



SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: SYSTEMS MANAGEMENT I

CODE NO. : CSO200 SEMESTER: 3

PROGRAM: Computer Studies

AUTHOR: Fred Carella

DATE: Sept 2001 PREVIOUS OUTLINE DATED: Sept 2000

APPROVED:

DEAN

DATE

TOTAL CREDITS:

PREREQUISITE(S): CSO101

HOURS/WEEK: 4

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(705) 759-2554, Ext.642

I. COURSE DESCRIPTION:

This course is intended to provide a firm foundation in the management and use of operating systems. In particular, it continues the work done in CSO101 by using the Windows operating system from a systems management point of view and introduces the student to the Unix operating system. The operating systems used will be Windows (95, 98 NT WS) and Unix (Linux and Solaris). It is the first of two courses in systems management which will develop the students ability to use and manage various operating systems.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. System Resources

Potential Elements of the Performance:

- ⑩ describe and apply knowledge of the Intel architecture.
- ⑩ differentiate between various processor architectures.
- ⑩ describe and apply knowledge of the Windows architecture
- ⑩ the Windows 95 registry
- ⑩ install and remove device drivers
- ⑩ describe and apply plug and play
- ⑩ installable file systems
- ⑩ file system drivers
- ⑩ core system components (user, gdi, kernel)
- ⑩ virtual memory management

2. Operating system concepts .

Potential Elements of the Performance:

- ⑩ describe and apply knowledge of virtual memory,
- ⑩ define, describe and differentiate pre-emptive and non pre-emptive multitasking systems
- ⑩ define, describe and differentiate multi-user systems
- ⑩ describe and utilize multithreaded environments,
- ⑩ describe and apply knowledge of process scheduling and multitasking
- ⑩ define the role of POSIX

3. Install, configure and troubleshoot Windows and Windows applications

Potential Elements of the Performance:

- ⑩ prepare a system for Windows installation.
- ⑩ install Windows using Setup.
- ⑩ customise setup.
- ⑩ describe, locate and categorise files which make up the

Windows operating system.

- ⑩ understand the purpose of, identify, locate and modify Windows initialization files.
- ⑩ understand the purpose of, identify, locate and modify the Windows registry
- ⑩ understand and apply the understanding of the bootstrap process to troubleshooting windows startup problems.
- ⑩ Perform the following
 - ⑩ view/edit/maintain and describe the role of the registry
 - ⑩ control panel
 - ⑩ adding/removing components
 - ⑩ describe and apply application support issues
 - ⑩ install applications (16 bit, 32 bit and DOS apps)
 - ⑩ run applications
 - ⑩ associate file types
 - ⑩ killing programs
 - ⑩ configure dos apps
 - ⑩ use OLE
 - ⑩ running TSR's
 - ⑩ fix version errors
 - ⑩ troubleshoot applications

4. Introduction to Unix

Potential Elements of the Performance:

- ⑩ describe Unix, Linux and their history
- ⑩ enter commands and view/select commands from the command line history
- ⑩ apply command completion
- ⑩ log on and off and change passwords

5. Understand and manage the Unix file system

Potential Elements of the Performance:

- ⑩ understand file names
- ⑩ differentiate between different file types in particular:
 - ⑩ ordinary files
 - ⑩ directories
 - ⑩ directories and physical disks
 - ⑩ links
 - ⑩ special files
 - ⑩ file permissions
 - ⑩ standard directory structures

6. Understand and apply various Unix commands, command line tools shells.

Potential Elements of the Performance:

- ⑩ understand and apply pipes
- ⑩ understand and apply I/O redirection
- ⑩ understand and apply the following Unix commands:

- ⑩ cd
- ⑩ ls
- ⑩ cp
- ⑩ mv
- ⑩ rm
- ⑩ mkdir
- ⑩ rmdir
- ⑩ man
- ⑩ more
- ⑩ less
- ⑩ clear
- ⑩ cat
- ⑩ ps
- ⑩ chown
- ⑩ chmod
- ⑩ chgrp
- ⑩ lpr
- ⑩ lpq
- ⑩ lprm
- ⑩ lpc
- ⑩ tar
- ⑩ pwd

- ⑩ create and modify files using

- ⑩ “vi”
- ⑩ “joe”
- ⑩ “emacs”

- ⑩ understand and apply Unix shells
- ⑩ differentiate between the different shells
- ⑩ describe the logon environment
- ⑩ understand and control processes
- ⑩ understand and apply background processing
- ⑩ describe and apply command aliasing
- ⑩ write shell scripts
- ⑩ customise the shell

7X-Windows on Linux and Solaris

Potential Elements of the Performance:

- ⑩ introduction to X-Windows
- ⑩ become familiar with the CDE and KDE window managers and their utilities and be able to perform the following:
 - ⑩ cut, copy and paste between applications
 - ⑩ modify the menu system
 - ⑩ move between desktops
 - ⑩ create, manage and manipulate windows and folders

III. TOPICS:

1. System Resources
2. Operating system concepts
3. Operating System and Application installation and configuration.
4. Introduction to Unix (Linux and Solaris)
5. Unix file systems
6. Unix commands and command line tools and shells.
7. X-Windows

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Textbook:

"Operating Systems, A Systematic View",
 Fifth Edition,
 Davis, Rajkumar
 ISBN 02-201-61267-7

Web Page:

<http://apollo.saultc.on.ca/~fcarella>

V. EVALUATION PROCESS/GRADING SYSTEM:

Lab Assignments	40%
Install Windows and Windows drivers (95/98/2000)	
Install/Remove Windows Applications	
Install Linux and Linux drivers (RedHat)	
Install/Remove Linux applications	
Tests	60%

The following semester grades will be assigned to students in postsecondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
U	Unsatisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see <i>Policies & Procedures Manual - Deferred Grades and Make-up</i>).	
NR	Grade not reported to Registrar's office. This is used to facilitate transcript preparation when, for extenuating circumstances, it has not been possible for the faculty member to report grades.	

VI. SPECIAL NOTES:

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 so that support services can be arranged for you.

Retention of course outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students

from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course outline amendments:

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

<include any other special notes appropriate to your course>

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.