Introduction to Computer Applications

Course Summary:

Students progress to more sophisticated work in this course, including the use of electronic media and software to apply academic concepts in the creation of meaningful organizers, projects, and presentations. Students locate, retrieve, and evaluate data in order to construct and analyze databases. Students produce presentations on Internet safety, online predators, and cyberbullying. At the end of the course, students become effective communicators and collaborators as they plan, evaluate, and synthesize research emphasizing current issues with technology.

Course Outline

1. **Introduction**
    1. Typing Skills
        - Utilize keys from the home row, and rows above and below the home row to type individual letters and words
        - Identify spelling errors with the opportunity to self-correct
    2. Hardware, Components, and Operating Systems
        - Compare and contrast input, output, processing, and data storage devices
        - Describe computer hardware, components, and system
        - Identify personal software programs
        - Create a course folder structure using subfolders to organize and manage files
    3. Computer Troubleshooting
        - Examine troubleshooting techniques related to everyday computer use
        - Recommend solutions to various computer problems
        - Identify appropriate resolutions to common computer problems
2. **Microsoft® Word**
    1. Verbs in the Active and Passive Voice
        - Academic: Apply both active and passive voice in writing
        - Academic: Construct a news article with proper paragraph alignment and indentation
        - Technology: Compose a typed news article using the Tab key to indent text or apply double spacing between paragraphs using the Enter key
    2. Verbs Expressing Mood
        - Academic: Identify and analyze indicative, imperative, and subjunctive verb moods in context
        - Technology: Demonstrate how to bold, italicize, and underline text using buttons and menus available in the Home ribbon
        - Technology: Apply the same font face throughout a document
    3. Characters, Setting, and Plot
        - Academic: Identify parts of a story
        - Academic: Outline and summarize the characters, setting, and plot of a story

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        - Technology: Organize the structure of a story within a document by inserting columns and column breaks to add headings
    4. Thematic Poetry
        - Academic: Illustrate the rhyme scheme of a favorite song
        - Academic: Identify and explain the theme and rhyme scheme of poetry
        - Technology: Demonstrate inserting a table to construct and display the rhyme scheme of poetry
    5. Technology for Searching: Cyberbullying
        - Academic: Locate articles in a database using specific search parameters
        - Technology: Construct a search log to cite works by inserting a table and hyperlinks
        - Technology: Apply font formatting to identify key information gained in research
        - Technology: Conduct online database searches using Boolean operators
    6. Technology for Publishing: Cyberbullying
        - Academic: Design an informative or explanatory text about cyberbullying
        - Academic: Identify important information to educate others about cyberbullying
        - Technology: Utilize multimedia sources to insert images and captions
        - Technology: Demonstrate inserting a footnote to cite sources
        - Technology: Demonstrate correcting grammatical and punctuation errors using the Spelling and Grammar tool
3. **Microsoft® PowerPoint**
    1. Natural Disasters
        - Academic: Identify several types of natural disasters
        - Academic: Conduct in-depth research into one natural disaster
        - Technology: Utilize Microsoft® PowerPoint to create an informative presentation about a natural disaster
        - Technology: Integrate Action buttons, images, and text boxes to create multidimensional slides in a presentation about a natural disaster
    2. Today in History
        - Academic: Outline historical events in chronological order
        - Academic: Utilize visual aids to enhance presentations
        - Technology: Create a historical timeline, utilizing transitions between slides in Microsoft® PowerPoint
        - Technology: Incorporate animations into a timeline
    3. Historical Points of View
        - Academic: Explore the history of the women's suffrage movement in the United States of America
        - Academic: Examine political cartoons to understand differences in opinion
        - Technology: Create a Microsoft® PowerPoint presentation of the women's suffrage movement using the Photo Album feature
        - Technology: Provide analysis of images from the women's suffrage era in a digital presentation
    4. Progressive Era
        - Academic: Identify key issues and themes of the Progressive Era
        - Academic: Describe aspects of the Progressive Era utilizing a concept map
        - Technology: Create a concept map by inserting and formatting a SmartArt graphic in a Microsoft® PowerPoint presentation
    5. Technology for Publishing: Progressive Era
        - Academic: Analyze and research reforms of the Progressive Era

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- Academic: Create a concept map based on research about a Progressive Era topic
- Technology: Search for historical prints and photographs using the Library of Congress database
- Technology: Construct a presentation about the Progressive Era incorporating slide transitions and animations

4. **Microsoft® Excel**
    1. Scatter Plots
        - Academic: Create a scatter plot in order to visualize relationships within data
        - Academic: Identify and name ordered pairs on a scatter plot using the x- and y-axes
        - Technology: Examine data organized in columns and rows in Microsoft Excel
        - Technology: Build a scatter plot diagram in Microsoft Excel using given coordinates
        - Technology: Interchange the x- and y-axes of a scatter plot in Microsoft Excel
    2. Scatter Plots: Comparing Variables
        - Academic: Create and analyze data in scatter plot diagrams
        - Academic: Investigate common trends within scatter plot diagrams
        - Technology: Analyze a scatter plot diagram
        - Technology: Utilize Microsoft® Excel to create a data table
    3. Scatter Plots: Trend Lines
        - Academic: Explore the relationship between a country's land area and population
        - Academic: Identify and describe reasons for outliers along a trend line
        - Technology: Create a digital scatter plot to analyze trends
        - Technology: Insert a trend line into a scatter plot to determine negative or positive correlation
    4. Creating a Database
        - Academic: Collect data in order to create a digital database
        - Technology: Construct a database in Microsoft® Excel by entering data into fields and records
        - Technology: Define and understand the purpose of fields (cells) and records (rows) in a database
        - Technology: Reorganize and analyze data in a database using the sorting and filtering options
    5. Creating a Pivot Table
        - Academic: Utilize an existing database to support further data analysis
        - Technology: Create and modify a pivot table to analyze data
        - Technology: Format data to display percentages and currency using the Format Cells window
    6. Frequencies
        - Academic: Calculate frequencies within a set of data
        - Academic: Interpret data trends using a histogram
        - Technology: Create a histogram using the column chart option in Microsoft® Excel
    7. Data Analysis
        - Academic: Create and conduct an original survey
        - Academic: Interpret survey data using tools in Microsoft® Excel
        - Technology: Create and analyze a scatter plot using original data
        - Technology: Enter original data into a worksheet in Microsoft Excel
5. **Study Strategies**

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1. Tools for Organization and Time Management
    - Identify time management skills
    - Create a planning tool to manage time
    - Identify time management areas of improvement
2. Idea Organization Using Graphic Organizers
    - Evaluate the usefulness of a digital graphic organizer
    - Analyze idea organization for a Google Earth tour by exploring the tool in terms of your hometown
3. Idea Organization Using Memory Aids
    - Generate memory aids for academic concepts
    - Differentiate between various types of memory aids
4. Learning Through Games and Simulations
    - Examine personal learning gain through an online science game
    - Assess the value of online games and simulations for learning
5. Study Strategies
    - Identify current study habits
    - Construct a presentation on study strategies
6. Test-Taking Strategies
    - Examine test-taking strategies for five types of test
    - Prepare concise summaries of test-taking strategies
7. Goal Setting
    - Identify objectives to reach educational or career goals
    - Devise a goal-planning presentation based on academic study skills

6. **Internet Safety**
    1. Acceptable Use Policy
        - Identify important features of an Acceptable Use Policy
        - Review the school's Acceptable Use Policy
    2. Proactive Protection Online
        - Identify the basic risks associated with Internet use
        - Illustrate knowledge of a chosen Internet security topic
        - Create a presentation conveying an Internet security topic
        - Develop an understanding that those met online are strangers
    3. Cybersafety and Photo Management
        - Identify appropriate behavior for photo management on the Internet
        - Recommend alternative actions for cybersafety scenarios
    4. Your Digital Footprint
        - Differentiate between active and passive digital footprints
        - Identify reasons why digital footprints matter
        - Create an informative brochure about digital footprints
    5. Cyberbullying
        - Gain a basic understanding of cyberbullying through reading and discussion
        - Summarize theme and key learning points from a story in a Microsoft® PowerPoint presentation
        - Discuss strategies for coping with an online bullying situation
    6. Computer and Internet Health Issues
        - Explore health issues that result from prolonged computer usage
        - Identify strategies to maintain health and body while using digital technologies
    7. Media Literacy
        - Define media literacy
        - Identify sources of bias in media
        - Create a media product to promote media literacy

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8. The Power of Media
    - Identify media sources
    - Define and assess public service announcements (PSAs)
    - Understand the power the media have in changing perceptions and behavior
    - Utilize media to put a message out
9. Predator Awareness
    - Identify online behavior that is unsafe, demonstrating an understanding of how to avoid online predators
    - Understand the grooming process as it relates to online predators
    - Promote Internet usage related to predator awareness
10. Cyber Community Citizenship
    - Define communities in both the physical and virtual worlds
    - Evaluate website safety and appropriateness
11. Creation and Copyright
    - Categorize tangible and intellectual property
    - Develop an understanding of online piracy
    - Explain the importance of obeying copyright laws
12. Music Makers: Scripts
    - Recognize terminology related to copyrights in the music industry
    - Describe the effects of copyright laws on a group of people
13. Plagiarism
    - Define plagiarism and paraphrase
    - Illustrate ways to avoid plagiarism
14. Fair Use
    - Identify fair use and recommend actions for its application
    - Create a poster of tips for copyright rules and fair-use exceptions
15. Integrated Literacy
    - Review security concepts related to the online community
    - Plan and prepare the components of an educational story
    - Write a story relating online safety measures to a younger audience

7. **Digital Publishing**
    1. Exploring a Topic
        - Investigate the impact that technology has had on education
        - Utilize Boolean search operators to conduct research
    2. Investigating Design
        - Identify and define elements of design
        - Analyze how the design element was used to create a logo
        - Apply various design elements within a digital project
    3. Creating a Movie
        - Design an informative presentation using movie software to communicate the impact of technology on education
    4. Collaborating Online
        - Evaluate and provide feedback on student work
    5. Evaluating the Product
        - Conduct a self-assessment of a project based on the criteria presented in a rubric

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