

SAN DIEGO COMMUNITY COLLEGE DISTRICT
CONTINUING EDUCATION
COURSE OUTLINE

SECTION I

SUBJECT AREA AND COURSE NUMBER

COMP 628

COURSE TITLE

BUSINESS INFORMATION SYSTEMS

TYPE COURSE

NON-FEE

VOCATIONAL

CATALOG COURSE DESCRIPTION

This course is an introduction to using technology including computers, networks, information systems and the Internet in a business environment. Topics include computer components and functions, application software, systems software, digital devices and media. Students will learn about computer system evaluation, security, software programming and databases. (FT)

LECTURE/LABORATORY HOURS

72

ADVISORIES

NONE

RECOMMENDED SKILL LEVEL

Eighth grade reading level, ability to communicate effectively in the English language.

INSTITUTIONAL STUDENT LEARNING OUTCOMES

1. Social Responsibility
SDCE students demonstrate interpersonal skills by learning and working cooperatively in a diverse environment.
2. Effective Communication
SDCE students demonstrate effective communication skills.
3. Critical Thinking
SDCE students critically process information, make decisions, and solve problems independently or cooperatively.

INSTITUTIONAL STUDENT LEARNING OUTCOMES (CONTINUED)

4. Personal and Professional Development

SDCE students pursue short term and life-long learning goals, mastering necessary skills and using resource management and self-advocacy skills to cope with changing situations in their lives.

COURSE GOALS

1. Introduce computer and information systems principles to understand how computer systems components support business.
2. Learn the importance of how various software applications and systems, and reliable computer networks, operate and function.
3. Learn the importance of computer security for networks and on the internet.
4. Learn the importance of databases and how they are managed and function in business.
5. Understand the process of configuring networks, client-server protocols and the importance of security.
6. Introduce data management, transmission, and communication on the Internet.
7. Learn how to use the Internet and web resources.
8. Learn how to evaluate computer systems, digital and media devices.

COURSE OBJECTIVES

1. Identify computer systems components and utilize computer hardware and peripheral devices.
2. Describe the tools needed to use the Internet for communication, collaborating, and E-commerce.
3. Describe how the various operating systems and utility programs function together.
4. Explain how to evaluate computer systems, their capabilities and reliability.
5. Describe how to identify computer security issues in a network and online.
6. Evaluate database structures, functions and management for business systems.
7. Describe the process of setting up networks and client-server security protocols.
8. Explain data transmission, protocols, using coding and security when communicating on the Internet.

SECTION II

COURSE CONTENT AND SCOPE

1. Introduction to Using Technology
 - 1.1. Global impact and issues
 - 1.1.1. Social networking tools
 - 1.1.2. Health care
 - 1.1.3. The digital divide
 - 1.1.4. How we think, connect and consume
 - 1.1.4.1. Marketing and crowdsourcing
 - 1.1.4.2. Skyping

COURSE CONTENT AND SCOPE (CONTINUED)

- 1.1.5. Global economy's impact on purchasing
- 1.2. Technology and your career
 - 1.2.1. Retail, arts, education, law enforcement, medicine, and science
- 2. Computer Components and Functions
 - 2.1. Types of computers
 - 2.1.1. Mainframe, personal computers, mobile devices
 - 2.2. Internal components
 - 2.3. Input and output devices
 - 2.3.1. Keyboard, mouse, monitor
 - 2.4. Peripheral devices
 - 2.5. Data storage
 - 2.5.1. Hard drive, flash drives
 - 2.6. Setting up your computer
 - 2.6.1. Ergonomics
- 3. Using the Internet and Web Resources
 - 3.2. Communicating and collaborating on the Web
 - 3.2.1. Email
 - 3.2.2. Social networking
 - 3.2.3. Blogs
 - 3.2.4. Podcasts and webcasts
 - 3.3. Conducting business: E-commerce
 - 3.3.1. Making safe payments
 - 3.4. Using the Web effectively
 - 3.4.1. Hypertext transfer protocol (HTTP)
 - 3.4.2. Hyperlinks
 - 3.4.3. Live bookmarks and tagging
 - 3.5. Search engines and tools
 - 3.5.1. Metasearch engines
 - 3.5.2. Using wild cards
 - 3.5.3. Ethical use
 - 3.5.3.1. Plagiarism and copyright
- 4. Application Software
 - 4.1. Productivity software
 - 4.1.1. Word processing
 - 4.1.2. Spreadsheets
 - 4.1.3. Presentation
 - 4.1.4. Database
 - 4.2. Business software
 - 4.2.1. Project management
 - 4.2.2. E-commerce
 - 4.3. Organizational software
 - 4.2.1. Note taking
 - 4.2.2. Communication
 - 4.2.3. Finance
 - 4.2.4. Mobile apps

COURSE CONTENT AND SCOPE (CONTINUED)

- 4.4. Multimedia software
 - 4.4.1. Gaming
 - 4.4.2. Drawing
 - 4.4.3. Photo editing
- 4.5. Managing software
 - 4.5.1. Licenses
 - 4.5.2. Selection
 - 4.5.3. Downloading, installing and uninstalling
- 5. System Software
 - 5.1. Operating system (OS) fundamentals
 - 5.1.1. Real-time systems
 - 5.1.2. Networks, servers and mainframes
 - 5.1.3. Mobile devices
 - 5.1.3.1. iOS, Windows, Android
 - 5.1.4. Types for personal computers
 - 5.1.4.1. Windows, Mac OS, Linux
 - 5.1.5. Purpose and function of OS
 - 5.1.5.1. User interface
 - 5.1.5.2. Memory and storage management
 - 5.1.5.3. Hardware and peripheral device management
 - 5.1.6. Boot process
 - 5.1.7. Windows interface
 - 5.2. Trends and open source software
 - 5.3. Organizing your computer
 - 5.3.1. File management
 - 5.3.2. Naming
 - 5.4. Utility programs
 - 5.4.1. File compression
 - 5.4.2. System maintenance
 - 5.4.3. Accessibility
- 6. Computer System Evaluation
 - 6.1. Computing requirements
 - 6.1.1. Computer Processing Unit (CPU)
 - 6.1.2. Random Access Memory (RAM)
 - 6.1.3. Storage
 - 6.2. Making decisions
 - 6.2.1. CPU subsystem
 - 6.2.2. Memory subsystem
 - 6.2.3. Storage subsystem
 - 6.2.4. Video and audio subsystems
 - 6.2.5. Computer reliability
- 7. Networks in Business Environments
 - 7.1. Architecture
 - 7.2. Network hardware components
 - 7.2.1. Wireless router
 - 7.2.2. Switches and hubs
 - 7.2.3. Modems

COURSE CONTENT AND SCOPE (CONTINUED)

- 7.3. Internet connection
 - 7.3.1. Installation and configuration
 - 7.3.2. Wired and wireless networks
 - 7.3.3. Internet speeds
 - 7.3.4. Security
 - 7.3.4.1. Storage
 - 7.3.4.2. Wireless networks
- 8. Digital Devices and Media
 - 8.1. Mobile devices
 - 8.1.1. Smartphones
 - 8.1.1.1. Software
 - 8.1.1.2. Bluetooth
 - 8.1.1.3. Security
 - 8.1.2. Tablets, netbooks, ultrabooks, laptops
 - 8.1.2.1. Compare to smartphones
 - 8.1.2.2. File types
 - 8.2. Digital information age
 - 8.2.1. Digital definition and use
 - 8.2.2. Digital media
 - 8.2.2.1. Video, audio, image files
 - 8.2.2.2. Applications
 - 8.2.2.2.1. Digital publishing
- 9. Securing Your System
 - 9.1. Protecting devices and data
 - 9.1.1. Cybercrime
 - 9.1.2. Identity theft
 - 9.1.3. Computer viruses
 - 9.1.4. Hackers
 - 9.1.5. Firewalls
 - 9.1.6. Secure passwords
 - 9.1.7. Anonymity
 - 9.2. Managing online security
 - 9.2.1. Spyware
 - 9.2.2. SPAM, phishing
 - 9.3. Backup systems
 - 9.4. Protecting physical computing assets
 - 9.4.1. Power surges
 - 9.4.2. Theft
- 10. Software Programming
 - 10.1. Life Cycle of information system
 - 10.1.1. Systems
 - 10.1.1.2. Data flow
 - 10.1.2. Programming
 - 10.1.2.1. Describing a problem
 - 10.1.2.2. Plan, code, debug, test

COURSE CONTENT AND SCOPE (CONTINUED)

- 10.2. Programing languages
 - 10.2.1. Visual basic
 - 10.2.2. Hypertext markup language (HTML)
 - 10.2.3. Mobile apps
- 11. Databases and Information Systems
 - 11.1. Databases basics
 - 11.1.1. Building blocks
 - 11.1.2. Management
 - 11.1.3. Types
 - 11.1.3.1. Relational
 - 11.1.3.2. Object-oriented
 - 11.1.4. Functions
 - 11.1.4.1. Inputting data
 - 11.1.4.2. Data validation
 - 11.1.4.3. Extracting data
 - 11.1.4.4. Using Excel
 - 11.2. Databases in business
 - 11.2.1. Database storage
 - 11.2.2. Office support
 - 11.2.4. Management Information Systems (MIS)
 - 11.2.4.1. Reports
 - 11.2.5. Decision Support System (DSS)
 - 11.2.6. Data mining ethics
- 12. Networking and Security in Business
 - 12.1. Network basics
 - 12.1.1. Client
 - 12.1.2. Servers
 - 12.1.2.1. Application
 - 12.1.2.2. Email
 - 12.1.2.3. Web
 - 12.1.2.4. Virtualization
 - 12.1.3. Network topologies
 - 12.1.3.1. Bus, ring, star
 - 12.2. Setting up business networks
 - 12.2.1. Transmission media
 - 12.2.1.1. Wired
 - 12.2.1.2. Wireless
 - 12.2.2. Network adapters
 - 12.2.3. Navigation devices
 - 12.2.3.1. Switches, routers
 - 12.3. Client/server network security
 - 12.3.1. Authentication
 - 12.3.2. Access
 - 12.3.3. Physical protection
 - 12.3.3.1. Firewalls

COURSE CONTENT AND SCOPE (CONTINUED)

- 13. Management of the Internet
 - 13.1. Data transmission and protocols
 - 13.1.1. Switching
 - 13.1.2. Transmission Control Protocol (TCP)
 - 13.1.3. Internet Protocol (IP)
 - 13.2. IP addresses and domain names
 - 13.3. Coding and communicating
 - 13.3.1. Coding building blocks
 - 13.3.1.1. HTML, XML, other
 - 13.3.1.2. Server-side/client-side apps
 - 13.3.2. Email security and encryption

APPROPRIATE READINGS

Appropriate readings may include, but are not limited to, periodicals, magazines, instructor-written materials, manuals, instructor selected URLs, and publications related to information technology.

WRITING ASSIGNMENTS

Appropriate writing assignments may include, but are not limited to, describing what a CPU does and how it operates.

OUTSIDE ASSIGNMENTS

Outside assignments may include, but are not limited to, reading texts and reference resources; research as needed to complete projects; organizing and preparing written answers to assigned questions. Researching the different databases and information systems currently available to businesses.

APPROPRIATE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING

Assignments which demonstrate critical thinking may include, but are not limited to, researching and evaluating current software applications and system software that are available for use in a business environment. Students must select and use appropriate methods and resources to complete laboratory assignments.

EVALUATION

A student's grade will be based on multiple measures of performance and will include evaluation of student's ability to:

1. Demonstrate practical knowledge of computer systems, technology and information systems.
2. Complete written and practical examinations.
3. Maintain attendance and punctuality per current policy.
4. Demonstrate ability to work independently and as a team member.

EVALUATION (CONTINUED)

Upon successful completion of each course in the program, a Certificate of Course Completion will be issued. Upon successful completion of all courses included in the program, a Certificate of Program Completion will be issued.

METHODS OF INSTRUCTION

Methods of instruction may include, but are not limited to, lectures, discussion, hands-on demonstrations, computer-assisted instruction, laboratory assignments and field trips. This course, or sections of this course, may be offered through distance education.

TEXTS AND SUPPLIES

Technology in Action, Alan Evans, Kendall Martin, and Mary Anne Poatsy, Pearson Education, Inc., current edition

Web Resources: <https://www.pearsonhighered.com/>; elearningpearsonhighered.com

PREPARED BY: Vicki Maheu DATE: December 12, 2016

REVISED BY: _____ DATE: _____

Instructors must meet all requirements stated in Policy 3100 (Student Rights and Responsibilities and Administrative Due Process), and the Attendance Policy set forth in the Continuing Education Catalog.

REFERENCES:

San Diego Community College District Policy 3100
California Community Colleges, Title 5, Section 55002
Continuing Education Catalog