, data tables, sorting, and queries.
9. demonstrate advanced skills using a spreadsheet program to create and work with templates, wizards, and multiple spreadsheets and workbooks.
10. demonstrate advanced skills using a database program to create enhanced reports.
11. demonstrate advanced skills using presentation software to include diagrams, color and graphic modifications, animation schemes, custom backgrounds, action buttons, hyperlinks, sound, video, and speaker notes.
12. demonstrate advanced skills using word processing, spreadsheet, database, and presentation software to complete workgroup collaboration to include inserting and reviewing comments.
13. research and analyze career opportunities, participate in a job interview, and develop an employment portfolio (letter of application, resume, and follow-up letter).
14. develop FBLA projects using a variety of software applications.
15. utilize activities of FBLA as an integral component of course content, leadership development, and service learning.
16. analyze various hardware, software, operating systems, and emerging technologies used by business and industry, such as speech recognition and personal digital assistants.
17. integrate math, science, reading and business communication skills within the technical content.
18. demonstrate work-based learning (shadowing, mentoring, and co-op, etc.).
19. review proofreaders' marks, spell check and thesaurus, reference materials, and grammar check.

Connections

- National Standards for Business Education
- Partnership for 21st Century Skills
- Secretary's Commission on Achieving Necessary Skills (SCANS)
- Microsoft Office Specialists (MOS)
- Kentucky Academic Standards – Big Ideas
- Common Standards for Mathematics and English/Language Arts
- Kentucky Occupational Skills Standards Assessment (KOSSA) Standards

Course Title **Advanced Computer and Technology Applications** Grade Levels 11-12 Credit Value 1

Description This course is designed to provide students an advanced-level experience with practical applications through hands-on instruction. Course content will include understanding of various hardware, software, operating systems, care/operations, administrative applications, and employability skills. The software includes advanced business applications using word processing, presentation, spreadsheets, database management, desktop publishing, and electronic communication. Leadership development will be provided through FBLA.

Prerequisites Computer and Technology Applications

Resources Microsoft Office Specialist (MOS) (Core) http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/mos2010.html
Computer Literacy Basics A Comprehensive Guide to IC3 from Course Technology/Cengage

Unit Title Unit 1 Employability

Technical Content

1. identify, describe, and use different types of electronic communications and apply business communication and netiquette skills to create, send, receive, and reply to electronic communication, including e-mail and telephone.
2. demonstrate employability and social skills relative to the career cluster (includes cell phone, Internet netiquette, introductions, and grammar).
13. research and analyze career opportunities, participate in a job interview, and develop an employment portfolio (letter of application, resume, and follow-up letter).
18. demonstrate work-based learning (shadowing, mentoring, and co-op, etc.).
15. utilize activities of FBLA as an integral component of course content, leadership development, and service learning.

National Standards

NBEA Communications - communicate in a clear, complete, concise, correct, and courteous manner on personal and professional levels.
NBEA Technology Communication - use technology to enhance the effectiveness of communication.
ISTE S2B - communicate information and ideas effectively to multiple audiences using a variety of media and formats.
NBEA Workplace Expectations - relate the importance of workplace expectations to career development.
NBEA School to Career - develop strategies to make an effective transition from school to career.

KY Academic Standards (Big Idea)

Information, Communication and Productivity - Technology
Students demonstrate a sound understanding of the nature and operations of technology systems. Students use technology to learn, to communicate, increase productivity and become competent users of technology. Students manage and create effective oral, written and multimedia communication in a variety of forms and contexts.

Career Awareness, Exploration, Planning - Vocational Studies
Career awareness, exploration and planning gives students the opportunity to discover the various career areas that exist and introduce them to the realities involved with the workplace. Many factors need to be considered when selecting a career path and preparing for employment. Career awareness, exploration and planning will enable students to recognize the value of education, learn how to plan for careers and integrate academic subjects.

English/Language Arts Standards

CC.11-12.L.1 Conventions of Standard English: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CC.11-12.L.2.b Conventions of Standard English: Spell correctly.
CC.11-12.L.3 Knowledge of Language: Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
CC.11-12.L.4 Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11–12 reading and content, choosing flexibly from a range of strategies.
CC.11-12.L.4.c Vocabulary Acquisition and Use: Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.
CC.11-12.L.6 Vocabulary Acquisition and Use: Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

CC.11-12.W.1.d Text Types and Purposes: Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
CC.11-12.W.3 Text Types and Purposes: Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
CC.11-12.W.4 Production and Distribution of Writing: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
CC.11-12.W.5 Production and Distribution of Writing: Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 11-12 on page 55.)

21st Century Skills and Knowledge

Global Awareness

Financial, Economic, Business and Entrepreneurial Literacy

Creativity and Innovation

Critical Thinking and Problem Solving

Collaboration

Communication

Information Literacy

Leadership and Responsibility

ICT (Information, Communications, and Technology) Literacy

KOSSA Standards

2001.AA.1 Utilize effective verbal and non-verbal communication skills
2001.AA.2 Participate in conversation, discussion, and group presentations
2001.AA.3 Communicate and follow directions/procedures
2001.AA.4 Communicate effectively with customers and co-workers
2001.AB.1 Locate and interpret written information
2001.AB.2 Read and interpret workplace documents
2001.AB.3 Identify relevant details, facts, and specifications
2001.AB.4 Record information accurately and completely
2001.AB.5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation
2001.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
2001.AC.3 Implement effective decision-making skills
2001.EA.1 Demonstrate enthusiasm and confidence about work and learning new tasks
2001.EA.2 Demonstrate consistent and punctual attendance
2001.EB.3 Demonstrate ethical characteristics and behaviors
2001.EB.4 Maintain confidentiality and integrity of sensitive company information
2001.EC.1 Demonstrate appropriate dress and hygiene in the workplace
2001.EC.3 Demonstrate polite and respectful behavior toward others
2001.ED.1 Plan and follow a work schedule
2001.ED.2 Work with minimal supervision
2001.EE.1 Recognize diversity, discrimination, harassment, and equity
2001.EE.3 Explain the benefits of diversity within the workplace
2001.EE.6 Illustrate techniques for eliminating gender bias and stereotyping in the workplace
2001.EF.1 Recognize the characteristics of a team environment and conventional workplace
2001.EF.3 Demonstrate effective team skills and evaluate their importance in the workplace (e.g., setting goals, listening, following directions, questioning, dividing work)
2001.EH.1 Identify conflict resolution skills to enhance productivity and improve workplace relationships
2001.EK.2 Define jobs associated with a specific career path or profession
2001.EK.3 Identify and seek various job opportunities (e.g., volunteerism, internships, co-op, part-time/full-time employment)
2001.EK.4 Prepare a resume, letter of application, and job application

2001.EK.5 Prepare for a job interview (e.g., research company, highlight personal strengths, prepare questions, set-up a mock interview, dress appropriately)
2001.EK.6 Participate in a job interview
2001.EL.7 Accept and provide constructive criticism
2001.EM.1 Identify the value of new technologies and their impact on driving continuous change and the need for life-long learning
2001.OB.5 Communicate with liaisons outside the company (e.g., business partners, business professional organizations)
2001.OC.1 Gather and compile data for supervisor
2001.OC.4 Operate office equipment
2001.OC.5 Prepare materials for copying
2001.OD.1 Process mail and packages

Learning Targets	**Sample Learner Activities - Click in the box to go to Activities**
1. Demonstrate effective use of electronic communication to correspond via email in the workplace.	1. Students will compose an email message and attach a file.
2. Research careers of interest to determine educational goals, income potential, job outlook and workplace expectations.	1. Utilizing the ILP, students will research three careers and determine one career and prepare a career portfolio (letter of applications, resume, application, follow up letter).
3. Develop a professional letter of application for a job opening.	1. Included in the activity above.
4. Develop a professional resume to include education, experience and skills.	1. Included in the activity above.
5. Determine the skills necessary to interview successfully for a job position.	1. Students will research how to effectively answer commonly asked interview questions (internet research, youtube interviews). Review proper business attire as well as do's and don'ts when preparing for an interview. Students will participate in a mock interview.
6. Prepare a professional follow-up letter.	1. Included in the activity above.
7. Determine workplace expectations as they relate to cell phone and internet usage and etiquette.	1. Utilize capstone activity modules http://www.temple.edu/cte/research/CAPS/index.html.
8. Develop communication skills to utilize in the workplace.	1. Students will complete capstone modules http://www.temple.edu/cte/research/CAPS/index.html. 2. Allow students to demonstrate examples of verbal and nonverbal comunication. 3. Listening demonstration activities. 4. Explore the conflict resolution process.
9. Participate in a work-based learning, shadowing, mentoring or co-op program.	1. Students will complete appropriate paperwork to further understand the requirements for participation in a co-op, work-based learning, shadowing, mentoring program.

Technical Literacy Standards

Writing Standards 11-12

Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Language Standards 11-12

Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Language Standards 11-12

Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 11-12

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 11-12

Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Course Title **Advanced Computer and Technology Applications** Grade Levels 11-12 Credit Value 1

Description This course is designed to provide students an advanced-level experience with practical applications through hands-on instruction. Course content will include understanding of various hardware, software, operating systems, care/operations, administrative applications, and employability skills. The software includes advanced business applications using word processing, presentation, spreadsheets, database management, desktop publishing, and electronic communication. Leadership development will be provided through FBLA.

Prerequisites Computer and Technology Applications

Resources Microsoft Office Specialist (MOS) (Core) http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/mos2010.html
Computer Literacy Basics A Comprehensive Guide to IC3 from Course Technology/Cengage

Unit Title Unit 2 Computer Essentials

Technical Content

16. analyze various hardware, software, operating systems, and emerging technologies used by business and industry, such as speech recognition and personal digital assistants.

National Standards

ISTE 6a - understand and use technology systems
ISTE 6b - select and use applications effectively and productively.
ISTE 6c - troubleshoot systems and applications.
ISTE 6d - transfer current knowledge to learning of new technologies.
NBEA - describe current and emerging hardware, configure, install, and upgrade hardware, diagnose probles; and repair hardware.
NBEA - identify, evaluate, select, install, use, upgrade, customize, and diagnose and solve problems with various types of operating systems and utilities.
NBEA - identify, evauate, select, use, upgrade, and customize productiviey software; diagnose and solve problems.
NBEA - plan the slection and acquisition of information technologies.

KY Academic Standards (Big Idea)

Communication/Technology - Vocational Studies
Special communication and technology skills are needed for success in schooling and in the workplace. Students will be able to express information and ideas using a variety of technologies in various ways.

Information, Communication and Productivity - Technology
Students demonstrate a sound understanding of the nature and operations of technology systems. Students use technology to learn, to communicate, increase productivity and become competent users of technology. Students manage and create effective oral, written and multimedia communication in a variety of forms and contexts.

English/Language Arts Standards

CC.11-12.SL.1 Comprehension and Collaboration: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
CC.11-12.SL.1.a Comprehension and Collaboration: Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
CC.11-12.W.1.e Text Types and Purposes: Provide a concluding statement or section that follows from and supports the argument presented.

21st Century Skills and Knowledge

Global Awareness
Creativity and Innovation
Critical Thinking and Problem Solving
Communication
Collaboration
Information Literacy
ICT (Information, Communications, and Technology) Literacy
Flexibility and Adaptability
Initiative and Self-Direction
Social and Cross-Cultural Skills

KOSSA Standards

2001.AA.2 Participate in conversation, discussion, and group presentations
2001.AA.3 Communicate and follow directions/procedures
2001.AB.1 Locate and interpret written information
2001.AB.2 Read and interpret workplace documents
2001.AB.5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation
2001.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
2001.AC.1 Utilize critical-thinking skills to determine best options/outcomes (e.g., analyze reliable/unreliable sources of information, use previous experiences, implement crisis management, develop contingency planning)
2001.AC.2 Utilize innovation and problem-solving skills to arrive at the best solution for current situation
2001.AD.1 Perform basic and higher level math operations (e.g., addition, subtraction, multiplication, division, decimals, fractions, units of conversion, averaging, percentage, proportion, ratios)
2001.AF.3 Practice safe, legal, and responsible use of technology in the workplace
2001.EM.1 Identify the value of new technologies and their impact on driving continuous change and the need for life-long learning
2001.EM.3 Select appropriate technological resources to accomplish work
2001.OB.1 Prepare correspondence (e.g., memo, business letter, electronic mail)
2001.OB.2 Proofread for all content, format, and keying errors
2001.OB.3 Transcribe notes from written and/or recorded formats
2001.OE.3 Prepare and print documents in appropriate software
2001.OE.4 Insert a graphic
2001.OE.5 Design a table
2001.OE.6 Complete preprinted and electronic forms
2001.OE.7 Scan data or graphics for document use
2001.OE.8 Revise existing documents
2001.OE.9 Access the Help function
2001.OE.10 Locate and retrieve data from various sources (e.g., local drive, network drives, Internet)
2001.OE.13 Create and organize electronic files using folders and subfolders
2001.OE.14 Create high-quality visual aids
2001.OE.15 Locate and use templates
2001.OE.19 Maintain operating system integrity (e.g., virus scan, defragmentation, updates)

Learning Targets	Sample Learner Activities - Click in the box to go to Activities
1. Describe current and emerging hardware , configure, install, and upgrade hardware, diagnose problems; and repair hardware.	1. Students will complete Module 1-Computing Fundamental of IC3 certification (Learn key as well as SAM from Cengage have training modules). The textbook Computer Literacy Basics, a Comprehensive Guide to IC3 - Course Technology Cengage is an excellent resource. IC3 can be utilized as an industry certification. Also Microsoft Office 2010 Introduction and Advanced Course Technology/ Cengage has excellent online teaching resources that come with the book.
2. Identify, evaluate, select, use, upgrade, and customize productivity software used by business and industry; diagnose and solve problems.	1. Included in the activity above.
3. Troubleshooting of hardware and application software and operating systems.	1. Included in the activity above.
4. Identify, evaluate, select, install, use upgrade, customize, and diagnose and solve problems with varioious types of operating systems and utilities.	1. Included in the activity above.
5. Research, plan the selection and acquisition of emerging information technologies	1. Utilizing the internet, students will reseach, plan, compare & contrast and purchase emerging technologies making an effective consumer purchase.
6. Research, evaluate consumer current technical products and services; compare and contrast the products and make effective consumer decisions.	1. Included in the activity above.

Technical Literacy Standards

Writing Standards 11-12
Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

Writing Standards 11-12
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Writing Standards 11-12
Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Language Standards 11-12
Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Reading Standards for Literacy in Science and Technical Subjects 11-12
Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 11-12
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Course Title **Advanced Computer and Technology Applications** Grade Levels 11-12 Credit Value 1

Description This course is designed to provide students an advanced-level experience with practical applications through hands-on instruction. Course content will include understanding of various hardware, software, operating systems, care/operations, administrative applications, and employability skills. The software includes advanced business applications using word processing, presentation, spreadsheets, database management, desktop publishing, and electronic communication. Leadership development will be provided through FBLA.

Prerequisites Computer and Technology Applications

Resources Microsoft Office Specialist (MOS) (Core) http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/mos2010.html
Computer Literacy Basics A Comprehensive Guide to IC3 from Course Technology/Cengage

Unit Title Unit 3 Word Processing

Technical Content

4. demonstrate advance computer applications to create, edit, save, revise, and print word processing documents, spreadsheets and related charts, database files, reports, and presentations.
7. demonstrate advanced skills to utilize the mail merge feature of a software program.
19. review proofreaders' marks, spell check and thesaurus, reference materials, and grammar check.

National Standards

ISTE S1a - apply exisitng knowledge to generate new ideas, products, or processes.
ISTE S3a - plan strategies to guide inquiry.
ISTE S3b - locate, organize, anaylze, evaluate, synthesize, and ethically use information from a variety of sources and media.
ISTE S3D - process data and report results.
ISTE S6a - understand and use technology systems.
NBEA - communicate in a clear, complete, concise, correct, and courteous manner on personal and professional levels.
NBEA - use technology to enhance the effectiveness of communication.

KY Academic Standards (Big Idea)

Research, Inquiry/Problem-Solving and Innovation - Technology
Students understand the role of technology in research and experimentation. Students engage technology in developing solutions for solving problems in the real world. Students will use technology for original creation and innovation.

English/Language Arts Standards

CC.11-12.L.1 Conventions of Standard English: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CC.11-12.L.2.b Conventions of Standard English: Spell correctly.
CC.11-12.L.3 Knowledge of Language: Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
CC.11-12.W.4 Production and Distribution of Writing: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
CC.11-12.W.5 Production and Distribution of Writing: Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 11-12 on page 55.)

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Collaboration
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ICT (Information, Communications, and Technology) Literacy

Flexibility and Adaptability

Initiative and Self-Direction

Social and Cross-Cultural Skills

KOSSA Standards

2001.AA.2 Participate in conversation, discussion, and group presentations
2001.AA.3 Communicate and follow directions/procedures
2001.AB.1 Locate and interpret written information
2001.AB.2 Read and interpret workplace documents
2001.AB.4 Record information accurately and completely
2001.AB.5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation
2001.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
2001.AC.3 Implement effective decision-making skills
2001.AF.3 Practice safe, legal, and responsible use of technology in the workplace
2001.ED.1 Plan and follow a work schedule
2001.ED.2 Work with minimal supervision
2001.EM.1 Identify the value of new technologies and their impact on driving continuous change and the need for life-long learning
2001.EM.3 Select appropriate technological resources to accomplish work
2001.OB.1 Prepare correspondence (e.g., memo, business letter, electronic mail)
2001.OB.2 Proofread for all content, format, and keying errors
2001.OB.3 Transcribe notes from written and/or recorded formats
2001.OB.4 Prepare agenda and compile materials for meetings
2001.OE.2 Decide on the best process for reproducing printed materials
2001.OE.4 Insert a graphic
2001.OE.5 Design a table
2001.OE.6 Complete preprinted and electronic forms
2001.OE.7 Scan data or graphics for document use
2001.OE.8 Revise existing documents
2001.OE.9 Access the Help function
2001.OE.10 Locate and retrieve data from various sources (e.g., local drive, network drives, Internet)
2001.OE.12 Prepare mail merge
2001.OE.13 Create and organize electronic files using folders and subfolders
2001.OE.14 Create high-quality visual aids
2001.OE.15 Locate and use templates
2001.OE.17 Design and create desktop-publishing documents
2001.OE.18 Create charts and graphs
2001.OE.19 Maintain operating system integrity (e.g., virus scan, defragmentation, updates)

Learning Targets	Sample Learner Activities - Click in the box to go to Activities
1. Create business letters in mailable copy.	1. Students will be able to format and write a business letter in mailable copy.
2. Create envelopes for business communication.	1. Included in the activity above.
3. Develop a letterhead for business use.	1. Students will effectively design a letterhead.
4. Develop a research paper in MLA format.	1. Students will research and write a paper in MLA format (Microsoft Office 2010 Introductory: Course Technology Cengage).
5. Create a mail merge to produce letters to customers.	1. Students will develop a mail merge to produce letters (Microsoft Office 2010 Advanced: Course Technology Cengage).
6. Demonstrate applicaiton of proofreaders marks, spell check, thesaurus, grammar check and use of reference materials.	1. Included in the activity above.

Technical Literacy Standards

Writing Standards 11-12
Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

Writing Standards 11-12
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Language Standards 11-12
Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Language Standards 11-12
Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 11-12
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Course Title **Advanced Computer and Technology Applications** Grade Levels 11-12 Credit Value 1

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Prerequisites Computer and Technology Applications

Resources Microsoft Office Specialist (MOS) (Core) http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/mos2010.html
Computer Literacy Basics A Comprehensive Guide to IC3 from Course Technology/Cengage

Unit Title Unit 4 Spreadsheets

Technical Content

8. demonstrate advanced skills to apply financial and database functions to spreadsheets including formulas, data tables, sorting, and queries.
9. demonstrate advanced skills using a spreadsheet program to create and work with templates, wizards, and multiple spreadsheets and workbooks.

National Standards

NBEA - use technology to enhance the effectiveness of communication.
NBEA - Identify, evaluate, select, install, use, upgrade, and customize productivity software; diagnose and solve software problems.
NBEA - Solve problems involving whole numbers, decimals, fractions, percents, ratios, averages, and proportions.
NBEA - Analyze and interpret data using common statistical procedures.
NBEA - Use mathematical procedures to analyze and solve business problems.
ISTE 6a - understand and use technology systems.
ISTE 6b - select and use applications effectively and productively.
ISTE 6d - transfer current knowledge to learning of new technologies.

KY Academic Standards (Big Idea)

Financial Literacy - Vocational Studies

Financial literacy provides knowledge so that students are responsible for their personal economic well-being. As consumers, individuals need economic knowledge as a base for making financial decisions impacting short and long term goals throughout one's lifetime. Financial literacy will empower students by providing them with the knowledge, skills and awareness needed to establish a foundation for a future of financial responsibility and economic independence.

English/Language Arts Standards

CC.11-12.L.1 Conventions of Standard English: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CC.11-12.L.2.b Conventions of Standard English: Spell correctly.

Mathematics Standards

CC.9-12.A.SSE.3b Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.*
CC.9-12.A.SSE.4 Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.*
CC.9-12.A.REI.11 Explain why the x-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*
CC.9-12.F.IF.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
CC.9-12.F.IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.
CC.9-12.F.BF.1 Write a function that describes a relationship between two quantities.*
CC.9-12.F.BF.1b Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.
CC.9-12.S.ID.4 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.*
CC.9-12.S.ID.6a Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.*

CC.9-12.S.IC.6 Evaluate reports based on data.*

CC.9-12.S.CP.8 (+) Apply the general Multiplication Rule in a uniform probability model, P(A and B) = [P(A)]x[P(B|A)] =[P(B)]x[P(A|B)], and interpret the answer in terms of the model.*

21st Century Skills and Knowledge

Global Awareness

Financial, Economic, Business and Entrepreneurial Literacy

Creativity and Innovation

Critical Thinking and Problem Solving

Collaboration

Communication

Information Literacy

ICT (Information, Communications, and Technology) Literacy

Flexibility and Adaptability

Initiative and Self-Direction

KOSSA Standards

2001.AA.2 Participate in conversation, discussion, and group presentations
2001.AA.3 Communicate and follow directions/procedures
2001.AB.1 Locate and interpret written information
2001.AB.2 Read and interpret workplace documents
2001.AB.3 Identify relevant details, facts, and specifications
2001.AB.4 Record information accurately and completely
2001.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
2001.AC.2 Utilize innovation and problem-solving skills to arrive at the best solution for current situation
2001.AC.3 Implement effective decision-making skills
2001.AD.1 Perform basic and higher level math operations (e.g., addition, subtraction, multiplication, division, decimals, fractions, units of conversion, averaging, percentage, proportion, ratios)
2001.AD.4 Use tables, graphs, diagrams, and charts to obtain or convey information
2001.AF.3 Practice safe, legal, and responsible use of technology in the workplace
2001.AH.1 Select and use appropriate devices, services, and applications to complete workplace tasks
2001.ED.1 Plan and follow a work schedule
2001.ED.2 Work with minimal supervision
2001.EM.1 Identify the value of new technologies and their impact on driving continuous change and the need for life-long learning
2001.EM.3 Select appropriate technological resources to accomplish work
2001.OE.3 Prepare and print documents in appropriate software
2001.OE.4 Insert a graphic
2001.OE.5 Design a table
2001.OE.8 Revise existing documents
2001.OE.9 Access the Help function
2001.OE.10 Locate and retrieve data from various sources (e.g., local drive, network drives, Internet)
2001.OE.13 Create and organize electronic files using folders and subfolders
2001.OE.14 Create high-quality visual aids
2001.OE.15 Locate and use templates
2001.OE.16 Prepare spreadsheets including appropriate formulas, headings, and formatting
2001.OE.18 Create charts and graphs
2001.OE.20 Print spreadsheets and/or formulas using appropriate page setup (e.g., orientation, scaling, margins, headers/footers, print area, gridlines)

Learning Targets	Sample Learner Activities - Click in the box to go to Activities
1. Create worksheets and embedded charts to convey a visual presentation of data.	1. Students will Create charts based on worksheet data. 2. Students will Apply and manipulate illustrations. 3. Students will Create and modify images by using the Image Editor. 4. Students will Apply Sparklines.
2. Apply formulas, functions and formatting to create spreadsheets.	1. Students will Create formulas. 2. Studetns will Enforce precedence. 3. Students will Apply cell references in formulas. 4. Students will Apply conditional logic in a formula. (<,>,=) 5. Students will Apply named ranges in formulas. 6. Students will Apply cell ranges in formulas.
3. Apply what-if analysis to charts and large worksheets.	1. Included in the learning target above.
4. Apply financial functions but not limited to, future value, present value, amortization schedules and compound interest to spreadsheet application.	1. Students will complete activities related to mortgages, financing a car, credit cards, installment loans, and savings.

Technical Literacy Standards

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 11-12
Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Language Standards 11-12
Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Writing Standards 11-12
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Course Title **Advanced Computer and Technology Applications** Grade Levels 11-12 Credit Value 1

Description This course is designed to provide students an advanced-level experience with practical applications through hands-on instruction. Course content will include understanding of various hardware, software, operating systems, care/operations, administrative applications, and employability skills. The software includes advanced business applications using word processing, presentation, spreadsheets, database management, desktop publishing, and electronic communication. Leadership development will be provided through FBLA.

Prerequisites Computer and Technology Applications

Resources Microsoft Office Specialist (MOS) (Core) http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/mos2010.html
Computer Literacy Basics A Comprehensive Guide to IC3 from Course Technology/Cengage

Unit Title Unit 5 Database

Technical Content

8. demonstrate advanced skills to apply financial and database functions to spreadsheets including formulas, data tables, sorting, and queries.
10. demonstrate advanced skills using a database program to create enhanced reports.

National Standards

NBEA - use technology to enhance the effectiveness of communication.

KY Academic Standards (Big Idea)

Information, Communication and Productivity - Technology
Students demonstrate a sound understanding of the nature and operations of technology systems. Students use technology to learn, to communicate, increase productivity and become competent users of technology. Students manage and create effective oral, written and multimedia communication in a variety of forms and contexts.

English/Language Arts Standards

CC.11-12.L.1 Conventions of Standard English: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CC.11-12.L.2.b Conventions of Standard English: Spell correctly.

Mathematics Standards

CC.9-12.F.BF.1 Write a function that describes a relationship between two quantities.*
CC.9-12.F.BF.1b Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.
CC.9-12.S.IC.6 Evaluate reports based on data.*
CC.9-12.S.CP.8 (+) Apply the general Multiplication Rule in a uniform probability model, P(A and B) = [P(A)]x[P(B|A)] =[P(B)]x[P(A|B)], and interpret the answer in terms of the model.*

21st Century Skills and Knowledge

Global Awareness
Collaboration
Communication
Creativity and Innovation
Critical Thinking and Problem Solving
Financial, Economic, Business and Entrepreneurial Literacy
Flexibility and Adaptability
ICT (Information, Communications, and Technology) Literacy
Information Literacy
Initiative and Self-Direction

KOSSA Standards

2001.AA.2 Participate in conversation, discussion, and group presentations
2001.AA.3 Communicate and follow directions/procedures
2001.AB.1 Locate and interpret written information
2001.AB.2 Read and interpret workplace documents
2001.AB.3 Identify relevant details, facts, and specifications
2001.AB.4 Record information accurately and completely
2001.AB.5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation
2001.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
2001.AC.2 Utilize innovation and problem-solving skills to arrive at the best solution for current situation
2001.AC.3 Implement effective decision-making skills
2001.AF.3 Practice safe, legal, and responsible use of technology in the workplace
2001.AH.1 Select and use appropriate devices, services, and applications to complete workplace tasks
2001.ED.1 Plan and follow a work schedule
2001.ED.2 Work with minimal supervision
2001.EM.1 Identify the value of new technologies and their impact on driving continuous change and the need for life-long learning
2001.EM.3 Select appropriate technological resources to accomplish work
2001.OB.2 Proofread for all content, format, and keying errors
2001.OE.3 Prepare and print documents in appropriate software
2001.OE.4 Insert a graphic
2001.OE.5 Design a table
2001.OE.8 Revise existing documents
2001.OE.9 Access the Help function
2001.OE.10 Locate and retrieve data from various sources (e.g., local drive, network drives, Internet)
2001.OE.11 Develop, revise, and create queries and reports using database software
2001.OE.13 Create and organize electronic files using folders and subfolders
2001.OE.14 Create high-quality visual aids
2001.OE.18 Create charts and graphs

Learning Targets	Sample Learner Activities - Click in the box to go to Activities
1. Create, evaluate, maintiain a print reports from a database.	1. Students will create reports. 2. Students will apply report design tab options. 3. Students will apply report arrange tab options. 4. Students will apply report format tab options. 5. Students will apply report page setup tab options. 6. Students will sort and filter records for reporting.
2. Use a database program to create, design queries and custom queries.	1. Studenst will learn to create queries using the wizard and also learn to construct custom queries, manage source tables and relationships, manipulate fields, calculate totals, generate calculated fields, including but not limited to: hourly rate ,rate increase, totals and sub-totals.
3. Use a database program to create multi-table relational databases including, but not limited to databases containing two or more related tables.	-Included in activity above.
4. Utilize a database program to create and maintaining a database, filtering and multi-valued lookup fields.	-Included in activity above.

Technical Literacy Standards

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 11-12
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Course Title **Advanced Computer and Technology Applications** Grade Levels 11-12 Credit Value 1

Description This course is designed to provide students an advanced-level experience with practical applications through hands-on instruction. Course content will include understanding of various hardware, software, operating systems, care/operations, administrative applications, and employability skills. The software includes advanced business applications using word processing, presentation, spreadsheets, database management, desktop publishing, and electronic communication. Leadership development will be provided through FBLA.

Prerequisites Computer and Technology Applications

Resources Microsoft Office Specialist (MOS) (Core) http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/mos2010.html
Computer Literacy Basics A Comprehensive Guide to IC3 from Course Technology/Cengage

Unit Title Unit 6 Presentation Software

Technical Content

3. compose and illustrate an oral report using appropriate visual aids (presentation software, etc).
11. demonstrate advanced skills using presentation software to include diagrams, color and graphic modifications, animation schemes, custom backgrounds, action buttons, hyperlinks, sound, video, and speaker notes.
14. develop FBLA projects using a variety of software applications.

National Standards

NBEA - use multimedia software to create media rich projects.
NBEA - identify, evaluate, select, install, use, upgrade, and customize productivity software; diagnose and solve software problems.
NBEA - use technology to enhance the effectiveness of communication.
ISTE S2B - communicate information and ideas effectively to multiple audiences using a variety of media and formats.
ISTE 6a - understand and use technology systems.
ISTE 6b - select and use applications effectively and productively.
ISTE 6c - troubleshoot systems and applications.
ISTE 6d - transfer current knowledge to learning of new technologies.

KY Academic Standards (Big Idea)

Information, Communication and Productivity - Technology
Students demonstrate a sound understanding of the nature and operations of technology systems. Students use technology to learn, to communicate, increase productivity and become competent users of technology. Students manage and create effective oral, written and multimedia communication in a variety of forms and contexts.

English/Language Arts Standards

CC.11-12.SL.5 Presentation of Knowledge and Ideas: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
CC.11-12.SL.6 Presentation of Knowledge and Ideas: Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11-12 Language standards 1 and 3 on page 54 for specific expectations.
CC.11-12.W.2.f Text Types and Purposes: Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
CC.11-12.W.3.e Text Types and Purposes: Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.
CC.11-12.W.6 Production and Distribution of Writing: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
CC.11-12.W.8 Research to Build and Present Knowledge: Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

21st Century Skills and Knowledge

Collaboration

Communication

Creativity and Innovation

Critical Thinking and Problem Solving

Flexibility and Adaptability

Global Awareness

ICT (Information, Communications, and Technology) Literacy

Information Literacy

Initiative and Self-Direction

Leadership and Responsibility

KOSSA Standards

2001.AA.2 Participate in conversation, discussion, and group presentations
2001.AA.3 Communicate and follow directions/procedures
2001.AA.4 Communicate effectively with customers and co-workers
2001.AB.1 Locate and interpret written information
2001.AB.2 Read and interpret workplace documents
2001.AB.3 Identify relevant details, facts, and specifications
2001.AB.4 Record information accurately and completely
2001.AB.5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation
2001.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
2001.AC.2 Utilize innovation and problem-solving skills to arrive at the best solution for current situation
2001.AC.3 Implement effective decision-making skills
2001.AF.3 Practice safe, legal, and responsible use of technology in the workplace
2001.AH.1 Select and use appropriate devices, services, and applications to complete workplace tasks
2001.ED.1 Plan and follow a work schedule
2001.ED.2 Work with minimal supervision
2001.EM.1 Identify the value of new technologies and their impact on driving continuous change and the need for life-long learning
2001.EM.3 Select appropriate technological resources to accomplish work
2001.OB.2 Proofread for all content, format, and keying errors
2001.OB.4 Prepare agenda and compile materials for meetings
2001.OC.4 Operate office equipment
2001.OC.5 Prepare materials for copying
2001.OE.1 Photocopy a document using multiple features (e.g., collating, stapling, simplexing, duplexing) of a copier
2001.OE.2 Decide on the best process for reproducing printed materials
2001.OE.3 Prepare and print documents in appropriate software
2001.OE.4 Insert a graphic
2001.OE.5 Design a table
2001.OE.7 Scan data or graphics for document use
2001.OE.8 Revise existing documents
2001.OE.9 Access the Help function
2001.OE.10 Locate and retrieve data from various sources (e.g., local drive, network drives, Internet)

2001.OE.13 Create and organize electronic files using folders and subfolders
2001.OE.14 Create high-quality visual aids
2001.OE.15 Locate and use templates

Learning Targets	**Sample Learner Activities - Click in the box to go to Activities**
1. Utilize diagrams appropriately within a presentation.	1. Students will Construct and modify a table. 2. Students will Insert and modify a chart. 3. Students will Apply chart elements. 4. Students will Manipulate chart layouts. 5. Students will Manipulate chart elements.
2. Demonstrate the appropriate use of color and graphics to complete a professional presentation.	1. Students will Manipulate graphical elements. 2. Students will Manipulate images. 3. Students will Modify WordArt and shapes. 4. Students will Manipulate SmartArt. 5. Students will Edit video and audio content.
3. Develop animation schemes to enhance a presentation.	1. Students will Apply built-in and custom animations. 2. Students will Apply effect and path options. 3. Students will Manipulate an animation. 4. Students will Apply and modify transitions between slides.
4. Utilize custom backgrounds, action buttons, hyperlinks, sound, video and speaker notes when preparing a professional multi-media presentation.	1. Students will Manage comments in a presentation. 2. Students will Apply proofing tools. 3. Students will Prepare a presentation for delivery. 4. Students will Save a presentation. 5. Students will Share a presentation. 6. Students will Print a presentation. 7. Students will Protect a presentation. 8. Students will Deliver a presentation. 9. Students will Apply presentation tools. 10. Students will Set up a slide show. 11. Students will Set presentation timing. 12. Record a presentation.

Technical Literacy Standards

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 11-12

Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Language Standards 11-12

Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Writing Standards 11-12

Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Course Title **Advanced Computer and Technology Applications** Grade Levels 11-12 Credit Value 1

Description This course is designed to provide students an advanced-level experience with practical applications through hands-on instruction. Course content will include understanding of various hardware, software, operating systems, care/operations, administrative applications, and employability skills. The software includes advanced business applications using word processing, presentation, spreadsheets, database management, desktop publishing, and electronic communication. Leadership development will be provided through FBLA.

Prerequisites Computer and Technology Applications

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Unit Title Unit 7 Desktop Publishing

Technical Content

6. demonstrate advanced skills to design, create, edit, save, and print desktop publishing documents which include text, graphics, borders, shadings, watermarks, columns, and nameplates using principles of layout and design.

National Standards

NBEA - identify, evaluate, select, use, upgrade, and customize productivity software; diagnose and solve software problems.
NBEA - use technology to enhance the effectiveness of communication.
ISTE 6a - understand and use technology systems.
ISTE 6b - select and use applications effectively and productively.
ISTE 6d - transfer current knowledge to learning of new technologies.

KY Academic Standards (Big Idea)

Information, Communication and Productivity - Technology
Students demonstrate a sound understanding of the nature and operations of technology systems. Students use technology to learn, to communicate, increase productivity and become competent users of technology. Students manage and create effective oral, written and multimedia communication in a variety of forms and contexts.

English/Language Arts Standards

CC.11-12.L.1 Conventions of Standard English: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CC.11-12.L.2.b Conventions of Standard English: Spell correctly.
CC.11-12.L.6 Vocabulary Acquisition and Use: Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.
CC.11-12.W.1.d Text Types and Purposes: Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
CC.11-12.W.6 Production and Distribution of Writing: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

21st Century Skills and Knowledge

Collaboration
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Information Literacy
Initiative and Self-Direction
Leadership and Responsibility

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2001.AB.1 Locate and interpret written information
2001.AB.2 Read and interpret workplace documents
2001.AB.3 Identify relevant details, facts, and specifications
2001.AB.4 Record information accurately and completely
2001.AB.5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation
2001.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
2001.AC.2 Utilize innovation and problem-solving skills to arrive at the best solution for current situation
2001.AC.3 Implement effective decision-making skills
2001.AF.3 Practice safe, legal, and responsible use of technology in the workplace
2001.AH.1 Select and use appropriate devices, services, and applications to complete workplace tasks
2001.ED.1 Plan and follow a work schedule
2001.ED.2 Work with minimal supervision
2001.EM.1 Identify the value of new technologies and their impact on driving continuous change and the need for life-long learning
2001.EM.3 Select appropriate technological resources to accomplish work
2001.OB.1 Prepare correspondence (e.g., memo, business letter, electronic mail)
2001.OB.2 Proofread for all content, format, and keying errors
2001.OC.1 Gather and compile data for supervisor
2001.OC.3 Order and maintain inventory of supplies
2001.OC.4 Operate office equipment
2001.OC.5 Prepare materials for copying
2001.OC.13 Receive visitors and clients
2001.OE.1 Photocopy a document using multiple features (e.g., collating, stapling, simplexing, duplexing) of a copier
2001.OE.2 Decide on the best process for reproducing printed materials
2001.OE.3 Prepare and print documents in appropriate software
2001.OE.4 Insert a graphic
2001.OE.5 Design a table
2001.OE.7 Scan data or graphics for document use
2001.OE.8 Revise existing documents
2001.OE.9 Access the Help function
2001.OE.10 Locate and retrieve data from various sources (e.g., local drive, network drives, Internet)
2001.OE.13 Create and organize electronic files using folders and subfolders
2001.OE.14 Create high-quality visual aids
2001.OE.15 Locate and use templates
2001.OE.17 Design and create desktop-publishing documents
2001.OE.18 Create charts and graphs

Learning Targets	Sample Learner Activities - Click in the box to go to Activities
1. Create effective publications utilizing text, graphics, borders, shadings, watermarks and columns using desktop publication software.	1. Students will complete capstone projects that could include: newsletters, brochures, calendars, business cards, invitations, greeting cards.
2. Create nameplates using principles of layout and design.	-Included in activity above.

Technical Literacy Standards

Writing Standards 11-12
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Speaking and Listening 11-12
Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence to add interest.

Language Standards 11-12
Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 11-12
Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.