

## **COURSE OUTLINE** **Information Processing Systems**

### **Course Description**

BA 104. Information Processing Systems. 3 hours credit. Prerequisite: The student must have a typing speed of at least 20 words per minute (a pretest will be given). This course will enable the student to use the Windows operating system, word processing, spreadsheet, database, and presentation graphics programs.

### **Course Relevance**

The applications learned in this course will allow the student to effectively utilize the Windows operating system and current application software systems. The applications and principles learned in this course are relevant to any career field.

### **Required Materials**

Pasewark, W. R. & Pasewark, S. G. *Microsoft Office 2010: Introductory*. Boston, MA: Course Technology, Cengage Learning.

SAM 2010 – current version, Boston, MA: Thomson Course Technology.

512Mb or larger flash drive

### **Supplemental Materials**

Software: Microsoft Office 2010 Professional or Ultimate, Windows XP or Windows Vista, Internet Access

\* - For complete textbook information, refer to <http://www.butlercc.bkstr.com>

### **Learning Outcomes**

The intention is for the student to be able to:

1. Utilize word processing, spreadsheet, database, presentation graphics, and Windows application features to complete tasks.

### **Learning PACT Skills that will be DEVELOPED and/or documented in this course**

Through involvement in this course, the student will develop ability in the following PACT skill area(s):

#### **Analytical Thinking Skills**

1. Problem solving  
By applying skills learned in lessons, the student will use software applications to solve problems.

#### **Communication Skills**

1. Reception and interpretation of messages  
By reading and deciphering skill-based tasks, the student will then execute the task.

#### **Technology Skills**

1. General computer use

Through a variety of activities, the student will utilize current Microsoft Office software to create, store, retrieve, and modify files to produce and disseminate documents, spreadsheets, database management objects, and presentation graphics.

**Major Summative Assessment Task(s)**

These learning outcome(s) and the Learning PACT skill(s) will be demonstrated by

1. Completing computer (T skill) generated tasks (C skill) by an assessment program that integrates software programs to demonstrate the student's ability to solve problems (A skill) by using software applications in a proficient manner.

**Course Content**

- I. Skills or Competencies – Actions that are essential to achieve the course outcomes:
  - A. Using the Windows operating system
  - B. Using Microsoft Office Word 2007
    1. Creating and customizing documents
    2. Formatting content
    3. Working with visual content
    4. Organizing content
  - C. Using Microsoft Office Excel 2007
    1. Creating and manipulating data
    2. Formatting data and content
    3. Creating and modifying formulas
    4. Presenting data visually
  - D. Using Microsoft Office Access 2007
    1. Structuring a database
    2. Creating and formatting database elements
    3. Entering and modifying data
    4. Creating and modifying queries
    5. Presenting and sharing data
  - B. Using Microsoft Office PowerPoint 2007
    1. Creating and formatting presentations in Microsoft PowerPoint 2007
    2. Creating and formatting slide content
    3. Working with visual content
- II. Themes – Key occurring concepts that run throughout this course:
  - A. Proper use of software features
  - B. Technological tools and skills
- III. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
  - A. Reading comprehension
  - B. Following instructions
  - C. Completing tasks to the degree of approval
  - D. Keyboarding speed at a rate of 20 words a minute or more.
- IV. Concepts – Key concepts that must be understood to address the issues:
  - A. Task completion

- B. Time management
- C. Keyboarding skills

## **Learning Units**

### Microsoft Windows

- I. Windows basics
  - A. Understanding the desktop
  - B. Managing files and folders
  - C. Deleting files using the recycle bin
  - D. Using Windows help

### Microsoft Word 2007

- I. Word basics
  - A. Starting Word and identifying parts of the opening screen
  - B. Understanding document views
  - C. Inserting text and understanding word wrap
  - D. Navigating a document
  - E. Saving a document
  - F. Locating and opening an existing document
  - G. Selecting a page orientation
  - H. Previewing and printing a document
- II. Basic editing
  - A. Selecting text
  - B. Showing formatting marks
  - C. Understanding toggle commands
  - D. Creating paragraphs without blank space between them
  - E. Using undo, redo, and repeat Commands
  - F. Using drag-and-drop to move and copy text
  - G. Using the clipboard to move and copy text
  - H. Using the find and replace and go to commands
  - I. Identifying the number of words in a document or selection
- III. Helpful Word features
  - A. Understanding automatic features
    - 1. AutoCorrect
    - 2. AutoFormat as you type
    - 3. Quick parts
    - 4. AutoComplete
  - B. Inserting the date and time
  - C. Checking spelling and grammar
  - D. Using the thesaurus
  - E. Inserting symbols
- IV. Formatting text
  - A. Changing the font, font attributes, font effects
  - B. Highlighting text

- C. Copying formatting
- D. Understanding styles and applying quick styles
- E. Changing themes
- F. Redefining an existing quick style and creating a new quick style

V. Formatting paragraphs and documents

- A. Viewing the ruler
- B. Setting margins
- C. Aligning text
- D. Changing indents
- E. Adjusting line and paragraph spacing
- F. Changing vertical alignment
- G. Understanding tab stops
- H. Using bulleted and numbered lists
- I. Organizing a document in outline View

VI. Working with documents

- A. Inserting page breaks
- B. Understanding content controls
- C. Inserting headers, footers, and page numbers
- D. Modifying document properties
- E. Inserting a cover page
- F. Creating new sections
- G. Using the research tool
- H. Creating tables
- I. Converting text into tables
- J. Sorting text

Microsoft Excel 2007

I. Excel basics

- A. Starting Excel and exploring parts of the worksheet
- B. Opening an existing workbook
- C. Saving a workbook
- D. Moving an active cell in a worksheet
- E. Selecting a group of cells
- F. Entering and changing data in cells
- G. Searching for data
- H. Zooming, previewing, and printing a worksheet
- I. Closing a workbook

II. Changing the appearance of a worksheet

- A. Changing the size of a cell
- B. Positioning data within a cell
- C. Changing the appearance of cells
- D. Using styles

- III. Organizing the worksheet
  - A. Copying and moving cells
  - B. Inserting and deleting rows, columns, and cells
  - C. Freezing panes in a worksheet
  - D. Splitting a worksheet window
  - E. Checking spelling in a worksheet
  - F. Preparing a worksheet for printing
  - G. Inserting headers and footers
  
- IV. Entering worksheet formulas
  - A. Entering and editing a formula
  - B. Comparing relative, absolute, and mixed cell references
  - C. Previewing calculations
  - D. Showing formulas in the worksheet
  
- V. Using functions
  - A. Entering formulas with functions
  - B. Types of functions
    - 1. Mathematical and trigonometric functions—SQRT, ROUND
    - 2. Statistical functions—AVERAGE, COUNT, COUNTA, MAX, MIN, STDEV, VAR
    - 3. Financial functions—FV, PV, PMT
    - 4. Logical function--IF
  
- VI. Enhancing a worksheet
  - A. Sorting and filtering data
  - B. Applying conditional formatting
  - C. Hiding columns and rows
  
- VII. Working with charts
  - A. Comparing chart types
  - B. Creating charts
  - C. Updating the data source
  - D. Designing a chart

## Microsoft Access 2007

- I. Access basics
  - A. Starting Access, opening a database, and reviewing the database window
  - B. Editing records
  - C. Changing datasheet layout
  - D. Previewing and printing a table
  - E. Saving and closing objects
  - F. Compacting and repairing a database
  
- II. Creating a database

- A. Creating, designing and saving a table
- B. Working in design view and changing field properties

### III. Creating queries

- A. Creating a query with the simple query wizard
- B. Sorting and filtering data
- C. Creating a query in design view
- D. Creating table relationships
- E. Creating a multi-table query
- F. Using operators in a condition

### IV. Creating and modifying forms

- A. Creating and navigating a form
- B. Using a form to find and replace data
- C. Using a form to update data
- D. Creating and modifying a form in layout view
- E. Adding an unbound control to a form in design view
- F. Previewing and printing a form

## Microsoft PowerPoint 2007

### I. PowerPoint basics

- A. Starting PowerPoint and reviewing the PowerPoint window
- B. Opening and reviewing an existing presentation
- C. Saving a presentation
- D. Changing views
- E. Inserting a new slide with a new slide layout
- F. Notes Page view, Slide Sorter view
- G. Deleting slides
- H. Printing a presentation
- I. Closing a presentation and exiting PowerPoint

### II. Creating and enhancing PowerPoint presentations

- A. Creating presentations
- B. Inserting headers and footers
- C. Applying themes
- D. Using the slide master
- E. Editing pictures in PowerPoint
- F. Adding slides
- G. Adding text and notes to slides
- H. Changing text alignment, spacing, case, and tabs
- I. Working with bullets
- J. Changing font attributes
- K. Checking spelling, style, and usage
- L. Formatting slides

- M. Adding clip art and sounds to slides
- N. Inserting hyperlinks
- O. Using custom animation
- P. Using slide transitions

### III. Working with visual elements

- A. Working with SmartArt graphics
- B. Creating and formatting WordArt

### **Learning Activities**

Learning activities will be assigned to assist the student to achieve the intended learning outcome(s) through instructor-led demonstration and class discussion, drills/skill practice and other activities at the discretion of the instructor.

### **Grade Determination**

The student will be graded on learning activities and assessment tasks. Grade determinants may include the following: daily work, quizzes, lesson or unit tests, comprehensive examinations, projects, presentations, class participation, and other methods of evaluation employed at the discretion of the instructor.