SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: **Systems Management II**

CODE NO.: **CS0201** SEMESTER: **4**

PROGRAM: COMPUTER ENGINEERING TECHNOLOGY

AUTHOR: Fred Carella

DATE: Jan 1998 PREVIOUSLY DATED: Jan 1997

APPROVED: Joseph C Fenelon 98 01 05
DEAN **DATE**

Length of Course: **15 weeks**
Prerequisites: **CSO 200** Total Credit Hours: **60**

Systems Management II — **COURSE NAME**

CSO201 — **COURSE CODE**

I. COURSE DESCRIPTION:

This course prepares the technician for installing, managing and operating multi-user systems. It develops skill in typical systems management tasks including installation, upgrading, system configuration, security, backups, performance tuning, system monitoring and account management.

The operating systems used will be UNIX (LINUX), Windows 95, Wndows NT and VMS. This is the second of two courses in systems management which will develop the students ability to use and manage various operating systems (CSO 200 was the first course).

II. TOPICS TO BE COVERED:

1. Introduction to UNIX hardware environment.
2. Installing and setting up a UNIX system.
3. UNIX management and configuration issues.
4. Introduction to the Windows95 hardware environment.
5. Installing and setting up a Windows95 system.
6. Windows95 management and configuration issues.
7. Introduction to the WindowsNT hardware environment.
8. WindowsNT management and configuration issues.
9. The VMS command line environment and command procedures..
10. VMS installations, management and configuration issues.

III. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

A. Learning Outcomes:

		Approx. % of Course Grade
1.	Operating system theory:	
	a) Understand and discuss the following operating system features and terms: virtual memory, pre-emptive and non pre-emptive multitasking, multi-user systems, task scheduling, process, thread, multithreaded environments, POSIX.	10%
	b) Compare and contrast the various operating systems in terms of the general features and terms outlined in (1) above.	10%
2.	Installations: a) Install various operating systems. b) Upgrade various operating systems.	50%
3.	Maintenance. a) Write command procedures (scripts). b) Add user accounts c) Monitor system usage d) Perform Backups e) System Startup and Shutdown.	30%
		100%

B. Learning Outcomes and Elements of the Performance:

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

1. Theory:
   Understand and discuss operating system theory and apply that theory when comparing and contrasting operating systems.

   Elements of the performance:

   - understand and discuss the following
     - virtual memory,
     - pre-emptive and non pre-emptive multitasking,
     - multiuser systems,
     - task scheduling,
     - process,
     - thread,
     - multithreaded environments,
     - POSIX.
   - compare and contrast operating systems, in terms of the above.

2. Installation and upgrades:
   Install various operating systems.

   Elements of the performance:

   - install Linux using various methods
   - prepare and partition hard drives
   - apply an understanding of TCP/IP in the configuration of network support
   - identify, modify and maintain network configuration files
   - install slip and ppp services.
     recompile the kernel
   - choosing the right hardware
   - evaluate the various Slackware distribution packages
   - install applications using pkgtool and setup
   - install Windows 95
   - install applications (Windows 95 and NT)
   - understand, discuss and apply changes to the system registry
   - install service packs (Windows 95 and NT)
   - describe bootstrap and shutdown procedures (software events)

3. Maintenance:

Elements of the performance:

- understand and discuss the purpose and role of a system administrator
- write complex command procedures and scripts demonstrating an understanding of:
  - logical names
  - symbols (environment variables)
  - VMS,UNIX, Windows security and file protection mechanisms including ACL's
  - the VMS,UNIX, etc... file system and file I/O
- add and maintain user accounts (AUTHORIZE, passwd, adduser, etc...)
- perform backups
- monitor system usage (MONITOR and ACCOUNT, various utilities)
- install and maintain print and batch queues
- be able to startup and shutdown VMS, Linux and Windows systems and describe the events that occur.

IV. EVALUATION METHODS:

The mark for this course will be arrived at as follows:

Tests:	
Linux + general	30%
Windows 95	20%
Windows NT	5%
VMS	10%
Labs:	
Linux	15%
Linux Practical Test	5%
Windows 95 & NT	10%
VMS	5%
Total	100%

The following letter grades will be assigned in accordance with the School of Engineering Technology and the School of Business and Hospitality policies:

Course Grading Scheme

A+	90% - 100%	consistently outstanding achievement
A	80% - 89%	outstanding achievement
B	70% - 79%	consistently above average achievement
C	55% - 69%	satisfactory or acceptable achievement in all areas subject to assessment
R	less than 55%	repeat - the student has not achieved the objectives of the course and the course must be repeated
CR		Credit Exemption
S		satisfactory given at midterm only
U		unsatisfactory given at midterm only
X		a temporary grade

An 'X' grade is limited to instances where exceptional circumstances have prevented the student from completing objectives by the end of the semester. An "X" grade must be arranged before the deadline for grade submission and is granted at the discretion of the Professor. The 'X' grade must also have the Dean's approval and has a maximum time limit of 120 days.

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V. SPECIAL NOTES

1. In order to pass this course the student must obtain an overall **test** average of 55% or better, as well as, an overall **assignment** average of 55%.

2. Assignments must be submitted by the due date according to the specifications of the instructor. Late assignments will normally be given a mark of zero. Late assignments will only be marked at the discretion of the instructor in cases where there were extenuating circumstances. Attendance in the lectures and labs is mandatory.

3. The instructor reserves the right to modify the assessment process to meet any changing needs of the class. Consultation with the class will be done prior to any changes.

4. The method of upgrading an incomplete grade is at the discretion of the instructor, and may consist of such things as make-up work. rewriting tests, and comprehensive examinations.

5. Students with special needs (eg. physical limitations, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

6. Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.

VI. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the instructor.

VII. REQUIRED STUDENT RESOURCES

Text: Using LINUX, Special Edition
QUE. Books

VMS notes, to be supplied by the instructor

Windows Resource Kits