SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE MARIE, ON

COURSE OUTLINE

Course Title: Introduction to Cobol Programming

Code No.: CSD208 Semester: Third

Program: Computer Programmer / Programmer Analyst

Author: F. Turco

Date: Sept 2000 Previous Outline Date: Sept 1999

Approved: _____ _____
Dean Date

Total Credits: 4

Prerequisites: CSD101 or Equivalent

Hours / Week: 4

I. Course Description:

This course is designed to continue improving the student's programming skills. We will do this by introducing and applying their programming and problem solving skills using the COBOL programming language. We will also do a comparison study of the similarities with COBOL and the other programming languages that students have been exposed to. The student will continue to follow and improve structured programming techniques. The course will take a relatively non-mathematical approach but will include an in depth study of programming techniques such as modularization, file handling, error handling, string handling, table processing, and formatted output.

II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:

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

1. Describe and apply the language fundamentals of the COBOL environment to solve programming problems.

Potential elements of the performance:

- compare the similarities and differences in both structure and commands of COBOL and other languages.
- describe the various sections in a COBOL program such as:
  The Identification Division
  The Environment Division
  The Data Division
  The Procedure Division
- illustrate the COBOL approach to:
  Program Identification
  Commenting
  Data Definition
  File Definition
  Assignment of Data
  Looping Control
  Decision Making
- code programs into the proper columns
- find and correct errors in compilation and execution

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE (Continued):

- demonstrate and use the various methods available in COBOL to format data

This learning outcome will constitute approximately 25% of the course grade (possible weighting strategy) and take approximately 4 weeks.

RESOURCES:
TEXTBOOK: Chapters 1,2,4,5,7,8,9,10
Professor's handouts, guidance and material

2. Demonstrate proficiency in using structured programming techniques in problem solving.

Potential elements of the performance:

- demonstrate good programming habits and problem solving techniques regardless of the programming language being used
- describe and use the various structured programming tools and techniques such as:
  Plan of Attack
  Pseudo Code
  Inspections and Walk Through
- produce modular and structured code using programming features such as:
  Subroutines
  Common Blocks of Code
  Parameter Passing
  Readable code with proper spacing and indentation
- produce thorough and useful program documentation

This learning outcome will constitute approximately 10% of the course grade (possible weighting strategy) and take approximately 2 weeks.

RESOURCES:
TEXTBOOK: Chapters 3,6,16
Professor's handouts, guidance and material

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE (Continued):

3. Write and develop programs that perform File Input, File Output and ERROR handling.

Potential elements of the performance:

- format input and output using a variety of PICTURE clauses in COBOL
- describe the differences to the types of files such as:
  Terminal Format
  Sequential
  Relative
  Indexed
- apply the various methods of performing typical file maintenance activities when using the various types of files such as:
  Add data records
  Modify records
  Delete records
- produce thorough and useful program documentation
- write and debug programs that deal with file processing and error handling

This learning outcome will constitute approximately 40% of the course grade (possible weighting strategy) and take approximately 6 weeks.

RESOURCES:
TEXTBOOK: Chapters 17,18
Professor's handouts, guidance and material

4. Write and develop programs that perform Array and String processing.

Potential elements of the performance:

- discuss the concept of subscripted variables and the use of one and two dimensional arrays
- describe the common requirements of programs that process string data

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE (Continued):

- write programs in COBOL that utilize array processing and string manipulation

This learning outcome will constitute approximately 25% of the course grade (possible weighting strategy) and take approximately 4 weeks.

RESOURCES:
TEXTBOOK: Chapters 11,12,13,14
Professor's handouts, guidance and material

III. TOPICS TO BE COVERED:

*** NOTE: These topics sometimes overlap several areas of skill development and are not necessarily intended to be explored in isolated learning units or in the order below.**

TOPICS	**APPROXIMATE TIME**
1. LANGUAGE FUNDAMENTALS	**4 WEEKS**
2. STRUCTURED PROGRAMMING TECHNIQUES	**2 WEEKS**
3. FILE INPUT, OUTPUT, AND ERROR HANDLING	**6 WEEKS**
4. ARRAY AND STRING HANDLING	**4 WEEKS**

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

TEXTBOOK:

1. "COBOL – From Micro to Mainframe" Preparing for the New Millennium by R. Grauer, C. Vasquez Villar, A. Buss
   3rd Edition – Prentice Hall Publishing
   ISBN 0-13-085849-8 With FUJITSU COBOL 4.0 CD Bundled

MATERIALS:

2. At least 5 3.5" high density floppy disks
3. Additional reference material will either be given to the students or placed in the library for the student's use.
4. Professor's Handouts, Guidance, and Material as it relates to the individual topics.
5. Individual and Group Assignments to be formally prepared as assigned.

V. EVALUATION PROCESS/GRADING SYSTEM:

Theory Tests, Practical Tests and Quizzes	60%
Assignments	40%

The tentative breakdown is as follows:

4	FORMAL THEORY TESTS	AT 15 % EACH
4	ASSIGNMENTS	AT 5 % EACH
2	ASSIGNMENTS	AT 10 % EACH

Some minor modifications to the above percentages may be necessary. The instructor reserves the right to adjust the mark up or down 5% based on attendance, participation and whether there is an improving trend.

As per school policy, the student must pass both the

assignment portion and the testing portion of the evaluation scheme.

* - All Assignments must be completed satisfactorily to complete this course. Late hand in penalties will be 5% per day. Assignments will not be accepted past one week late unless there are extenuating and legitimate circumstances.

* - The professor reserves the right to adjust the number of tests, practical tests and quizzes based on unforeseen circumstances. The students will be given sufficient notice to any changes and the reason thereof.

V. EVALUATION PROCESS/GRADING SYSTEM(Continued):

GRADING SCHEME

1. TESTS

Written tests will be conducted as deemed necessary; generally at the end of each block of work. They will be announced about one week in advance. Quizzes may be conducted without advance warning.

2. ASSIGNMENTS

Assignments not completed by the assigned due-date will be penalized by 5% per day late. All assignments must be completed satisfactorily to complete the course.

3. GRADING SCHEME

A+	90 - 100%	Outstanding achievement
A	80 - 89%	Excellent achievement
B	70 - 79%	Average Achievement
C	60 - 69%	Satisfactory Achievement
R	less than 60	Repeat
CR	Credit given	Credit Exemption
S	Satisfactory	used at midterm only
U	Unsatisfactory	unsatisfactory
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 authorised by the Chairperson. It reverts to an R if not upgraded in an agreed-upon time, less than 120 days.

4. UPGRADING OF INCOMPLETE

When a student's course work is incomplete or final grade is below 60%, there is the possibility of upgrading to a pass when the student's performance warrants it. Attendance and assignment completion will have a bearing on whether upgrading will be allowed. A failing grade on all tests will remove the option of any upgrading and an R grade will result. The highest grade on re-written tests or assignments will be 60%.

Where a student's overall performance has been consistently unsatisfactory, an R grade may be assigned without the option of make-up work.

The method of upgrading is at the discretion of the teacher and may consist of one or more of the following options: assigned make-up work, re-doing assignments, re-writing of tests, or writing a comprehensive supplemental examination.

VI. SPECIAL NOTES:

1. All students should be aware of the Special Needs Office in the college. If you have any special needs such as being visually impaired, hearing disabled, physically disabled, learning disabilities you are encouraged to discuss required accommodations confidentially with the Professor and/or contact the Special Needs Office, Room E1204, Ext 493, or 717, or 491 so that support services can be arranged for you.

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

3. It is the responsibility of the student to retain all course outlines for possible future use in gaining advanced standing at other post-secondary institutions.

4. Plagiarism
Students should refer to the definition of "academic dishonesty" in the "Statement of 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, as may be decided by the professor.

5. Substitute course information is available at the Registrar's office.

6. Students must achieve a passing grade in **both** the assignment and the test portions of the course.

7. The topics will not necessarily be covered in the order shown in this course outline.

VII. PRIOR LEARNING ASSESSMENT

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