

# CIS 130: Operating Systems Course Syllabus - Fall 2009

## Instructor Contact Information

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I will be available to students outside of class by appointment or during my posted Office Hours.

## Course Description

**CIS 130. Operating Systems.** This course provides an introduction to current microcomputer operating systems from an end-user perspective. Functions common to all operating systems will be examined. Through lecture and hands-on exercises, students will explore concepts and usage of different systems such as: MS-DOS, Microsoft Windows™, and Unix.

## Course Rationale

All computer systems (whether microcomputers, workstations, or mainframes) are controlled by some type of operating system. Understanding the purpose and function of operating systems is vital for computer professionals or anyone who is required to work with a computer on a regular basis.

This course will provide an introduction and comparison of the most common operating systems. Through lecture and hands-on exercises, students will have opportunity to learn and explore the workings of various computers and operating systems.

## Prerequisites

[CIS 115](#) or permission of instructor; [CIS 110](#) is recommended.

## Textbook(s)

1. Holcombe, Jane, and Holcombe, Charles. Survey of Operating Systems, 2nd ed. California: McGraw Hill Osborne, 2006. ISBN: 0-07-225773-3. **Required**

Students will also benefit from **reference** guides of their own choosing for the various systems examined (MS-DOS, Unix/Linux, Windows XP, Mac OS, etc.)

## Course Materials

Additional materials (SCANTRON forms, USB storage devices, ZIP disks, floppy diskettes, etc) may be required by the instructor

## Requirements

Final Grades for this course will be calculated as follows:

Examinations	30%
Final Exam	15%
In-Class Exercises	10%
Projects & Exercises	45%

1. Written tests will be given during the semester. These closed book tests will consist of some combination of Matching, True/False, Multiple Choice, Fill-In, Short Answer and Essay type questions.
2. There are three scheduled written tests.. The lowest test score will be dropped. Make up tests will only be given with prior permission of the instructor, otherwise, missed tests will receive a grade of zero. Make up tests must be taken within one week of the original scheduled test date.
3. The Final Exam is a comprehensive, written test covering all of the objectives for the course.. The final exam is scheduled at a different time than the regular class time.
4. Participation in class discussions and group exercises is an important part of this course, therefore all students are expected to attend class prepared to contribute to the discussion of course material.
5. Projects and exercises may include both written and laboratory work. Some assignments may be graded as simply completed or not completed.
6. Completed assignments must be submitted by the due date for full credit. The responsibility to complete make-up work rests with the **student**. Late assignments will be marked down **25%** for every week (or part of a week) they are late. For example: an assignment turned in eight days late would be marked down 50%.
7. All work must be submitted by the last regular class to be considered for final grade evaluation.

## Grading Scale

Grades will be determined according to a standard grading scale.

<b>A</b>	92 - 100 %	<b>B-</b>	80 - 81 %	<b>D+</b>	68 - 69 %
<b>A-</b>	90 - 91 %	<b>C+</b>	78 - 79 %	<b>D</b>	62 - 67 %
<b>B+</b>	88 - 89 %	<b>C</b>	72 - 77 %	<b>D-</b>	60 - 61 %
<b>B</b>	82 - 87 %	<b>C-</b>	70 - 71 %	<b>E</b>	59 %

## Policies

1. This course contains a number of hands-on assignments and projects which require use of the computer. Though some class time will be given for these assignments, students should plan to use the computers available in the Learning Resources Center (LRC) or in the Academic Achievement Center during open hours, as **there will not be sufficient time to complete the assignments in class**. The classroom computers are generally **NOT** available outside of scheduled class time.
2. Many students enjoy using their own personal computers to complete assignments. Students are responsible for completing their homework assignments on the version of the software used in class. Students who do not have the correct version of the software should plan to use the computers on campus. *No additional consideration for late work will be made due to technical or software issues with your computer.*
3. Classroom Etiquette: Be courteous in class by participating in the classroom experience. All cell phones, pagers, etc. should be turned off or to silent during class. Cell phones may not be used in the classroom (talking/texting/browsing) at any time. Personal media players (iPod, etc.) and computers should be put away and not used during class. Students who participate in disruptive behavior will be asked to leave the classroom.
4. All students are expected to be familiar with **and to follow** all of the guidelines set forth in the SCCC Student Code of Conduct, [available online](#) or on pages 194-203 of the 2009-2010 Catalog. Of particular importance to students in this course are the sections on Technology and Academic Honesty (see 5 & 6 below).
5. Use of classroom computers is governed by the Acceptable Use Policy available in the Student Code of Conduct. Use of the classroom computers is reserved for class work only; students may not use classroom computers to work on personal work or visit sites such as Facebook, MySpace, eBay, iTunes or other non-class related sites.
6. St. Clair County Community College considers academic honesty to be an integral necessity of all academic performance. Instances of academic dishonesty will be treated as serious offenses. Students involved in activities such as cheating and/or plagiarism will be subject to disciplinary action.
7. Students are expected to keep current with all course work. Students who, for whatever reason, fall behind and are unable to complete the course requirements before the end of the semester are encouraged to withdraw and re-take the course at a later date. Incomplete grades are extremely rare, and will only be given if 90% of the course material prior to the final exam has been completed satisfactorily.

## Course Objectives

A number of topics will be addressed in this course. Students achieving satisfactory performance should complete the following:

1. Describe the functions of an operating system (OS).
2. Compare strengths and weaknesses of various operating systems.
3. Compare commands in various operating systems and environments.
4. Apply command line concepts, including:
  - a. Proper command syntax
  - b. Common OS commands
  - c. Command arguments (parameters)
  - d. Command line switches
  - e. Obtain command specific help
5. Demonstrate the use of a GUI to launch and manage software applications.
6. Demonstrate the ability to work with files and directories in various operating systems, including:
  - a. Differentiate program and data files
  - b. Create, edit, and display text files
  - c. Copy, rename, move, link, and delete files
  - d. Create and utilize a hierarchical directory (folder) organization
  - e. Understand and modify file permissions
7. Identify, compare and create file systems in various operating systems.
  - a. Define FAT, NTFS, FAT32, ext2, ext3
  - b. Describe file system purposes: swap, var, usr, etc.
  - c. Describe partitioning, allocation units, removable media
  - d. Discuss the file system mounting process
8. Utilize operating system print facilities:
  - a. Manage print jobs,
  - b. Select printers,
  - c. Start and stop print queues
  - d. Start and stop the spooler
9. Demonstrate how the OS works with devices and device drivers by:
  - a. Installing new devices in various operating systems
  - b. Determining location / version of device drivers
  - c. Removing devices
  - d. Describing the need for hardware compatibility (hcl, WHQL)
10. Manipulate operating system batch or script files, including:
  - a. Automate command line processes using short batch or script files
  - b. Edit and debug scripts
  - c. Make scripts executable
11. Discuss basic System Administrator responsibilities
12. Explain procedures and rationale relating to backup of user and system information
13. Analyze the network related components of various operating systems

Fall 2009 Addendum - these objectives have been expanded/clarified since the last *official* course abstract

14. Discuss PC hardware critical to operating system operations, including:
  - a. CPU
  - b. Disk
  - c. Memory
  - d. BIOS & the boot sequence
15. Discuss security issues and procedures relevant to microcomputer operating system end-users