IT-109H: HONORS COMPUTER APPLICATIONS

Cuyahoga Community College

Viewing: IT-109H : Honors Computer Applications

Board of Trustees:
June 2022

Academic Term:
Fall 2022

Subject Code
IT - Information Technology

Course Number:
109H

Title:
Honors Computer Applications

Catalog Description:
Overview of the computer techniques and skills used in a professional environment, with an emphasis on problem solving and addressing business needs. Instruction and hands-on training in file management, word processing, spreadsheet, presentation software, database management, electronic collaboration, and professional Internet usage. Practical applications in researching, creating, editing, saving, presenting, and printing computer generated materials in a profession manner.

Credit Hour(s):
3

Lecture Hour(s):
2
Lab Hour(s):
2

Requisites

Prerequisite and Corequisite
MATH-0955 Beginning Algebra, or qualified Math placement; and eligibility for ENG-101H Honors College Composition I.

Outcomes
Course Outcome(s):
Identify hardware and software systems with a focus on personal computers and emerging technologies.

Objective(s):
1. Describe what Operating Systems are used for and identify common examples. (Windows, OSX, iOS, Android, etc...)
2. Describe was Productivity Software is used for and identify common programs. (Word, Power Point, Excel, Access, Outlook, etc...).

Course Outcome(s):
Demonstrate the ability to create and manipulate simple databases using the currently available database software.

Objective(s):
1. Design a simple flat-file, single database table.
2. Define the structure, create and enter data into a database table.
3. Edit the design of a database table.
4. Edit the content of a database table (e.g., add, delete, and modify records).
5. Sort and filter records in a table based on single and multiple field options.
6. Create queries on one or more tables to search for specified records using single and multiple criteria expressions.
7. Create forms to enter, edit, view and maintain data.
8. Generate formatted reports from table or query results.
9. Save database files using name and save functions from the Office button.
10. Access needed information using online database help features.

11. Research components of database technology best suited to solve specific business problems.
12. Identify common types of information systems.

Course Outcome(s):

Evaluate the role of information systems in supporting organizational goals.

Objective(s):

1. Explain how information systems are used by organizations to make decisions.

Course Outcome(s):

Demonstrate use of email systems and use proper etiquette and netiquette when communicating electronically.

Objective(s):

1. Use the basic features of an electronic mail system, including sending and receiving emails.
2. Discuss the importance of using proper email etiquette, especially in a professional environment.
3. Research impact of email and business communications with a focus on business etiquette.

Course Outcome(s):

Evaluate the ethical, social and political impact of information systems.

Objective(s):

1. Identify recent and emerging technological breakthroughs, and describe the potential opportunities created by new technology.
2. Identify how emerging technologies impact roles that humans currently handle vs. roles in which computers or robots are currently used.

Course Outcome(s):

Evaluate the strengths and weaknesses of computer functions and information systems.

Objective(s):

1. Identify roles in society where humans are better equipped to handle tasks than computers or robots are, and where computer or robots are better equipped to handle a task than a human is.

Course Outcome(s):

Navigate Intranet and Internet applications.

Objective(s):

1. Collaborate on a project or report using a cloud based office application.
2. Utilize social media to create personal and professional connections.
3. Create a basic Web page and display in a variety of browsers.

Course Outcome(s):

Recognize fundamental networking technologies (e.g., wireless, cellular).

Objective(s):

1. Explain the difference between Operating Systems, Web Browsers, Search Engines, and Internet Service Providers.
2. Identify common examples of Operating Systems, Web Browsers, Search Engines, and Internet Service Providers.
3. Recognize the difference between wired, wireless, and cellular network communication technologies.

Course Outcome(s):

Utilize multiple computer applications in both type and vendor to research and solve business problems.

Objective(s):

1. Dissect business problems to determine appropriate use of computer applications including an analysis of current application platforms.
2. Determine integration of microcomputer applications and platforms to address business issues.
3. Use online help and documentation to research additional features required to address business issues.

Course Outcome(s):

Identify the components of a computer system.

Objective(s):

1. Identify and describe the function of including input devices (mouse, keyboard, touch screen),
2. Identify and describe the function of output devices (monitor, speakers, printer), and
3. Identify and describe the function of basic internal computer components (processor, ram, motherboard, hard drive, power supply, etc...).
4. Explain the major components of a computer and their impact on PC performance and computer applications.

Course Outcome(s):

Demonstrate efficient file management techniques using an operating system's file management tools.

Objective(s):

1. Perform basic windows manipulation.
2. Recognize file formats and the capabilities of the file management systems of various operating systems.
3. Identify the common components of a desktop environment, such as icons, the taskbar, menus, and windows.
4. Perform basic file management, such as naming, saving, deleting, moving, renaming, and editing files.
5. Navigate, save, and move files between folders and subfolders.

Course Outcome(s):

Describe the basic concepts of information systems.

Objective(s):

1. Explain the difference between data, information, knowledge, and wisdom.
2. Explain the roles that hardware, software, data, people, networks, and processes play in an information system.

Course Outcome(s):

Evaluate the current value, the potential value, the limitations, and potential dangers (e.g., violation of privacy, copyright, software piracy, and computer crime) in the use of computers.

Objective(s):

1. Discuss how to protect individuals and computers from common computer threats including virus, trojans, worms, phishing, spoofing, and ransomware.
2. Describe how and where browsing activity is tracked.

Course Outcome(s):

Apply appropriate technology tools and resources to locate and retrieve information from various sources (e.g., on-line, libraries, etc.).

Objective(s):

1. Establish strategies to distinguish between reputable and non-reputable information found on the Internet.
2. Explore current browser technology from both a client and a server perspective.
3. Perform customized searches using the advanced search tools available in common search engines such as Google or Bing.
4. Access electronic information through library resources.

Course Outcome(s):

Demonstrate the ability to create documents and manipulate text data using the current available software.

Objective(s):

1. Create documents (e.g., letters, memos, reports) using blank forms and predesigned templates.
2. Insert, delete, and move text within a document.
3. Utilize cut, copy, and paste functions to edit documents.
4. Format documents by modifying margins, tab settings, line spacing, alignment settings, page setup, headers/footers and page numbers.
5. Enhance documents by changes in fonts, font sizes, and character formatting styles (bold, italic, etc).
6. Enhance a document using styles, style sets, and themes.
7. Locate/replace text using search and replace functions.
8. Employ word processing review tools (e.g., spell checker, grammar checker and thesaurus on the Office ribbon).
9. Add images to a document, and enable word wrapping around images.
10. Understand Explain basic ADA compliance, and how to add alternate text to images in a document.

11. Use reference tools to add sources to a document, insert inline citations, and create a work cited page.
12. Check documents using print preview functions
13. Print materials using print functions (e.g., number of copies, duplexing or one-sided, selected pages or whole document).
14. Save documents using name and save functions.
15. Access needed information using online word processing help features from the Office ribbon.
16. Research components of word processing best suited to solve specific business problems.

Course Outcome(s):

Demonstrate the ability to organize and manipulate numerical data using the currently available spreadsheet software.

Objective(s):

1. Enter text, numbers, formulas and functions to create spreadsheets.
2. Perform calculations using simple formulas and predefined functions.
3. Format numeric and non-numeric cell entries to produce professional-looking worksheets.
4. Explain the difference between a relative reference and an absolute reference, and how to apply absolute references when necessary.
5. Utilize cut, copy and paste functions to edit spreadsheet data.
6. Create charts and graphs from spreadsheets.
7. Check spreadsheets using print preview functions.
8. Print spreadsheets using spreadsheet print functions and options.
9. Save spreadsheet files using name and save functions from the Office button.
10. Access needed information using online spreadsheet help feature.
11. Research components of electronic spreadsheets best suited to solve specific business problems.
12. Add transitions, animations, and sound effects to slide shows.

Course Outcome(s):

Demonstrate the ability to create and manipulate simple presentation materials using the currently available presentation software.

Objective(s):

1. Add, modify, and remove templates in a presentation.
2. Insert images into presentation slides. Use Picture Tools Format to set a Picture Style, adjust the Color, and add an Artistic Effect.
3. Create Smart Art objects for inclusion within presentations.
4. Run slide shows manually and automatically.
5. Print a presentation in various formats, including a single slide, an entire presentation, an outline, and notes.
6. Save slide show presentations.
7. Access needed information using online software help features.
8. Research components of presentations best suited to solve specific business problems.
9. Research and implement presentation approach to meet specific business needs.
10. Explain basic database concepts, including the terms field, record, file, table, and database.

Methods of Evaluation:

1. Class participation and discussion
2. Quizzes and examinations
3. Projects and presentations
4. Group projects
5. Computer lab projects
6. Other methods deemed appropriate by the department

Course Content Outline:

1. Identify the Basic Parts of a Personal Computer.
   a. Computer Hardware components
      i. Input devices
      ii. Output devices
      iii. Basic internal computer components
   b. Software components of a microcomputer
      i. Operating Systems
      ii. Productivity Applications
   c. Information Systems
      i. Hardware
      ii. Software

        iii. Data
        iv. People
        v. Process

2. Use the Windows operating system to perform basic file maintenance tasks, navigate within the Windows environment, and operate integrated software applications.
   a. Desktop environment
      i. Icons
      ii. Taskbar
      iii. Menus
   b. Data file manipulation
      i. Name
      ii. Save
      iii. Retrieve
      iv. Edit
   c. File maintenance
      i. Copy
      ii. Move
      iii. Rename
      iv. Delete files
   d. Use of folders (directories) and subfolders (subdirectories).
   e. Window manipulation
      i. Maximize
      ii. Minimize
      iii. Restore
      iv. Close
      v. Resize
      vi. Move
   f. Common navigation tools
      i. Tabs
      ii. Ribbon
      iii. Groups
      iv. Dialog Box Launcher
      v. Quick Access Toolbar
      vi. Scrollbars
   g. Common functions across applications
      i. Cut
      ii. Copy
      iii. Paste

3. Use a word processing program to create, enter, edit, format, print and save documents.
   a. Create documents
      i. Blank forms
      ii. Predesigned templates (e.g., letters, memos, reports)
   b. Editing documents
      i. Inserting text
      ii. Deleting text
      iii. Moving text
      iv. Cut
      v. Copy
      vi. Paste
   c. Formatting documents
      i. Setting and modifying margins
      ii. Tab settings
      iii. Line spacing
      iv. Alignment settings
      v. Page setup
      vi. Headers/footers
      vii. Page numbers
   d. Enhancing documents

           i. Fonts
          ii. Font sizes
        iii. Character formatting styles (bold, italic, etc.)
        iv. Styles
         v. Style Sets
        vi. Themes

e. Locate/replace text using search and replace functions

f. Basic ADA compliance/using alternate text images in a document

g. Word processing review tools
           i. Spell checker
          ii. Grammar checker
        iii. Thesaurus

h. Managing sources
           i. Adding sources to a document
          ii. Adding inline citations
        iii. Adding a work cited page to a document

i. Printing documents
           i. Print preview functions
          ii. Print functions
        iii. Number of copies
        iv. Duplexing or one-sided
         v. Selected pages or whole document

j. Saving documents

k. Word processing help feature

l. Problem solving/research

4. Use an electronic spreadsheet program to create, enter, edit, format, print and save electronic worksheets containing formulas and functions.

a. Designing spreadsheets
           i. Formatting
              A. Numeric cell entries
              B. Non-Numeric cell entries
          ii. Calculations
              A. Simple Formulas
              B. Pre-defined functions
              C. Relative vs Absolute Referencing
        iii. Charts and Graphs

b. Editing spreadsheets
           i. Cut
          ii. Copy
        iii. Paste

c. Print functions and options

d. Name and Save functions

e. Online spreadsheet help features

f. Problem solving/research

5. Use presentation programs to create, enter, edit, print, save, and present computer-generated presentations and handouts.

a. Creating presentations and handouts
           i. Templates
          ii. Clip Art
        iii. Smart Art Objects
        iv. Transitions
         v. Automatic run vs. manual run
        vi. Saving

b. Editing presentations
           i. Copying from one to another
          ii. Changing/removing templates

c. Printing presentations
           i. Single slide
          ii. Entire presentation

        iii. Outline
        iv. Notes
    d. Online software help features
    e. Meeting business needs
        i. Presentation approaches
        ii. Presentation components
        iii. Problem resolution

6. **Use a database/file management program to build, manage and save data files**
    a. Terminology
        i. Field
        ii. Record
        iii. File
        iv. Table
        v. database
    b. Design
        i. Simple single database table
        ii. Creating and entering data
    c. Editing table design
    d. Sorting and Filtering
    e. Creating Queries
    f. Creating Forms
    g. Creating Reports
    h. Saving
    i. Online software help features
    j. Using database technology to solve specific business problems

7. Use websites and online-resources to perform basic research and to stay informed.
    a. Connecting to the Internet
        i. Local Area Network
        ii. Wi-Fi
        iii. Cellular Connecting
    b. Internet and the World Wide Web
        i. Internet Service Providers
        ii. Browsers
            1. Client perspective
            2. Server perspective
        iii. Search engines
        iv. Tracking of browsing activity
        v. Basic web pages
            1. Creating
            2. Displaying in various browsers
    c. Searching the WWW
        i. Advanced search features
        ii. Specialized search engines
        iii. Researching business needs
    d. Finding 'good' information
        i. Reputable
        i. Timely
        ii. Unbiased
        iii. Web site integrity and application in research
    e. Legal Considerations
        i. Plagiarism
        ii. Piracy
        iii. Copyright
        iv. Violation of privacy
        v. Computer crime
    f. Identifying potential risks
        i. Viruses
        ii. Trojans
        iii. Worms

   iv. Phishing
   v. Spoofing
   vi. Ransomeware
 8. Use Web based tools to collaborate and communicate.
  a. Electronic mail systems
   i. Basic purposes and functions
   ii. Login and password functions
  b. Collaborate using Cloud solutions
   i. Setting up a joint document
   ii. Saving and printing documents from the cloud
  c. Connecting with Social Media
   i. Creating personal connections
   ii. Creating professional connections
    A. LinkedIn
  d.

Resources

Gaskin, Shelly, Alicia Vargas, Debra Geoghan, and Nancy Graviett. *GO! with Microsoft Office 365 Getting Started*. Upper Saddle River, NJ: Prentice Hall, 2021.

Nordell, Randy. *Microsoft Office 365 in Practice*. 2019 edition. McGraw-Hill Education, 2019.

Weixel, Suzanne. *Introduction to Computers and Information Technology*. 3rd ed. New York: Pearson Education, Inc., 2019.

Humphrey, M.L. *Microsoft Office 2019 Beginner*. M.L. Humphrey, 2021.

Resources Other

1. Microsoft. (n.d.). Office 365 Training Center. Retrieved from Microsoft Office Support: https://support.office.com/en-us/office-training-center (https://support.office.com/en-us/office-training-center/)
2. Global Community Foundation International. (2021) Office 2019. Retrieved from GCF Learn Free: https://edu.gcfglobal.org/en/topics/office/
3. https://www.w3schools.com/

Top of page
Key: 2482