

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

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Sault College

COURSE OUTLINE

COURSE TITLE: SYSTEMS MANAGEMENT I

CODE NO. : CSO200 **SEMESTER:** 3

PROGRAM: Computer Studies

AUTHOR: Fred Carella

DATE: August, 2000 **PREVIOUS OUTLINE DATED:** August 1999

APPROVED:

DEAN

DATE

TOTAL CREDITS: 5

PREREQUISITE(S): NONE

HOURS/WEEK: 4

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For additional information, please contact Kitty DeRosario,

School of Trades & Technology

(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 LINUX. 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. Operating system concepts .

⑩ Understand and discuss the following operating system features and terms:

- ⑩ virtual memory,
- ⑩ pre-emptive and non pre-emptive multitasking,
- ⑩ multi-user systems,
- ⑩ task scheduling,
- ⑩ process,
- ⑩ thread,
- ⑩ multithreaded environments,
- ⑩ POSIX

⑩ Compare and contrast the various operating systems in terms of the general features and terms outlined above.

2. Discuss the hardware environment, resources and the Windows architecture and describe the Operating Systems role in their management.

- ⑩ describe the PC memory architecture.
- ⑩ optimise DOS for Windows.
- ⑩ differentiate between 16 and 32 bit disk accesses and 32 bit file I/O from 32 bit disk accesses.
- ⑩ the Windows 95 architecture components
- ⑩ the Windows 95 registry
- ⑩ device drivers
- ⑩ plug and play
- ⑩ configuration manager
- ⑩ virtual machine manager
- ⑩ process scheduling and multitasking
- ⑩ memory paging
- ⑩ support for MSDOS mode
- ⑩ installable file systems
- ⑩ file system drivers
- ⑩ core system components (user, gdi, kernel)
- ⑩ virtual memory management

- ⑩ Discuss the Microsoft Certification program .
 - ⑩ Microsoft Certified Systems Engineer (MCSE)
 - ⑩ Microsoft Certified Solution Developers (MCSD)
 - ⑩ Microsoft Certified Product Specialist (MCPS)
 - ⑩ Microsoft Certified Trainers (MCT)

3. Install, configure and troubleshoot Windows and Windows applications.

- 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 95 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 (Linux and Solaris) (Understand the UNIX command line environment.)

Elements of the performance:

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

5. Understand the UNIX file system and apply the UNIX commands necessary to manage files and directories. (Linux and Solaris)

- 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 and command line tools and understand and apply UNIX shells. (Linux and Solaris)

- 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

6. X-Windows on Linux and Solaris

- 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:

Operating system concepts 5%

Introduction to Windows hardware environment. 5%

Install and setup windows and windows applications. 40%

Introduction to UNIX. 5%

The UNIX file system. 20%

UNIX command line tools and UNIX commands. 20%

Intro to X-Windows on Linux and Solaris 5%

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Textbook:

"Special Edition Using Linux", 5th Ed
by Tackett and Burnett,
Publisher: Que
ISBN 0-7897-2180-5

Instructor supplied handouts and internet resources

V. EVALUATION PROCESS/GRADING SYSTEM:

3 Written Tests @ 20% each	60%
Lab assignments/Lab attendance/Lab Quizzes	<u>40%</u>
	100%

ELIGIBILITY FOR XGRADES/UPGRADING OF INCOMPLETES

When a student's course work is incomplete or final grade is below 60%, there is the possibility of upgrading to a pass when a student meets all of the following criteria:

1. The student's attendance has been satisfactory.
2. An overall average of at least 50% has been achieved.
3. The student has not had a failing grade in all of the theory tests taken.
4. The student has made reasonable efforts to participate in class and complete assignments.

Note: **The opportunity for an X grade is usually reserved for those with extenuating circumstances.** The nature of the upgrading requirements will be determined by the instructor and may involve one or more of the following: completion of existing labs and assignments, completion of additional assignments, re-testing on individual parts of the course or a comprehensive test on the entire course.

ASSIGNMENTS

Required format for lab assignments will be detailed by the instructor before labs are assigned.

ATTENDANCE:

Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the instructor. There will be an attendance factor included in the lab evaluation.

The following semester grades will be assigned to students in post-secondary 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.

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.