SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	**SYSTEMS MANAGEMENT I**		
CODE NO. :	**CSO200**	**SEMESTER:**	4
PROGRAM:	**Computer Studies**		
AUTHOR:	**Fred Carella / Douglas McKinnon**		
DATE:	**Jan 06**	**PREVIOUS OUTLINE DATED:**	**Jan 05**

APPROVED: _____ _____

DEAN **DATE**

TOTAL CREDITS:	**5**
PREREQUISITE(S):	**CSO105**
HOURS/WEEK:	**4**

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 CSO105 by using the Windows operating system from a systems management point of view and introduces the student to the Unix operating system. In addition, the following will be covered: D.O.S. internal and external commands, and the writing of Batch files; UNIX (Linux) and its essential command set and environment, and the writing of Scripts.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. **Manage System Resources**
   Potential Elements of the Performance:
   - describe and apply knowledge of the Intel architecture.
   - differentiate between various processor architectures.
   - describe and apply knowledge of the Windows architecture
   - the Windows registry
   - install and remove device drivers
   - describe and apply plug and play
   - installable file systems
   - file system drivers
   - core system components (user, gdi, kernel)
   - manage virtual memory

2. **Describe and Apply Operating System Concepts**
   Potential Elements of the Performance:
   - describe and apply knowledge of virtual memory,
   - define, describe and differentiate pre-emptive and non pre-emptive multitasking systems
   - define, describe and differentiate multi-user systems
   - describe and utilize multi threaded environments,
   - describe and apply knowledge of process scheduling and multitasking

3. **Install, configure and troubleshoot Windows and Windows applications**
   Potential Elements of the Performance:
   - prepare a system for Windows installation.

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

4. **Demonstrate writing DOS batch files, understanding Path, Internal/External commands, and the purpose of the Autoexec.bat and Config.sys files.**

   Potential Elements of the Performance:

   - Discuss the processes DOS follows when running programs, and the ways in which batch files can interact with each other and the user.
   - Describe the operation of and be able to write batch files using the following DOS commands: cls, rem, echo, pause, call, if, goto, shift, for, choice.
   - Discuss and be able to use the following: pipes, filters, and features: redirection, more, sort, and find in DOS batch files.
   - Understand directory structures and the concepts of relative and explicit pathnames to files.
   - Demonstrate the processes for compressing/uncompressing a

file.
- Create a bootable disk and describe the function of IO.SYS, MSDOS.SYS, COMMAND.COM. Focus on Format C: Format A:/S and SYS A:
- Discuss the purpose of the Autoexec.bat and Config.sys files.
- Understand DOS' memory configuration and the use of the mem command.

5. **Demonstrate writing UNIX scripts and understanding the basic command set of the operating system.**

Potential Elements of the Performance:

- Describe the operation of and be able to use basic Unix commands.
- Understand the Unix filesystem, disks, directories, and the full path to files.
- Understand Unix file types and permissions: regular files, directories, links, read, write, execute, and hidden.
- Demonstrate the ability to create, edit and manage Unix files, file types and permissions.
- Describe the operation of and be able to write batch files using Unix's Bash shell command set.
- Work with the standard input, output and error devices.
- Discuss and be able to use the following: pipes, filters, redirection and features; more, sort and find in Unix batch files.
- Describe and demonstrate the process for compressing/uncompressing a file.

6. **Demonstrate writing Windows scripts using the Windows Scripting Host.**

Potential Elements of the Performance:

- Differentiate between shell scripting and scripting with the Windows Scripting Host.
- Write and execute shell scripts in a Windows environment.
- Demonstrate the ability to create, edit and manage scripts using the Windows Scripting Host.
- Discuss other various scripting languages available for the Windows environment.
- Demonstrate the ability to write scripts that utilize or illustrate the use of: variables, arguments, iterative and conditional processing, Javascript, Vbscript, files, and registry.

III. TOPICS:

1. System Resources
2. Operating System Concepts
3. Installation and Configuration
4. DOS batch files
5. Unix command line and shell scripting
6. Windows Scripting with Windows Scripting Host

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Textbook:
(Note Students should already have this textbook. Its the text from CSO105)**

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

Title: "Microsoft Windows Shell Scripting and WSH"
First Edition
Author: Ford
ISBN: 1-931841-26-8

Web Page:

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

Instructor Supplied handouts.

V. EVALUATION PROCESS/GRADING SYSTEM:

Lab / Take-Home Assignments 40%
- Install Windows and Windows drivers (2000/XP)
- Install/Remove Windows Applications
- Writing DOS batch files.
- Writing Unix Scripts
- Utilize Windows Scripting Host

Tests & Quizzes 60%
- DOS theory and practical
- Unix theory and practical
- Windows Scripting Host

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

Grade	Definition	*Grade Point Equivalent*
A+	90 – 100%	4.00
A	80 – 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

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 professor and/or the Special Needs office. Visit Room E1103 or call Extension 2703 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.