

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

COURSE OUTLINE

Course Title: INTRODUCTION TO OPERATING SYSTEMS & COMPUTER OPERATIONS
Code No.: EDP 107-2
Program: Programmer
Semester: 2
Date: January, 1985
Author: J. Wied

New: _____ Revision: X

APPROVED:


Chairperson

31.01.85
Date

INTRODUCTION TO OPERATING SYSTEMS
& COMPUTER OPERATIONS

Course Name

EDP 107-2

Course Number

OBJECTIVES:

This course will focus on the interrelationship between the systems hardware, software and personnel. Students who meet the course objectives will understand how the field of operations and operating systems relates and interfaces with systems design and programming. A practical analysis and application of the VAX 11/780 software will be included.

STUDENT EVALUATION:

| | |
|----------------------------|------------|
| Tests (x2) | 60% |
| Assignments | 30% |
| Attendance & Participation | <u>10%</u> |
| TOTAL | 100% |

TEXTBOOK:

Marjorie Leeson, Computer Operations - Procedures and Management, S.R.A., 1982.

REFERENCES:

Shelly & Cashman, Introduction to Computers and Data Processing, Anaheim Publishing Co., 1980.

Peter Calingeart, Operating Systems Elements - A User Perspective, Prentice-Hall, 1982.

William S. Harrison, Data Processing - Computers In Action, Wadsworth Inc., 1982.

VAX 11/780 Manuals

1. VAX/VMS - Guide to Using Command Procedures #AA-H782B-TE
2. VAX/VMS - Command Language User's Guide #AA-DO23C-TE

REFERENCES:

Chapter 1
Shelly & Cashman (Ch. 4 & 12)
Lecture Notes

Lecture Notes

Chapter 1

Chapter 2

Chapter 3

Chapter 4, 5, 6, 7, 8, 11

Chapter 9

TOPIC OUTLINE:

1. COMPUTER SYSTEMS: HARDWARE & SOFTWARE
 - 4 generations
 - Hardware: I/O, CPU
 - Software: application and system
 - Functions of an operating system;
 - 1) Control programs
 - 2) Language system
 - 3) Data management & utilities

2. VAX-11/780 OPERATING SYSTEM - AN INTRODUCTION
 - Job Control Language defined
 - DCL (Digital Control Language) Grammar & Syntax
 - 1) Files
 - 2) Commands and defaults
 - 3) Program development commands
 - 4) The editor
 - 5) Spooling and queues
 - 6) Standard utilities and options

3. THE EDP DEPARTMENT
 - a) Personnel
 - 3 Major areas - systems, programming, and operations
 - Operations: areas of responsibilities
 - Classification of Computers
 - b) Documentation Requirements
 - systems analysts and programmers
 - operations

4. OPERATIONS - HARDWARE
 - 1) Terminals
 - 2) Printers
 - 3) DAS: tapes and disks
 - 4) CPU and console

5. OPERATING SYSTEM: TYPICAL FEATURES
 - Supervisor
 - Library management and maintenance
 - JCL
 - Translators
 - Utilities
 - Scheduling
 - Nucleus of a operating system

REFERENCES:

Chapter 10
Lecture Notes

VAX 11/780 Tapes
Lecture Notes

Lecture Notes

Chapter 12

Chapter 12

TOPIC OUTLINE:

6. TYPES OF OPERATING SYSTEMS (An Overview)
 - 1) Batch Processing
 - 2) Multi-programming and Multi-processing
 - 3) Time-sharing: partitioning and swapping
 - 4) Remote job entry and telecommunications
 - 5) Virtual storage
7. THE VAX-11/780 - A VIRTUAL STORAGE SYSTEM
 - VAX architecture
 - Virtual storage and addressing system
8. VAX-11/780 - O/S (Advanced)
 - Designing command procedures
 - Using DCL as a Fourth Generation Language
9. MICRO-COMPUTER SYSTEMS
 - An overview
 - Hardware (RAM, ROM, peripherals)
 - Operating systems - CP/M
 - UNIX
 - MSDOS
10. DATATRIEVE (VAX-11/780) (Optional)
 - An example of Report Writers and Query language

* * * SUBJECT TO MODIFICATION * * *