

Component I: Core

Module E: Computers

Topic 1: Introduction to Computers

Statement of Purpose

To prepare the learner with the basic knowledge and skills necessary to operate all types of computer hardware and software.

Student Learning Outcomes

Upon completion of this topic, the learner will be able to:

1. Spell and define key terms.
2. Describe the relationship between computer hardware and software.
3. Identify the parts of a computer and computing devices.
4. Categorize software as either utility software, system software or application software.
5. Research reliable information about computer devices and determine which products are of good quality and value for the intended purpose.
6. Demonstrate email operations by using a variety of communication applications.
7. Identify methods of connecting to the Internet.

Terminology

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| 1. Application software | 27. Monitor |
| 2. Backup | 28. Mouse |
| 3. Compact Disk (CD) | 29. Notebook Computer |
| 4. Central processing unit | 30. Numeric keypad |
| 5. Compatible | 31. On-line |
| 6. Computer device | 32. Operating system |
| 7. Computer hardware | 33. Output |
| 8. Data security | 34. Password |
| 9. Device drivers | 35. Peripheral device |
| 10. Digital Versatile Disc (DVD) | 36. Personal Computer (PC) |
| 11. E-mail | 37. Printer |
| 12. Encryption | 38. Processor |
| 13. Fax modem | 39. Random Access Memory (RAM) |
| 14. Flash drive | 40. Recycle bin |
| 15. Folders | 41. Scanner |
| 16. Freeware | 42. Security |
| 17. Hard disk drive | 43. Software version |
| 18. Input | 44. Smartphone |
| 19. Installing | 45. Storage capacity |
| 20. Internet | 46. Storage media |
| 21. Keyboard | 47. Supercomputer |
| 22. Macintosh (MAC-Apple Computer) | 48. System software |
| 23. Mainframe computer | 49. Tablet |
| 24. Memory | 50. Uninstalling |
| 25. Mobile Applications (Apps) | 51. Universal Serial Bus (USB flash drive) |
| 26. Modem | 52. Trash |

53. Upgrade

54. World Wide Web

References

1. Hogan, L., (2013). Practical Computing (3rd Ed.) Upper Saddle River, NJ: Pearson/Prentice Hall.
2. Joos, I., Nelson, R., & Smith, M.J., (2009). Introduction to Computers for Healthcare Professionals (5th Ed.) Burlington, MA: Jones & Bartlett Learning.
3. Sayles, N. (2010), Introduction to Computer Systems for Health Information Technology, AHIMA.
4. Blesi, M., Wise, B.A., & Kelley-Arney, C, (2012) Medical Assisting Administrative and Clinical Competencies (7th Ed.) Clifton Park, NY: Delmar, Cengage Learning.
5. Proctor, D. B., & Young-Adams, A. P. (2011). Kinn's The Medical Assistant: An Applied Learning Approach (11th Ed.). Philadelphia, PA: Saunders Elsevier.

Content Outline/Theory Objectives	Suggested Learning Activities
<p>Objective 1 Spell and define key terms.</p> <ul style="list-style-type: none"> A. Define “computer” to include the following: <ul style="list-style-type: none"> 1. Input. 2. Process. 3. Storage. 4. Output. B. Review the terms listed in the terminology section. C. Spell the listed terms accurately. D. Pronounce the terms correctly. E. Use the terms in their proper contexts. 	<ul style="list-style-type: none"> A. Games: word searches, crossword puzzles, Family Feud, Jeopardy, bingo, spelling bee, hangman and concentration. B. Administer vocabulary pre-test and post-test. C. Discuss learning gaps and plan for applying vocabulary.
<p>Objective 2 Describe the relationship between computer hardware and software.</p> <ul style="list-style-type: none"> A. Software, open source. B. Hardware. <ul style="list-style-type: none"> 1. Categories of computer hardware <ul style="list-style-type: none"> a. Personal computers <ul style="list-style-type: none"> 1) Desk top. 2) Laptop or Notebook. 3) Blackberry. 4) Smartphone. b. Mainframes <ul style="list-style-type: none"> 1) Used by government service programs such as Medicare and MediCal. 2) Used by large institutions such as hospitals and universities to store huge amounts of information. c. Supercomputers <ul style="list-style-type: none"> 1) Biggest, fastest and most complex. 2) Primarily used in research. 	<ul style="list-style-type: none"> A. Lecture/Discussion B. Assigned Readings C. Use posters/videos/computer assisted learning/workbook activities. D. Have students bring in a computing device and demonstrate to class.
<p>Objective 3 Identify the parts of a computer and computing devices.</p> <ul style="list-style-type: none"> A. System central processing unit (CPU). B. Monitor. C. Universal Serial Bus (USB). D. Storage Devices <ul style="list-style-type: none"> 1. Memory, hard disk drives <ul style="list-style-type: none"> a. Random Access Memory (RAM) is temporary or programmable. When using a computer program, it is accessing RAM. b. Hard drive is permanent memory storage of computer <ul style="list-style-type: none"> 1) External Hard Drive, information stored for later retrieval outside of computer; usually connected through USB. 	<ul style="list-style-type: none"> A. Lecture/Discussion B. Assigned Readings C. Use posters/videos/computer assisted learning/workbook activities. D. Have students research one of the technological advances discussed in class. E. Be prepared to discuss in class. F. Assess student’s computer comfort and practice peripheral devices based on their comfort level.

<ul style="list-style-type: none"> c. Megabytes, measurements of memory. d. Tape drive, information copied on tapes, used to back up (make copy), the files on a hard disk. E. Keyboard. F. Mouse. G. Compact Disc (CD)/Digital Versatile Disc (DVD) player/recorder. H. Printer. I. Modem/Fax modem. J. Scanner. K. Voice Activated Devices. 	<ul style="list-style-type: none"> G. Divide students into three functional groups: <ul style="list-style-type: none"> 1. Basic – no mouse or keyboard experience. 2. Medium – mouse and keyboard experience (need practice to increase speed). 3. Proficient – computer literate and able to navigate through applications.
<p>Objective 4 Categorize software as either utility software, system software, or application software.</p> <ul style="list-style-type: none"> A. System Software <ul style="list-style-type: none"> 1. Operating system. 2. Device drivers. 3. Utilities. 4. Programming languages and tools. B. Application Software <ul style="list-style-type: none"> 1. Productivity software. 2. Entertainment software. 3. Business software. 4. Education and reference software. 5. Internet software. C. Utility Software <ul style="list-style-type: none"> 1. File management. 2. Virus protection. 3. Internet security. 	<ul style="list-style-type: none"> A. Lecture/Discussion B. Assigned Readings C. Use posters/videos/computer assisted learning/ workbook activities. D. Collaborative group exercise.
<p>Objective 5 Research reliable information about computer devices. Determine which products are of good quality and value for the intended purpose.</p> <ul style="list-style-type: none"> A. Computer Devices <ul style="list-style-type: none"> 1. Desktop. 2. Laptop. 3. Tablet. 4. Smartphone. B. Hardware product life <ul style="list-style-type: none"> 1. Product announcement and current technology. 2. Product introduction, maintenance and retirement. C. Software product life cycle <ul style="list-style-type: none"> 1. Introductory offers. 2. Software product line. 3. Software enhancements and upgrades. 4. Types of software applications. 5. Mobile apps (applications)/ 	<ul style="list-style-type: none"> A. Lecture/Discussion B. Assigned Readings C. Use posters/videos/computer assisted learning/workbook activities library research. D. Provide web addresses for professional journals for students to research the websites. E. Invite guest speakers. F. Plan field trips to electronics/computer equipment supply stores.

<p>Objective 6 Demonstrate email operations by using a variety of communication applications.</p> <ul style="list-style-type: none"> A. How e-mail works <ul style="list-style-type: none"> 1. Outlook <ul style="list-style-type: none"> a. Address book. b. Integration. c. Set up options. 2. Managing your e-mail <ul style="list-style-type: none"> a. Folders. b. Options. 3. Security and e-mail privacy <ul style="list-style-type: none"> a. Passwords. b. Data encryption. 4. E-mail professionalism. 	<ul style="list-style-type: none"> A. Lecture/Discussion B. Assigned Readings C. Use posters/videos/computer assisted learning/ workbook activities Use the Internet. D. Use computer-assisted instruction E. Have students create a professional email address. F. Identify social media sites for students to network.
<p>Objective 7 Identify methods of connecting to the Internet.</p> <ul style="list-style-type: none"> A. Web Browsers <ul style="list-style-type: none"> 1. Internet Explorer. 2. Firefox. 3. Safari. 4. Google Chrome. B. Internet Storage <ul style="list-style-type: none"> 1. Shareware. 2. Cloud computing. C. The Internet <ul style="list-style-type: none"> 1. Use the Internet for basic and advanced searches. Physician practice website. 2. Internet services and access software. 3. Internet e-mail. 4. File transfer protocol (FTP). 5. Telnet applications. 6. Gopher applications. 7. Usenet News Groups. D. Internet Connections <ul style="list-style-type: none"> 1. Cable. 2. DSL. 3. Wireless. 4. Dial up. 	<ul style="list-style-type: none"> A. Lecture/Discussion B. Assigned Readings C. Use posters/videos/computer assisted learning/workbook activities. D. Invite guest speakers. E. Have students review the types of application software that are available. Discuss the different consumer needs. Create a list of software packages, guidelines for purchasing a computer and items to look for in a service contract. F. Most representatives can supply color brochures for your students for various software packages. G. Ask students to research three medical resource websites and write a paragraph about each to be presented in class for discussion. H. Research professional organization websites and navigate website links.