

**CUYAMACA COLLEGE**  
**COURSE OUTLINE OF RECORD**

**Business Office Technology 174 – Computer Concepts and Applications**

3 hours lecture, 3 units

**Catalog Description**

This course involves the study of computer concepts and computer skills needed to use computers effectively and efficiently to enhance personal and professional productivity. Computer concepts covered include a basic understanding of the components that comprise computer hardware, system software, social media, mobile computing, and the security and privacy issues related to technology. This course will guide students to achieve entry-level competence with the latest editions of Microsoft Windows, web browsers and the Microsoft Office productivity suite, including OneNote, Outlook, Word, Excel, PowerPoint, and Access.

**Prerequisite**

None

**Course Content**

- 1) Living in a Digital World
  - a. Personal Computers
  - b. Mobile devices, wearable computers, and embedded computers
  - c. Computers for connecting multiple users and specialized processing
  - d. Computer innovations and trends
  - e. Information technology and the information processing cycle
  - f. Cloud computing
  - g. Green computing
  - h. Computers and your health
- 2) Exploring the World Using the Internet
  - a. Networks, the Internet, and the World Wide Web
  - b. Connecting to the Internet
  - c. Popular web browsers
  - d. Understanding Internet and web addresses, and navigating web pages
  - e. Searching the web
  - f. Evaluating web content
  - g. Popular web plug-ins and players for multimedia content
  - h. E-commerce, messaging, and internet telephone and conferencing options
- 3) Computer Hardware
  - a. The system unit
  - b. Input devices
  - c. Output devices
  - d. Network adapters
  - e. Digital data
  - f. Storage options
- 4) The Operating System and Utility Programs
  - a. Introduction to the OS and OS functions
  - b. Popular OSs for mobile devices
  - c. Embedded OSs and Cloud OSs
  - d. OS utilities for maintaining system performance
  - e. OS troubleshooting tools

- 5) Application Software
  - a. Productivity applications for the workplace
  - b. Other workplace productivity applications
  - c. Applications for working with graphics, publications, multimedia, and the web
  - d. Software applications for personal use
  - e. Cloud and open source applications
  - f. Acquiring, installing, uninstalling, and upgrading software
  - g. Mobile apps
- 6) Using Social Media to Connect and Communicate
  - a. Social networking
  - b. Social bookmarking
  - c. Media sharing
  - d. Blogging
  - e. Wikis for user-generated content
  - f. Social media strategies in business
- 7) Computer security and privacy
  - a. Unauthorized access and unauthorized use of computer resources
  - b. Botnets and denial of service attacks
  - c. Malware infections
  - d. Phishing, pharming, and clickjacking threats
  - e. Information privacy
  - f. Mobile device security
- 8) Using Windows 10 and Managing Files
  - a. Using touch, mouse, and keyboard input to navigate Windows 10
  - b. Starting Windows 10 and exploring apps
  - c. Understanding files and folders and downloading and extracting data files
  - d. Creating folders and copying files and folders
  - e. Moving, renaming, and deleting files and folders and ejecting a USB flash drive
- 9) Navigating and Searching the Web
  - a. Introduction to the Internet and the World Wide Web
  - b. Navigating the web using Microsoft Edge, Chrome, and Mozilla Firefox
  - c. Searching for information and printing web pages
- 10) Using the Microsoft Office productivity suite
  - a. Organizing and managing class notes using OneNote
  - b. Communicating and scheduling using Outlook
  - c. Creating, editing, and formatting Word documents
  - d. Enhancing a Word document with special features
  - e. Creating, editing, and formatting Excel workbooks
  - f. Working with functions, charts, tables, and page layout options in Excel
  - g. Creating, editing, and formatting a PowerPoint presentation
  - h. Enhancing a presentation with multimedia and animation effects
  - i. Using and querying an Access database
  - j. Creating a table, form, and report in Access
  - k. Integrating Word, Excel, PowerPoint, and Access content
  - l. Using OneDrive and Other Cloud Computing Technologies

### Course Objectives

Students will be able to:

- 1) Identify various types of computers; explain how data is converted into information; and understand technological convergence, cloud computing, green computing, and ergonomics.
- 2) Identify hardware and software needed to connect to the Internet; explain broadband connectivity options; recognize popular web browsers, plug-ins, and players; search the web effectively; and distinguish various online services.
- 3) Recognize and explain the components in a system unit, input devices, output devices, and network

adapters; understand how data is represented on a computer; and distinguish various options for storage and storage capacity.

- 4) List the major functions of operating system software and recognize popular operating systems used for computing devices; explain the purpose of embedded and cloud operating systems; describe commonly used utility programs for maintaining a computer; and use troubleshooting tools in system software for solving computer issues.
- 5) Identify productivity and multimedia applications used in workplaces and by individuals; differentiate web-based and open source applications; explain the process to acquire, install, uninstall, and upgrade software; and provide examples of mobile apps.
- 6) Describe popular social networking, social bookmarking, media sharing, blogging, and wiki websites; and provide examples of how individuals and businesses are using social media strategies to connect and communicate with others.
- 7) Evaluate the validity, legitimacy, and productivity potential of future technologies as they emerge, as well as how to assess the privacy risks associated with each.
- 8) Recognize and explain behaviors related to technology use, such as online identity, personality types in cyberspace, addiction to computers and Internet, regressive behavior in cyberspace, etc.
- 9) Evaluate personal computer workstation for proper ergonomic function, and configure it properly to reduce physical strain and injury from improper repetitive motion
- 10) Navigate the Windows operating system and manage files and folders.
- 11) Use web browsers such as Microsoft Edge, Google Chrome, or Mozilla Firefox to navigate and search the web, as well as download content to a PC or mobile device.
- 12) Use navigation, file management, commands, and features within the Microsoft Office suite that are standard across all applications.
- 13) Organize and manage class notes in OneNote.
- 14) Communicate and manage personal information in Outlook.
- 15) Create, edit, format, and enhance documents in Word.
- 16) Create, edit, analyze, format, and enhance workbooks in Excel.
- 17) Create, edit, format, and enhance slides and set up a slideshow in PowerPoint.
- 18) Create and edit tables, forms, queries, and reports in Access.
- 19) Integrate information among the applications within the Microsoft Office suite.
- 20) Use cloud computing technologies to create, edit, store, and share documents.

### **Method of Evaluation**

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in subject matter determined by multiple measurements for evaluation, one of which must be essay exams, skills demonstration or, where appropriate, the symbol system.

- 1) Assignments and projects
- 2) Exams, final exam (objective, performance)

### **Special Materials Required of Student**

None

### **Minimum Instructional Facilities**

Computer lab with Internet access

### **Method of Instruction**

- 1) One-on-one lecture and/or group lecture
- 2) Self-paced reading, hands-on practice, assignments and projects
- 3) Individual assistance

### **Out-of-Class Assignments**

- 1) Reading assignments
- 2) Software exercises and projects

**Texts and References**

- 1) Required (representative examples):
  - a. Evans, Martin, Poatsy. *Technology In action* by Pearson Education, 2024.
  - b. Gaskin, Vargas, Geoghan, Graviett. *Go! Microsoft 365 2021*, by Pearson Education, 2023.
- 2) Supplemental: White, Ron, *How Computers Work, 10th edition*, Que Publishing, 2014.

**Student Learning Outcomes**

Students will be able to:

- 1) Select and use appropriate application software to solve specific tasks.
- 2) Identify the hardware and software components of a computer system.
- 3) Use social media and cloud technology to share files and collaborate in a business-oriented team environment.
- 4) Identify Internet and mobile device security risks and techniques for minimizing risk and safeguarding personal information.