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CAPP 120.01: Introduction to Computers

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Missoula College UM

Business Technology Department

COURSE SYLLABUS

COURSE NUMBER AND TITLE: CAPP120-SP15 - Becker – Introduction to Computers

DATE REVISED: Spring 2015

SEMESTER CREDITS: 3

PREREQUISITES: None

FACULTY: Anthony Becker

E-MAIL: Anthony.Becker@umontana.edu – Use UM faculty email address only.

PHONE: 243-7817

OFFICE: AD-11A (across from the North/East entrance)

OFFICE HOURS: Mondays, & Wednesdays: 10:10 – 11:00am, or by appointment.

RELATIONSHIP TO PROGRAM(S):

This course provides students with a comprehensive foundation for computer technology, hardware, and software through practical activities.

COURSE DESCRIPTION: Introduction to Computers offered autumn and spring. Introduction to computer terminology, hardware, and software, including wire/wireless communications and multimedia devices. Students utilize word processing, spreadsheet, database, and presentation applications to create projects common to business and industry in a networked computing environment. Internet research, e-mail usage, and keyboarding proficiency are integrated.

STUDENT PERFORMANCE OUTCOMES:

Occupational Performance Objectives

Upon completion of this course, the student will be able to:

1. Define and explain basic microcomputer hardware and software terminology.
2. Describe and select strategies for purchasing a microcomputer system.
3. Proficiently operating a graphical user interface (GUI); and operate a mouse.
4. Describe and use basic operating features of Windows Desktop Accessories (Calculator, WordPad, Paint); use Windows Explorer or My Computer for file management tasks including creating folders/directories, deleting/moving/copying files, and backing up files, or use System Tools for Backup purposes.
5. Describe and use basic operating features of a popular integrated software suite to accurately and attractively create basic business correspondence with a word processing application to edit, format and manipulate text; a spreadsheet application to calculate, format and chart numbers; a database application to organize information for searching, sorting and selecting data; and a graphical presentation application to present information to a group of people.
6. Demonstrate correct keyboarding technique and ergonomics while using keyboarding tutorial and producing assigned documents.

7. Independently proofread and apply universal proofreading marks to make necessary editions to business documents.
8. Send and receive e-mail with attachments to/from instructor and other students.
9. Select a browser and apply research strategies to competently search the World Wide Web for assigned information.
10. Describe and apply ethical guidelines to e-mail communication, to security of computer hardware and software, and to privacy issues of computer data.
11. Illustrate and apply appropriate copyright citation to electronic and textbook references.
12. Troubleshoot and correct basic hardware/software malfunctions, such as printing errors and network errors.
13. Appraise advantages and disadvantages in new technologies such as wire and wireless communication, networking and sharing resources, and multimedia devices.

STUDENT PERFORMANCE ASSESSMENT METHODS AND GRADING PROCEDURES:

Production and Testing

1. Document production activities will occur on a regular, if not daily basis. Student is expected to practice chapter/unit computer activities independently until student feels proficient. Participation in discussion forums may be a component of this course. It is the expectation that in-class production or homework assigned outside of class will be turned in when due. It is student to check due dates and turn in assignments when due. Assignments are not accepted beyond the identified due date.
2. The test schedule and dates are included in the weekly schedule posted in introductory content area of Moodle shell. Tests will be written or produced using a computer. Makeup for a missed test is not offered unless faculty is notified and guidelines are identified for the individual situation **before** each test. Students may be able to make up a missed test for emergency situations such as sickness or required work activities, but must submit documented excused absences such as a Doctor Note identifying excused dates or mandatory work related travel dates in a timely manner.
3. Familiarity with Moodle (or review of Moodle tutorial), basic computer mouse and keyboarding skill recommended.

Grading Scale:

94 - 100 = A

88 - 93 = B

80 - 87 = C

74 - 79 = D

Final grade will be determined by total points received on production, homework and tests in relationship to total points available. (Total points acquired/Total points available)

ATTENDANCE POLICY: Students are expected to come prepared for class each day and to participate in the assigned activity. In-class activities account for a substantial portion of the final grade.

ACADEMIC INTEGRITY: All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The [Student Conduct Code is available online](#) for review at <http://www.umt.edu/SA/VP/SA/index.cfm/page/1321>.

DISABILITY ACCOMMODATION: The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors and Disability Services for Students (DSS). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with DSS, please contact DSS in Lommasson 154.

Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Please contact me after class or in my office. Please be prepared to provide a letter from your DSS Coordinator. For more information, visit the [Disability Services for Students website](#) at <http://life.umt.edu/dss/> or call 406.243.2243 (Voice/Text).

REQUIRED TEXTBOOKS:

Computer Concepts, Illustrated Series, 9th Edition, (2013). J. Jamrich Parsons, & D. Oja, Course Technology, Boston, MA. (ISBN-13: 978-1-133-69313-0).



Microsoft Office 2013 Fundamentals – Illustrated Series, (2014), M. Hunt, B. Clemens, Course Technology, Cengage Learning, Boston, MA. (ISBN-13: 978-1-285-41829-2).



REQUIRED SOFTWARE:

Missoula College computers are installed with the Microsoft Office 365 Edition aka Office 2013. If you desire to purchase this software for your home computer, check that the version you purchase includes; **Word, Excel, PowerPoint, and Access**, as these applications are required for assignments that will be turned in via printouts from class, email with document attachment, or Moodle File Upload, and for document production during tests.

The University of Montana Bookstore (406-243-1234) sells Microsoft Office 365 for a discounted price (about \$80). If you purchase the software from a location other than the UM Bookstore, be sure it includes **Access**, as there are some versions sold without Access. Microsoft Office versions for Macintosh computers have not included Microsoft Access in the past. If you are a Mac user, please make other arrangements when Microsoft Access is required during the semester (last part of semester and through final exam).

Moodle Access: Ability to regularly access UMOOnline via the Internet using Mozilla **Firefox** web browser for Moodle Academic Suite (online course delivery module) and assigned research. Contact Tech Support Help Desk with any issues with assignment submissions or material viewing. *Tech Support Help Desk:* 406.243.4999 or 866.225.1641

UMConnect student email account: Ability to regularly access Email (send/receive/attach documents). Contact IT Help Desk with any UMConnect Student Email issues or problems using the application. *IT Help Desk:* (406) 243-4357

SUPPLIES: USB jump drive is required for backing up student data and for file management project. (2GB minimum)

USE OF PERSONAL ELECTRONIC DEVICES: Does not pertain to Online students

Cell phone use during class period is prohibited. Please shut off your cell phone upon entering the classroom so your ringer and/or buzzer does not disturb the class

However, to some students, unique circumstances require their use. (I.e. emergencies, health, absolute business necessity). If you absolutely require their use, you must adhere to the following criteria:

1. If they are not required, please turn them off, or on vibrate mode.
2. If receiving a call, leave the room quietly. Do not conduct your conversation in class. (You are responsible for notes missed)
3. **There will be no use of cell phones or other portable electronic devices during the midterm or final exam.** Due to testing standards, you may not leave the room (except to use the restroom) during a quiz or exam and cell phones must be turned off.
4. You may bring an iPod to class only during the days we are working on projects that do not include lectures.
5. Please be courteous of your classmates. Should this policy create routine distractions, I will ask you to leave the class. A positive learning environment will be maintained.

COURSE OUTLINE:

- I. Computer Fundamentals
 - A. Hardware and Software Terminology
 1. Basic Definitions
 2. System Unit
 - a) *Motherboard*
 - b) *Central processing unit (CPU)*
 - c) *Memory (description/updating)*
 3. Processing (CPU)
 - a) *Data representation*
 - b) *Purchasing and performance issues*
 4. Input/Output Devices
 - a) *Types/differences*
 - b) *Factors influencing purchase*
 5. Storage Devices
 - a) *Types/differences*
 - b) *Selecting storage devices based upon storage capacity needs*
 6. Software
 - a) *Application software and integrated productivity suite*
 - b) *Other (graphics, business, educational, science, entertainment)*
 - c) *Operating system software and operating environments*
 - d) *Utilities*
 - e) *NetWare*
 - f) *Licensing and software piracy*
 7. Types of Computers
 8. Advantages/Disadvantages
 9. Buying and Upgrading a Computer
 - B. Computer Ethics
- II. Keyboarding
 - A. Keyboarding technique
 - B. Tutorials
 - C. Ergonomics

III. Windows Operating System

A. Desktop

1. Opening/Closing/Executing
2. Resizing and Scrolling Within a Window

B. File Management; Windows Explorer; My Computer; Application options

1. Formatting Disks
 - a) *File allocation table (FAT)*
 - b) *Tracks*
 - c) *Sectors*
2. Hierarchy or Path
 - a) *File locations*
 - b) *Folder/directory (root, subfolder/directory)*
3. Create/Rename/Delete a Folder
4. File type, file names and file extensions
5. Launch/Save or Rename/Delete/Restore a File
6. Copy (File, Folder, Disk)
7. Status Bar
8. Version
9. Task Bar
10. Windows Explorer Views

C. Functions of Settings, Control Panel, etc.

1. Time and Date Settings
2. Display Customization
3. Mouse, Keyboard
4. Add/Remove programs

D. Accessories

IV. Internet and World Wide Web

A. Internet

1. Introduction/History
2. Internet and Web Basics
 - a) *Hypertext concept*
 - b) *Web browsers/servers/pages*
 - c) *Web addresses (URL)*
 - d) *Domain names*
 - e) *E-commerce*
 - f) *Internet and Online Service Providers*
 - g) *Search engines and search techniques for the Web*
 - h) *Web search result evaluation and web regulations*

- B. E-Mail Communications
 - 1. UM based (UMConnect) e-mail
 - a) *Document attachments*
 - 2. Internet based e-mail
 - 3. Other Internet Services
 - 4. Privacy

- V. Office Suite
 - A. Word (word processing)
 - B. Excel (spreadsheet)
 - C. Access (database)
 - D. PowerPoint (presentation)

- VI. General Topics
 - A. Professional ethics
 - B. Communications and network
 - 1. Wire/Wireless
 - 2. LAN, WAN, PAN, NAN, MAN
 - 3. Home/Business networks
 - 4. Advantages and disadvantages
 - C. Computer security
 - 1. Threats
 - 2. Authentication
 - 3. Virus
 - 4. Malware
 - 5. Network and Internet security
 - 6. Backup
 - D. Privacy
 - E. Computer crime issues
 - F. Ergonomics/Health Issues
 - G. Multimedia Devices
 - 1. Audio
 - 2. Graphics
 - 3. Video
 - H. Supplies for Computers and Disks
 - I. Computer Industry and Careers

CAPP120 Introduction to Computers

15 Week Semester Schedule *(subject to change)*

Review Syllabus. Purchase two required textbooks as instructed in course syllabi, MS Office 365 Edition aka; Office 2013, software as instructed in syllabi, and USB drive for saving files and learning file management.

Download Student Data Files that correspond to Microsoft Office 2013, Illustrated Fundamentals Series (2011\4) by Course Technologies, Cengage Learning, ISBN#978-1-285-41829-2. See download instructions, back cover page, cengagebrain.com - "Access Student Data Files and other", or www.cengage.com/ct/studentdownload.

Week 1 Objectives: January 26th – February 1st.

- Computer Fundamentals (Understanding basic definitions, digital technology, how computers work—the Information Processing Cycle-Input/Processing/Output/Storage, and Communication) and memory
- Types of Computers (categories for individuals and organizations)
- Software introduction
- The Internet and World Wide Web introduction
- E-mail and communication basics
- Introduction to computer email ethics and privacy
- Protecting your privacy, data and devices
- Using Windows and the Desktop (Using the mouse, starting programs, moving and resizing windows, using menus, keyboard shortcuts, and toolbars, using command buttons, menus and dialog boxes, using scroll bars, Windows Help, and closing programs and properly shutting down Windows)

Reading:

Concepts: Unit A; Computer and Internet Basics, pages 1-20

MS Office 2013: Computer Concepts; Understanding Essential Computer Concepts, pages **Concepts** 1-26.

(Optional Reading) MS Office 2013: Unit A; Getting Started with Windows 8, pages **Windows** 33-52. Lite reading for those students who are using a Personal Computer with Windows 8 operating system installed.

Week 2 Objectives: February 2nd – 8th.

- Examine input
 - Input Devices: giving commands (keyboards and keyboard usage, mouse, and selection and use of other pointing devices and alternative input devices)
- output devices
 - Output Devices: display (monitor types, graphics card and characteristics), and printers (printer types, characteristics, and selection and use of printers)
- Storage technologies and comparison of storage technologies
 - Data Storage: (distinguish between memory and storage, fixed or portable and magnetic or optical media storage selection and characteristics for hard disk drives, storage capacity, USB flash drives, CD and DVD technologies, solid state, and storage horizons)

- Describe the various physical connectors on the exterior of the system unit and explain their use
- Adding devices to expand your computer
- Understand file creation cycle: creating new document, editing document, switching between and using data from multiple programs, saving a file to various media devices
- Understand folders and files, define file management and perform management functions such as formatting a disk, creating a folder, or copying or moving a file to another storage location or renaming an existing file and delete a file
- Use "My Computer" and "Windows Explorer" to perform file management functions and searches
- Ethics: recycling computer

Reading:

Concepts: Unit B; Computer Hardware, pages 27-46

Concepts: Unit C; Computer Software, pages 53-74

Week 3 Objectives - File Management: February 9th – 15th.

- Exploring computer files and folders (file locations)
 - Create a file, save a file, open a file
 - Types of files
 - File path
 - Root directory
- Purpose of file/folder/subfolder management, organization and properties
- Understanding and using Windows Explorer as file management program
- Define and create files and folders using multiple media devices (drives)
- Demonstrate understanding of path (hierarchy of file location) by locating, copying, moving, renaming or deleting file(s) and folders
- File naming conventions and file extensions
- Changing Windows Explorer views
- Describe digital data representation
- Exploring chips, processors, and computer memory (RAM, ROM, virtual, and cache memory)
- Ethics: computer risk and repetitive stress injury Recognize ethical dilemmas facing business professionals using computers
- Understand terms associated with ethics and computing Define intellectual property
- Define and identify plagiarism
- Define and apply fair use doctrine
- Understand and be able to apply data protection guidelines to a business or educational environment
- Demonstrate the ability to properly cite textbook and Internet references used in researching a topic and recognize acceptable uses of paraphrasing

Reading:

MS Office 2013: Unit B; Windows 8 - Understanding File Management, pages Windows 57-76

Concepts: Unit D; File Management and Digital Electronics, pages 81-106

Professional Ethics (**Computer Concepts;** pages 230-233)

Week 4 Objectives: February 16th – 22nd, (**President's Day, Feb 16th – No Classes**).

- Operating system software and utility software
- Explain why a computer needs an operating system
- List the basic functions of the operating system
 - Launch programs
 - Manage files
 - Manages resources such as memory, processor resources, input and output, and loading programs
 - Get help
 - Customize and establish the user interface (GUI/graphical user interface)
 - Configure equipment
- Explain what happens when you turn on a computer
- Discuss the strengths and weaknesses of popular operating systems (OS) - Windows, Mac, Linux (GPL), tablet and smartphone platforms
- General-Purpose Applications (distinguish between and make selections of personal productivity software, multimedia and graphics software, Internet programs, business, home, and educational programs)
- Local application, Web application (web app or cloudware), portable application, and mobile application
- Discuss the advantages and disadvantages of standalone programs, integrated programs and productivity software suites
- Understand utility software (diagnostic and maintenance tools, setup wizards, communication programs, security software, device drivers, gadgets)
- Understand system requirements and software versions when selecting or upgrading applications
- Understand how commercial software, shareware, freeware, and public domain software differ in terms of licensing agreements, copyright, and registration
- Differentiate between open source software and proprietary software
- Understand and be able to install/uninstall, launch, select options in and exit applications
- Understand Microsoft Office 2013 Pro and programs
- Ethics: software piracy
- Understand and use elements in a typical Office application window
- Starting programs, using ribbon and zoom controls, quick access toolbar, saving, printing, getting help, closing Office application window
- Creating a document from an existing file and editing by typing text, copying and pasting text, moving text, using find and replace feature for editing text, format text and mini toolbar, check spelling and grammar, and previewing/printing document

Reading:

MS Office 2013: Unit C; Office 2013 - Getting Started with Microsoft Office 2013, pages Office 81-98

MS Office 2013: Unit D; Word 2013 - Creating a Document, pages Word 101-118

Week 5 Objectives: February 23rd – March 1st.

- Apply font type, size, color, effect and styles
- Adjust paragraph alignment and spacing
- Adjust margin settings
- Set and apply tabs
- Set indents (first line, right, left, hanging) and learn ruler marker symbol for use of each

- Add bulleted and numbered lists
- Apply quick styles
- Create and format a table
- Insert and delete table columns and rows
- Add Clip Art
- Insert a footnote and citations
- Insert a header or footer
- Add borders and shading
- Understand, create and format business letters and memorandums, and research papers: understand usage of and difference between
- Apply correct format to business communications: business letters and memorandums

Reading:

MS Office 2013: Unit E; Word 2013 - Enhancing a Document, pages Word 128-144

MS Office 2013: Unit F; Word 2013 - Adding Special Elements to a Document, pages Word 151-170

Week 6 Objectives: March 2nd – 8th.

- Computer ethics, ethical principles and decision making
- Codes of conduct regarding computer use at home or in organizations
- Understand and apply netiquette online
- Computer use violations such as plagiarism and software piracy
- Understanding software and copyright
- Understand use and creation of a presentation graphics program
- Create a presentation using design theme or blank slide
- Enter and format text
- Adding SmartArt and text boxes
- Adding a header and footer
- Customize a slideshow (color schemes)Previewing a presentation and printing handouts
- Adding a shape to a presentation
- Adding Clip Art and pictures
- Adding sound and video
- Setting timing and slide transitions
- Animating slide objects
- Create speaker notes
- Create an attractive and **PROOFREAD** presentation using PowerPoint including; applying a slide design, inserting and formatting text, selecting appropriate slide layout, inserting graphic elements, applying a slide transition and animation

Reading:

MS Office 2013: Unit M-PowerPoint 2013, Creating a Presentation, pages PowerPoint 327-344

MS Office 2013: Unit N-PowerPoint 2013, Polishing & Running a Presentation, pages PowerPoint 351-368

Week 7 Objectives: March 9th – 15th.

- Understand basic web terminology and how the Internet works
- Understand and define a Web browser, a Web site, a Web page and use hypertext links
- Identify the parts of a URL (web address or path) and how to access Web pages
- Use Web browser, search engines and subject guides to locate information on the Internet efficiently
- Use search operators to improve Web search results
- Examine other Web and Internet services
- Evaluate the reliability of information on a Web page
- Define and provide example of e-Commerce
- Identify advantages and disadvantages of e-Commerce
 - Securing e-commerce transactions
 - Avoiding fraud on the web
 - Cookies
- Enhancing Web technologies (scripts and applets)
- Citing Web-based source material
- Ethics: Regulating the Web

Reading:

Concepts Unit G: The Web and E-Commerce, pages 165-184

Week 8 – Midterm Exams: Week of March 16th – 22nd.

Week 9 Objectives: March 23rd – 29th.

- Threats to your computer (hardware, software, data security)
- Authentication protocols
- Virus and malware
- Protecting your computer system from threats
- Examine network and Internet access security
- Exploring Web and e-mail security
- Examine backup procedures
- Ethics: Computer crime issues
- Identify purpose and use of spreadsheet application (Excel)
- Understand basic spreadsheet/workbook terms
- Navigate a workbook
- Enter numbers (values) and labels
- Change column width and row height
- Use formulas and AutoSum function
- Edit a worksheet
- Change alignment and number format
- Change fonts and add borders, headers and footers, themes
- Save a worksheet as a Web page
- Preview and print a worksheet

Reading:

Concepts: Unit E; Data Security, pages 113-132

MS Office 2013: Unit G; Excel 2013 - Creating a Worksheet, pages Excel 179-196

Week 10: March 30th – April 3rd, **Spring Break – No Classes**

Week 11 Objectives: April 6th – 12th.

- Understand, plan and create a chart
- Create complex formulas
- Using absolute cell reference (vs. relative cell reference)
- Understand functions
- Use date and time functions
- Use statistical functions
- Use financial functions
- Apply conditional formatting
- Sort rows in a table
- Filter table data
- Understanding and planning a chart
- Create, edit/modify and enhance chart type, size, chart objects, titles, font
- Applying/modifying chart layouts and styles and creating Sparklines
- Print chart with headers and footers

Reading:

MS Office 2013: Unit H; Excel 2013 - Using Complex Formulas, Functions, and Tables, pages Excel 205-222

MS Office 2013: Unit I; Excel 2013 - Working with Charts, pages Excel 229-246

Week 12 Objectives: April 13th – 19th.

- Define a network
- Discuss the advantages and disadvantages of networks
- Classifying networks
- Network hardware
- Comparing wire and wireless technology
- Setting up, sharing and using network resources
- Connecting to the Internet (wire/wireless)
- IP addresses and domain names
- Ethics: Pirating Wi-Fi (WLANs)
- Understand and evaluate computer hardware components when purchasing a computer system
- Evaluate the purchase of computer platform and computer portability
- Understand and select computer components to upgrade your computer system
- Identify steps to maintain and safeguard your computer

Reading:

Concepts: Unit F; Networks and Connecting to the Internet, pages 139-158

Week 13 & 14 Objectives: April 20th – May 3rd.

- Understand various multimedia devices and their purpose
 - Digital audio
 - Synthesized sound and speech recognition
 - Graphics
 - bitmap or raster

- resolution
- pixel
- digital camera
- scanner
- transfer: card reader, direct transfer cable, email, USB, FireWire
- understanding color and compression
- vector and 3D
- Digital video
- Ethics: Copyright and Digital Rights Management technology
- Define and understand databases
- Create a database and a table
- Design, enter data, and modify a table (datasheet view and design view)
- Create a data entry form
- Enter, edit and print records
- Sort records in a table
- Filter records in a table
- Create queries (Query Wizard)
- Modify a query in design view
- Relating two tables
- Creating a query using two tables
- Adding a calculated field to a table

Reading:

Concepts Unit H: Digital Media

MS Office 2013: Unit J; Access 2013 - Creating a Database, pages Access 253-270

MS Office 2013: Unit K: Access 2013 - Working with Data, pages Access 279-296

Week 15 Objectives: May 4th – 10th.

- Create a database report (Report Wizard)
- Modifications to a report - resize, add field, delete and move database report controls
- Apply conditional format, adding summary information to a report, creating mailing labels
- History and development of computers
- IT industry, jobs, education and certification, job searches, ePortfolio

Reading:

Concepts: Unit I; The Computer Industry and Careers, pages 219-234

MS Office 2013: Unit L; Access 2013 - Creating Database Report, pages Access 305-320

Week 16 - Final Exam Week: May 11th – 15th.