Educational Technology and Online Learning 7

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 to construct and analyze databases. Students produce presentations on Internet safety, online predators, and cyber bullying. 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. Keyboarding
        - Recognize the home row keys on the keyboard
        - Recognize the keys in rows above and below the home row
        - Utilize keys from the home row and the rows above and below the home row to type words, phrases, and sentences
        - Demonstrate appropriate posture and positioning for keyboarding
    2. History of Technology
        - Identify how changes in technology throughout history have impacted different aspects of the world
    3. Hardware, Components, and Operating Systems
        - Distinguish the difference between hardware and software, and input and output devices
        - Identify and define types of hardware, software, operating systems, and components of a computer and other technology devices
    4. File Management and Organization
        - Identify different file extensions, and demonstrate proper naming conventions of files
        - Practice saving a document as different files types in Microsoft® Word
        - Create a course folder structure using subfolders to organize and manage files
        - Organize files into appropriate folders and analyze a folder hierarchy
    5. Computer Troubleshooting
        - Apply troubleshooting techniques in preparation for minor computer problems that may occur
2. **Microsoft® Word**
    1. Fact vs. Opinion in Publications
        - Academic: Evaluate text to determine whether it is a fact or opinion
        - Academic: Provide support of ideas from information in the text that verifies it is fact or opinion
        - Technology: Apply an underline to words using the Underline button and the Underline Style drop-down menu available in the Font window
        - Technology: Create and insert SmartArt to organize facts and opinions

2. Using a Thesaurus
    - Academic: Compare similar writings that use synonyms for overused words
    - Academic: Utilize different types of thesaurus sources to obtain synonyms and integrate them in previously written sentences
    - Technology: Utilize thesaurus.com and the Thesaurus feature in Microsoft® Word to search for synonyms
    - Technology: Demonstrate how to highlight text using the Highlighter drop-down menu in order to color code adjectives and adverbs
    - Technology: Apply edits to two documents using the View Side by Side feature
    - Technology: Construct and insert a table in a document with a specified number of columns and rows and format text within the table
3. Idioms
    - Academic: Evaluate the use of figurative language in general with the characteristics of idioms
    - Academic: Implement idioms within personal writing and research the meaning of idioms
    - Technology: Create a document containing two columns and headings at the top of each column
    - Technology: Format and edit a SmartArt graphic in order explain an idiom
    - Technology: Insert a clip art image into a SmartArt graphic illustrating an idiom
4. Organizing Writing
    - Academic: Analyze a story to discover the importance of order and organization in narrative writing
    - Academic: Evaluate different types of graphic organizers that can be used to organize different types of writing including timelines, personal narratives, and fictional story
    - Academic: Utilize different graphic organizers to help with organizing writing ideas
    - Technology: Utilize SmartArt to format and create a graphic organizer
    - Technology: Insert and format shapes in a document in order to construct a graphic organizer
5. Reading Textual, Functional, and Recreational Text
    - Academic: Analyze different types of text and determine attributes associated with factual, textual, and recreational text
    - Academic: Identify characteristics of different types of text
    - Academic: Determine uses for each type of text in real-life settings
    - Technology: Utilize and format a table in a document to identify text characteristics
    - Technology: Format a checklist to use as a personal resource when writing
6. Points of View
    - Academic: Establish point of view by writing from a literal visual point of view
    - Academic: Enhance writing by utilizing different points of view for different narratives
    - Academic: Analyze points of view and associate different characteristics with each type of view
    - Technology: Edit images embedded in a document and create captions using the Insert Caption button
    - Technology: Utilize the Highlighter tool to highlight words in captions
7. History: Personal Narratives

- Academic: Distinguish between the attributes of spoken speech and written text
- Academic: Recognize both point of view and voice in writing
- Technology: Utilize, insert and format a SmartArt graphic to create a Venn diagram comparing written and spoken word
- Technology: Change orientation of the document from portrait to landscape

8. Writing a Personal Narrative
    - Academic: Utilize prewriting organizers in order to write a personal narrative
    - Academic: Incorporate figurative language into writing
    - Technology: Develop and type a rough draft personal narrative in a Microsoft® Word document
    - Technology: Insert and format text boxes to separate parts of the story
9. Revising and Editing Writing
    - Academic: Evaluate the process of revising and editing to understand the meaning of each
    - Academic: Analyze personal writing through the revision and editing process
    - Technology: Use the revising and editing features in Microsoft® Word including the Spelling and Grammar tool and the Thesaurus

3. **Microsoft® PowerPoint**
    1. Technology for Publishing
        - Academic: Publish a final copy of a personal narrative
        - Technology: Record a personal narrative using the Record Audio tool in Microsoft® PowerPoint
        - Technology: Insert images and sound within the presentation
    2. Using Context Clues
        - Academic: Read and analyze historical text
        - Academic: Identify unknown or unfamiliar words and use context clues to determine their meaning
        - Technology: Utilize the Thesaurus feature to infer the meaning of the unfamiliar word
        - Technology: Demonstrate adding additional slides to a presentation using the New Slide drop-down menu
        - Technology: Create a presentation and apply a different font color to text to illustrate the context clues and define unfamiliar words
    3. Graphing Probability
        - Academic: Explore basic probability
        - Academic: Observe frequencies of an event by collecting and tallying data
        - Academic: Investigate relationships of the event by creating a table to analyze data
        - Technology: Demonstrate inserting a graph or chart using the Microsoft® Excel charting function within Microsoft® PowerPoint
    4. Graphing Probability Part 2
        - Academic: Determine probability of events and analyze the relationships
        - Academic: Analyze the probability of an event using the terms greater or lesser likelihood
        - Technology: Demonstrate inserting a graph or chart using the Microsoft® Excel charting function within Microsoft® PowerPoint
        - Technology: Adjust and format graphs in a presentation using the Design, Layout, and Format ribbons
        - Technology: Use the Record tool to share information within the presentation
    5. Technology for Searching

- Academic: Search, examine, and assess research articles to determine authenticity and sound reasoning
- Technology: Create a presentation to share information from research
- Technology: Modify a table and insert hyperlinks to maintain a record of reliable sources and websites

6. Technology for Inquiry
    - Academic: Conduct an Internet search for information and evaluate the text for authenticity
    - Academic: Organize resources from Internet research
    - Technology: Conduct a scholarly search using Boolean operators within the EBSCO and Grolier™ databases to find information about Earth's history
    - Technology: Create a bulleted list in Microsoft® PowerPoint
7. Technology for Communication Geologic Time Scale
    - Academic: Outline geological research and illustrate the time scale sequence logically
    - Technology: Insert and format SmartArt to organize and sequences events
    - Technology: Create a presentation to sequence events of the geological time scale

4. **Microsoft® Excel**
    1. Estimate by Rounding
        - Academic: Determine when it is appropriate to round decimal numbers up or down to the nearest whole number
        - Academic: Solve multi-step problems by rounding decimals
        - Technology: Round numbers with decimals to practice estimation using the ROUND function
        - Technology: Apply formulas to multiple cells in a workbook using the AutoFill feature
    2. Function Tables
        - Academic: Create input/output tables from expressions
        - Academic: Solve word problems and equations using an input/output table
        - Technology: Create an input/output table in Excel to show answers to equations
        - Technology: Insert and apply multiplication and addition formulas to an input/output table
    3. Real-World Data
        - Academic: Balance a checkbook within a provided resource
        - Technology: Insert formulas into an Excel workbook to determine the balance of the checkbook
        - Technology: Insert and apply the SUM function to add multiple cells together
    4. Finding the Mean and Range of Data
        - Academic: Organize data to enable easier comparison
        - Academic: Compute the range and mean for a list of numbers
        - Technology: Apply formulas in a workbook to find the mean and range of data
    5. Sorting and Filtering Data
        - Academic: Analyze data in a database to identify similarities and differences
        - Technology: Organize, sort and filter data in a database to identify trends
        - Technology: Define and identify fields, field names and records in a database
    6. Graphing Data
        - Academic: Evaluate different types of graphs and determine appropriate graphs for certain types of data

        - Technology: Graph two data series in multiple formats and evaluate the graphs' advantages and disadvantages
    7. Survey and Graphing Analysis
        - Academic: Evaluate a random sample for fair and unbiased questions
        - Academic: Compare and analyze collected data
        - Technology: Organize information into a data table in Excel
        - Technology: Create a graph from the data table in Excel to compare data
5. **Study Skills**
    1. Organization and Time Management
        - Identify characteristics of time management
        - Identify time management skills that need improving
        - Design a weekly schedule to improve time management skills
    2. Using Graphic Organizers: Timelines
        - Evaluate a timeline as a tool to support learning
        - Create a timeline
    3. Memory Aids
        - Identify key elements in creating memory tools, acronyms, and acrostics
        - Construct original acronyms and acrostics using information from current academic courses
    4. Study Strategies
        - Identify different study skills
        - Formulate a method of studying that works best for you
    5. Test-Taking Strategies
        - Distinguish between characteristics of objective questions and essay questions
        - Evaluate personal test-taking strategies
        - Utilize test-taking strategies
    6. Goal Setting
        - Express the characteristics of successful and well-thought-out goals
        - Apply study skills while developing short- and long-term goals
    7. Learning through Games and Simulations
        - Research examples of simulations and interactive games for education online
        - Analyze trends that occur when repeating simulations with different data
        - Predict outcomes when data in a simulation is changed
6. **Internet Safety**
    1. Acceptable Use Policy
        - Identify necessary components of an acceptable use policy (AUP)
        - Review the school's AUP
        - Develop AUP guidelines
    2. Cybersecurity
        - Identify key general attributes of the threats to the security of computers and information via the Internet, such as viruses, worms, and Trojan horses
        - Understand how to protect computers from viruses, worms, Trojan horses, and spyware
        - Understand basic prevention and maintenance that can be done to protect the computer, such as operating system updates, firewalls, spyware checks, virus protection, etc.
    3. Cyber Community
        - Describe different ways to communicate
        - Differentiate between appropriate and inappropriate websites
        - Describe different ways to handle inappropriate websites
    4. Social Networks

- Identify media that is commonly shared online
- Define the relevance of intellectual property rights to online sharing in an age appropriate way
- Compare the relationship of intellectual property rights to linking on personal social networking pages

5. Cyberbullying
    - Identify bystanders who may be involved in a cyberbullying incident
    - Use a variety of resources to explore the characteristics and behaviors of bystanders and upstanders
    - Draw conclusions about the actions of various participants in bullying incidents
6. Safety in Online Gaming
    - Evaluate the concept of online gaming
    - Understand the safety and security risks associated with online gaming
    - Develop an action plan for informing others of how to play online safely
7. Safeguarding Identity
    - Evaluate the concept of identity theft
    - Critique the security risks associated with revealing private information online
    - Develop an action plan for dealing with identity theft that can be shared with parents
8. Online Shopping
    - Evaluate the safety risks associated with online shopping
    - Take preventative measures when shopping online to help ensure personal safety and computer security
9. Blogging
    - Evaluate the security risks associated with online journaling and blogging
    - Identify specific risky behaviors associated with online journaling
    - Determine positive techniques to blog online
10. Cyber Predators
    - Evaluate risks involved in engaging in online friendships
    - Discuss basic strategies for interacting online
    - Demonstrate understanding of risky online interaction through a selected project/activity
11. Safety in Online Relationships
    - Apply the concept of willing participation
    - Evaluate risk-taking in the context of a cyber predator case
    - Make conclusions about who is most at risk for potentially dangerous online relationships
    - Make conclusions about how to maintain safe and healthy online relationships
12. Digital Literacy
    - Compare how the Internet and media publications can be used in positive ways, as well as in negative or unethical ways
    - Create a code of conduct governing Internet use
    - Consider the consequences of various means of online publication
13. Understanding Intellectual Property
    - Make a distinction between tangible property and intellectual property
    - Define intellectual property that has been created in the mind before it is turned into a material item
    - Identify copyrighted materials as tangible works that are protected from being copied, distributed, performed, or changed without the creator's or owner's permission

- Identify the impact made when intellectual property rights are not respected
- Relate the concepts of intellectual property to reveal available online materials: music, videos, software, etc.

14. Music Copyright Basics
    - Apply copyright laws to online usage of music
    - Determine legal alternatives when using copyrighted music for school assignments and/or personal use
15. Plagiarism and the World Wide Web
    - Define plagiarism
    - Identify how plagiarism occurs
    - Follow the basic guidelines for fair use of intellectual property
16. Peer-to-Peer Networks
    - Define and understand the concept of peer-to-peer networks
    - Identify the safety and security risks, as well as legal issues, surrounding peer-to-peer networks
    - Understand and correct misconceptions about the use of peer-to-peer networks

7. **Digital Publishing**
    1. Exploring a Topic
        - Utilize Boolean search strategies to research ethical implications of technology
        - Develop a research plan, and identify stakeholders involved
        - Apply questioning and research skills to narrow down a topic for investigation
    2. Investigating Design
        - Define the elements of design including line, shape, texture, color, value, and space
        - Understand the uses for line, shape, texture, color, value, and space in design
        - Apply the basic elements of design to edit work
        - Utilize the GNU Image Manipulation Program to edit images
    3. Creating a Multimedia Presentation
        - Create a multimedia presentation to communicate the ethical implications of technology and artificial intelligence
    4. Collaborating Online
        - Utilize technology to share ideas and collaborate with peers
        - Evaluate others' works using provided criteria
    5. Evaluating the Product
        - Self-evaluate a product in regard to audience, purpose, design, and content delivery

