

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

COURSE OUTLINE

COURSE TITLE: _____ COBOL _____

CODE NO.: _____ EDP112 _____ SEMESTER: _____ THREE _____

PROGRAM: _____ COMPUTER PROGRAMMER _____

AUTHOR: _____ FRAN DEW _____

DATE: _____ SEPTEMBER, 1994 _____

PREVIOUS OUTLINE DATED: _____ SEPTEMBER, 1993 _____

New: _____ Revision: _____ X _____

APPROVED: _____ DEAN, SCHOOL OF BUSINESS & HOSPITALITY _____ DATE _____

COBOL

EDP112

COURSE NAME

COURSE CODE

Total credit time: 90 hours

Prerequisites: EDP111, EDP318

I PHILOSOPHY/GOALS:

This course provides the student with an opportunity to develop practical data processing skills through structured COBOL programming. This course also provides an opportunity for the student to develop skills in using standard techniques for problem analysis through to final program testing. Emphasis is placed upon structured design, top-down developments, program constructs, pseudocode, structure charts, etc. These tools are applied to case studies.

II STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course, the student will be able to:

1. identify the origin, purpose and basic structure of COBOL
2. design structured programs
3. write high-level cobol programs
4. maintain files
5. use advanced COBOL features such as interactive processing
6. utilize features such as Report Writer, COPY and CALL

III TOPICS TO BE COVERED

1. Introduction to structured program design
2. IDENTIFICATION and ENVIRONMENT DIVISIONS
3. DATA DIVISION - File Section, Working-Storage Section
4. PROCEDURE DIVISION
5. The theory of structured program design
6. Moving data and printing information
7. Debugging programs
8. Computing in COBOL

9. Selection using the IF statement
10. Iteration
11. Control break processing
12. Sequential file processing
13. Sorting
14. The COPY and CALL statements
16. Interactive Processing
17. Using Advanced Debugging Aids and Improving Program Performance

IV LEARNING OUTCOMES

1. Introduction to Structured Program Design

Learning Activities

- . describe COBOL as a business-oriented language
- . relate COBOL programming techniques and practices
- . describe an overview of the four divisions of COBOL

Resources

Text - Chapter 1

2. IDENTIFICATION and ENVIRONMENT DIVISIONS

Learning Activities

- . describe the basic structure of a COBOL program
- . employ the general coding and format rules
- . use IDENTIFICATION DIVISION and ENVIRONMENT DIVISION entries

Resources

Text - Chapter 2

3. DATA DIVISION - File Section, Working-Storage Section

Learning Activities

- . use system design, relating to programming
- . organize data, and form data-names and constants
- . define and describe input and output files in the DATA DIVISION
- . reserve storage for constants and work areas

Resources

Text - Chapter 3

4. PROCEDURE DIVISION

Learning Activities

- . access input and output files, read data from an input file and write information onto an output file
- . perform move statements
- . execute paragraphs from a main module, and perform end-of-job operations

Resources

Text - Chapter 4

5. The Theory of Structured Program Design

Learning Activities

- . map out structured program logic using flowcharts and pseudocode
- . illustrate the relationships among modules in a top-down program using hierarchy or structure charts
- . use the logical control structures of sequence, selection, iteration and case
- . use techniques to make programs easy to code, debug, maintain, and modify

Resources

Text - Chapter 5

6. Moving Data and Printing Information

Learning Activities

- . use options of the MOVE statement
- . describe the rules for moving fields and literals
- . print decimal points and dollar signs

Resources

Text - Chapter 6

7. Debugging programs

Learning Activities

- . anticipate the types of input errors that might occur
- . use techniques to validate input data
- . perform actions upon error detection

Resources

Text - Chapter 11

8. Computing in COBOL

Learning Activities

- . perform arithmetic in COBOL in various ways
- . use the formats and options available with the arithmetic verbs

Resources

Text - Chapter 7

9. Selection using the IF statement

Learning Activities

- . use the IF statement for selections
- . use a variety of formats and options available with the conditional statement

Resources

Text - Chapter 8

10. Iteration

Learning Activities

- . use the PERFORM statement options for iteration

Resources

Text - Chapter 9

11. Control Break Processing

Learning Activities

- . prepare the main types of computer-generated reports, using techniques for efficient printing of group reports and control totals
- . use control break processing and printing

Resources

Text - Chapter 10

12. Chapter 14 Sequential File Processing

Resources

Text - Chapter 14

13. Sorting

Learning Activities

- . process a file before, during and after it is sorted

Resources

Text - Chapter 15 (part)

14. The COPY and CALL statements

Learning Activities

- . copy standard parts of a program from a library
- . execute subroutines

Resources

Text - Ch 19

15. Interactive Processing

Learning Activities

- . design screen layouts so that the operator can interact with a computer at a terminal
- . handle input and output, and manipulate text

Resources

Text - Ch 17

16. Using Advanced Debugging Aids and Improving Program Performance

Learning Activities

- . use advanced techniques to debug programs
- . improve program efficiency

Resources

Text - Ch 18

V EVALUATION METHODS

Tests (3 @ 25%)	75%
Assignments (3 @ 5%)	15%
Participation	10%

	100%

Assignments received after the due date are subject to a zero mark. Assignment layout is explained on another handout.

Grading:

A+	90 and over
A	80 and over
B	70 and over
C	60 and over
R	under 60

VI REQUIRED STUDENT RESOURCES

Text: "Structured COBOL Programming"
 by Stern & Stern
 7th Edition, 1994
 available in the Campus Bookstore

Other References: VAX COBOL Volume 1 User Manual
 VAX COBOL Volume 2 Reference Manual
 available in Software Support

VII SPECIAL NOTES

Tests may contain both written and practical on-line components.

Students with special needs, such as physical limitations, visual impairments, hearing impairments, or learning disabilities, are encouraged to discuss required accommodations, confidentially, with the instructor.

Your instructor reserves the right to modify the course as is deemed necessary to meet the needs of students.