



## **Educational Technology and Online Learning 5**

**Course Summary:** In this course, students use appropriate technology tools and resources to complete projects, manage information, and solve problems. Students use software to write, organize, analyze, and present information and data. Students learn listening and organizational skills and set attainable learning goals. Students become responsible communicators and users of technology as they learn about intellectual property, Internet safety, and effective search and evaluation strategies.

### **Course Outline**

#### **1. Keyboarding**

1. Speed and Accuracy: Lesson 8
  - Demonstrate proper touch typing posture and finger position while typing
  - Apply proper touch typing techniques to type sentences from a text
  - Develop speed and accuracy while copying provided text
2. Speed and Accuracy: Lesson 9
  - Demonstrate proper touch typing posture and finger position while typing sentences
  - Apply proper touch typing techniques to type text from a story
  - Develop speed and accuracy while copying provided text
3. Speed and Accuracy: Lesson 10
  - Demonstrate proper touch typing posture and finger position while typing sentences from stories
  - Apply proper touch typing techniques to type sentences from stories
  - Develop speed and accuracy while copying provided text
4. Speed and Accuracy: Lesson 11
  - Demonstrate proper touch typing posture and finger position while typing sentences from stories
  - Apply proper touch typing techniques to type sentences from stories
  - Develop speed and accuracy while copying provided text
5. Speed and Accuracy: Lesson 12
  - Demonstrate proper touch typing posture and finger position while typing
  - Apply proper touch typing techniques to type sentences from stories and random text
  - Develop speed and accuracy while copying provided text
6. Speed and Accuracy: Lesson 13
  - Demonstrate proper touch typing posture and finger position while typing
  - Apply proper touch typing techniques to type words and phrases
  - Develop speed and accuracy while copying provided text
7. Speed and Accuracy: Lesson 14
  - Demonstrate proper touch typing posture and finger position while typing
  - Apply proper touch typing techniques to type sentences from a story
  - Develop speed and accuracy while copying provided text
8. Keyboarding Review

- Demonstrate proper touch typing posture and finger position while typing
- Apply proper touch typing techniques to type numbers, words, and phrases
- Develop speed and accuracy while copying a paragraph

## 2. Microsoft® Word

### 1. Fact Versus Opinion

- Academic: Identify and distinguish the differences between facts and opinions in text
- Technology: Demonstrate selecting text in a document using the mouse
- Technology: Demonstrate using keyboard shortcuts, Ctrl+ C and Ctrl + V in order to copy and paste text in a document and table

### 2. Greek Roots

- Academic: Identify and define the Greek roots photo-, geo-, demo-, and -ology used in context
- Academic: Examine words with Greek roots to compare meanings of words with common roots
- Technology: Demonstrate how to type words and sentences and move to the next line using the Enter key
- Technology: Incorporate and format a table with the correct number of rows and columns using the Table drop-down menu
- Technology: Illustrate Greek roots in context using different colors within the Highlighter drop-down menu

### 3. Subjects and Predicates

- Academic: Identify subjects and predicates within existing sentences
- Academic: Create original sentences containing both a simple subject and predicate
- Technology: Insert a table with the correct number of columns and rows, adjust the table settings within the Insert Table window, and format text within a table
- Technology: Illustrate subjects and predicates in context using different highlighting colors

### 4. Verb Tenses

- Academic: Identify the difference between past, present, and future tense
- Academic: Modify inappropriate use of verb tense within existing sentences
- Technology: Format the font color of text using the Font Color drop-down menu to identify incorrect verb tenses
- Technology: Demonstrate aligning text using the alignment buttons in the Home ribbon

### 5. Editing a Friendly Letter

- Academic: Identify and write the components of a friendly letter, such as heading, greeting, body, and closing
- Technology: Generate changes in a document using Track Changes
- Technology: Apply alignment and font formatting using menus and buttons in the Home ribbon
- Technology: Revise a document using the Spelling and Grammar tool

### 6. Drafting an Outline

- Academic: Identify the main idea within a text
- Academic: Differentiate between the main idea and the supporting details within a text
- Academic: Apply knowledge of text outlines to real-life applications
- Technology: Construct an outline using Outline View in Microsoft® Word
- Technology: Develop multiple levels within the outline using the Promote and Demote arrow buttons

## 7. Similes and Metaphors

- Academic: Interpret figurative language and include it in a poem
- Academic: Define and identify similes and metaphors
- Technology: Generate and type a poem with multiple lines using the Enter key
- Technology: Arrange a poem on the center of a page using the Center Align button
- Technology: Apply bold and underline formatting to the title of a poem using the Bold and Italics buttons available in the Mini Toolbar

## 8. Poetry

- Academic: Identify the speaker and analyze voice within poetry
- Academic: Create original poetry
- Technology: Arrange a poem on the center of a page using the Center Align button
- Technology: Generate and type a poem with multiple lines using the Enter key

## 9. Coordinate Grids

- Academic: Identify and label the axes of a coordinate grid
- Academic: Identify and define ordered pairs on a coordinate grid
- Technology: Demonstrate inserting a text box and formatting text within the textbox
- Technology: Illustrate ordered pairs on a coordinate grid by inserting shapes using the Shapes drop-down menu

## 10. Number Prefixes

- Academic: Identify number prefixes and define words that begin with number prefixes
- Academic: Categorize words with similar meanings within a table
- Technology: Demonstrate inserting shapes to illustrate number prefixes
- Technology: Construct and insert a table and type within it

## 3. Microsoft® PowerPoint

### 1. Antonyms and Synonyms

- Academic: Identify and define antonyms and synonyms using a thesaurus
- Academic: Explain the difference between synonyms and antonyms
- Technology: Demonstrate inserting and typing synonyms and antonyms in new text boxes
- Technology: Demonstrate inserting a new slide using the New Slide drop-down menu
- Technology: Illustrate the definitions of synonyms and antonyms using clip art

### 2. Reflections, Translations, and Rotations

- Academic: Describe how to reflect, translate, and rotate a shape
- Academic: Create patterns with translations, reflections, and rotations using shapes
- Technology: Apply animations and motion paths to shapes to simulate transformations

### 3. Sequence Ideas for Writing

- Academic: Demonstrate knowledge of main idea and supporting details to sequence ideas during writing
- Technology: Arrange the correct slide sequence using the Slide Sorter view
- Technology: Create a themed presentation with various slide layouts, clip art, text and animations

- Technology: Apply animated entrance effects to sequence text and clip art on a slide
4. Compare and Contrast Fables
    - Academic: Identify and define a fable
    - Academic: Compare and contrast the similarities and differences between fables
    - Academic: Relate similarities in the theme, topic, and main idea between various fables
    - Technology: Demonstrate how to insert and format SmartArt graphics to compare and contrast fables
    - Technology: Demonstrate how to insert clip art and shapes to illustrate the characteristics of a fable
  5. How a Bill Becomes a Law
    - Academic: Explain the process used to make a bill a law
    - Academic: Identify and define key vocabulary used during the bill creation process
    - Technology: Design a presentation using various slide layouts, clip art, and images to explain the bill process
  6. Food Chains
    - Academic: Construct and define organisms in a food chain
    - Academic: Examine the interrelationship between plants, animals, and fungi
    - Academic: Define an herbivore, omnivore, and carnivore
    - Technology: Demonstrate how to insert and format SmartArt to illustrate various stages of a food chain
    - Technology: Construct an interactive food chain by adding action buttons and hyperlinks to different slides within a presentation

#### 4. Microsoft® Excel

1. Place Value
  - Academic: Identify place value of digits
  - Academic: Relate groups of 10 to 100 and 1,000
  - Technology: Navigate and type within cells
  - Technology: Insert shapes into a workbook to represent place values
  - Technology: Apply a fill color to shapes to help sort different place values
2. Identifying Patterns
  - Academic: Identify odd and even numbers in patterns
  - Technology: Apply a fill color to cells to illustrate odd and even number patterns
  - Technology: Insert an addition formula to build numbers and develop patterns
3. Comparing Decimals
  - Academic: Demonstrate how to compare decimals using the less than  $<$ , greater than  $>$ , and equal to  $=$  symbols
  - Academic: Compare decimals to the hundredths place
  - Technology: Apply a fill color to cells to illustrate decimals
  - Technology: Apply borders to cells to illustrate a hundredths grid
4. Multiplying by Powers of Ten
  - Academic: Explain movement of a decimal point when a number is multiplied by 10, 100, or 1,000
  - Academic: Apply powers of ten to multiplication problems
  - Technology: Demonstrate how to insert a multiplication formula to multiply a decimal by 10, 100, or 1,000
  - Technology: Navigate and type within cells

5. Area
  - Academic: Apply variables to replace numerals in mathematical equations
  - Academic: Calculate the area of squares and rectangles
  - Technology: Create uniform cells by applying a set column width
  - Technology: Illustrate a square and rectangle by applying borders to groups of cells
  - Technology: Compute the area of a square and rectangle by inserting a multiplication formula
6. Area of Irregular Shapes
  - Academic: Demonstrate how to compute the areas of irregular shapes
  - Academic: Apply formulas to find the area of irregular shapes
  - Technology: Apply borders to groups of cells to illustrate regular shapes within an irregular shape
  - Technology: Demonstrate how to insert a fill color to identify rectangles within irregular shapes
7. Converting Customary Units of Length
  - Academic: Identify the customary units of length: feet and miles
  - Academic: Demonstrate how to convert customary units of length using multiplication and division formulas
  - Technology: Insert multiplication and division formulas to convert feet to miles and miles to feet
8. Bodies of Water on Earth
  - Academic: Identify, collect, and categorize data on the major bodies of water on Earth
  - Technology: Identify and create a major type of graph (line, pie, or bar graph)
  - Technology: Generate graphs to illustrate variations in surface area

## 5. Study Skills

1. Listening Skills
  - Identify and apply the qualities of an active listener
  - Summarize how to use active listening strategies
  - Explain the importance of being a good listener by recording active listening strategies using the audio recording tool
2. Organization and Time Management
  - Demonstrate how to use organizational strategies to track, plan, and manage a schedule
  - Create a weeklong calendar to organize tasks
3. Note Taking
  - Identify different learning styles and different ways to take notes
  - Demonstrate how to take notes
  - Discuss the purpose of note taking
4. Virtual Tours
  - Demonstrate the ability to complete an online virtual tour to learn about places without traveling to them
  - Evaluate the usefulness of a virtual tour in enhancing learning
5. Online Learning
  - Describe online learning
  - Discuss the pros and cons of online learning
6. Goal Setting
  - Distinguish between short- and long-term goals
  - Plan short- and long-term goals for a possible career

- Create a short- and long-term career goals brochure to track progress toward reaching these goals

## 6. Internet Safety

1. Cybersecurity
  - Identify viruses, worms, Trojan horses, and spyware as programs that can make a computer work improperly
  - Summarize basic techniques to prevent viruses, worms, Trojan horses, and spyware infection
  - Discuss information with parents to check on personal computer security
2. Digital Literacy
  - Define the term media literacy
  - Identify types of media
  - Explain the importance of media literacy
3. Blogging
  - Explain security risks associated with blogging
  - Identify specific risky behaviors associated with blogging
  - Describe positive techniques for safe blogging
4. Cyberbullying
  - Identify and describe elements of cyberbullying
  - Explain the moral in a contemporary fairy tale
5. Text Messaging Safety
  - Describe text and instant messaging and their associated vocabulary
  - Explain the need to follow basic safety rules and netiquette when text or instant messaging
6. Predator Identification
  - List safety rules for behavior toward strangers in the physical community that also apply to behavior toward strangers in cyberspace
  - Explain the importance of refusing inappropriate online relationships
  - Describe how to interact appropriately and safely online
7. Intellectual Property, Fair Use, and Copyright I
  - Demonstrate an understanding that property on the Internet can be owned just like physical property
  - Relate the term intellectual property to something that is created in a person's mind
  - Understand different types of media as intellectual property: writings, music, videos, games, etc.
  - Explain that piracy is stealing from real people
8. Intellectual Property, Fair Use, and Copyright II
  - Identify unauthorized uses of copyrighted materials as acts of piracy and plagiarism
  - Define fair use and copyright law
9. Cyber Citizenship
  - Explain safe and appropriate behavior in cyberspace
  - Identify ways to be a good cyber citizen
  - Plan the components of an educational story for a younger audience