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 1984

Author: JODI WIED

New: _____ Revision: X

APPROVED: _____ Jan. 84
Chairperson Date

INTRODUCTION TO OPERATING SYSTEMS & COMPUTER OPERATIONS
Course Name

EDP 107-2
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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 | 10% |
| 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 780 Manuals

1. VAX/VMS - Guide to Using Command Procedures
# AA-H782B-TE

2. VAX/VMS - Command Language User's Guide
# AA-D023C-TE

| REFERENCES: | TOPIC OUTLINE: |
|---|---|
| Chapter 1<br>Shelly & Cashman (Ch. 4 & 12)<br>Lecture Notes | 1. COMPUTER SYSTEMS: HARDWARE & SOFTWARE<br>- 4 generations<br>- Hardware: I/O, CPU<br>- Software: application and system<br>- Functions of an operating system;<br>1) Control programs<br>2) Language system<br>3) Data management & utilities |
| Lecture Notes | 2. VAX-11/780 OPERATING SYSTEM - AN INTRODUCTION<br>- Job Control Language defined<br>- DCL (Digital Control Language) Grammar & Syntax<br>1) Files<br>2) Commands and defaults<br>3) Program development commands<br>4) The editor<br>5) Spooling and queues<br>6) Standard utilities and options |
| Chapter 1<br>Chapter 2<br>Chapter 3 | 3. THE EDP DEPARTMENT<br>a) Personnel<br>- 3 Major areas - systems, programming, and operations<br>- Operations: areas of responsibilities<br>Classification of Computers<br>b) Documentation Requirements<br>- systems analysts and programmers<br>- operations |
| Chapter 4, 5, 6, 7, 8, 11 | 4. OPERATIONS - HARDWARE<br>1) Terminals<br>2) Printers<br>3) DAS: tapes and disks<br>4) CPU and console |
| Chapter 9 | 5. OPERATING SYSTEM: TYPICAL FEATURE<br>- Supervisor<br>- Library management and maintenance<br>- JCL<br>- Translators<br>- Utilities<br>- Scheduling<br>- Nucleus of a operating system |

REFERENCES:

TOPIC OUTLINE:

Chapter 10
Lecture Notes

6. TYPES OF OPERATING SYSTEMS (An Overview)
   1) Batch Processing
   2) Multi-programming and Multi-processing
   3) Time-sharing: partioning and swapping
   4) Remote job entry and telecommunications
   5) Virtual storage

VAX 11/780 Tapes
Lecture Notes

7. THE VAX-11/780 - A VIRTUAL STORAGE SYSTEM
   - VAX architecture
   - Virtual storage and addressing system

Lecture Notes

8. VAX-11/780 - O/S (Advanced)
   - Designing command procedures
   - Using DCL as a Fourth Generation Language

Chapter 12

9. MICRO-COMPUTER SYSTEMS
   - An overview
   - Hardware (RAM, ROM, peripherals)
   - Operating systems - CP/M
     - UNIX
     - MSDOS

Chapter 12

10. DATATRIEVE (VAX-11/780) (Optional)
    - An example of Report Writers and Query language

* * * SUBJECT TO MODIFICATION * * *