COURSE OUTLINE

COURSE:      PREFIX: NO: | EFFECTIVE DATE | NEXT REVIEW DATE
CPT 115 | Spring 2015 | Spring 2016

TITLE: COBOL Programming I | CREDITS: 3 | CONTACTS: CLASS - LAB - TOTAL

PREREQUISITES: CPT-114 with a grade of "C" or better

DESCRIPTION: This course introduces the nature and use of the common business-oriented language—COBOL.

In this course, we’ll begin an in-depth look at the COmmom Business-Oriented Language (COBOL), one of the most widespread, popular, and famous of the legacy programming languages to be developed in the late 1950’s. Despite on-going predictions of its demise, COBOL has “stood the test of time”, and today accounts for over 85% of all business application code, with some 400 billion lines of COBOL code in use, and another 5 billion lines of new code added yearly.


MATERIALS (specifying those to be purchased by student): Students should have a flash drive for storing code and documentation as they work on it; optionally, they may also wish to acquire a template for drawing program flowcharts. They must keep a notebook for class and reading notes, as well as recording their analysis and design information while developing programs.

COLLATERAL READING: None

CLASS MANAGEMENT ACTIVITIES (Attendance, tardies, testing, etc.): Academic Dishonesty: Students are expected to do their own work. Any acts of impropriety or collusion during testing or projects will be unacceptable. If such an event occurs, the Student will receive a grade of “F” for the project or test and the matter will be referred to the Vice President for Student Services. Please refer to the NETC Student Code and Grievance Procedure for policies regarding academic dishonesty.

Attendance: Attendance is taken at the beginning of every class, so missing classes will have a negative impact on your class grade. Missing more than 3 classes for any reason will result in your being dropped from the class.

Students must have and wear their IDs at all times; should you forget your ID, you will be required to retrieve it, and will be marked tardy for the class, or absent if you are unable to return to the class before the halfway mark. Because it is disruptive and rude to classmates and to the instructor to come into the room after the class has started, if you arrive at the classroom and the door has been closed, please wait to be admitted.
Tardies: The student will be marked as "Tardy" when arriving after the roll has been called. Three (3) tardies will constitute one absence.

Class Policy: Cell phone, PDA, IPod or similar electronic device usage is forbidden during class. Because of the potential for abuse, it is considered a violation of academic honesty to use these devices while class is in session. Please turn them off or silence them and secure them in a purse or book bag until after class. If you need access to your cell phone during class, check with the instructor for arrangements.

There is to be no food or beverages in the computer lab at any time.

NO personal e-mail access will be permitted, nor any other use of the Internet (including surfing, playing games, chatting, instant messaging, or downloading ANY files) will be allowed unless the Instructor designates the Internet as a tool necessary for the completion of an assignment.

Software: The software for this course is Micro Focus Visual COBOL; it is installed in the labs for student use. It integrates with Microsoft’s Visual Studio, and uses many of the same features. There is also a free version that you can download on your own machine; the website and other supporting information is provided in your text.

**DISABILITIES STATEMENT:** Students with disabilities are encouraged to contact the Dean of Student Service to discuss needs or concerns as they pursue an academic program and participate in campus life. The Dean of Student Services will provide guidance regarding official documentation of disabilities and/or accommodation of needs. (See College Catalog)

**RESOURCES (A-V, persons, tools/equipment):** Lab Assistants and computers

**COURSE TOPICAL OUTLINE** (List topics and sub-topics of course) and Calendar or approximate length of time devoted to topic.

The following is a general outline for the course; the instructor reserves the right to amend, abridge, or change the order of topics depending on the progress of the class during the term.

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>CONCEPTS</th>
<th>READINGS</th>
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<tbody>
<tr>
<td>Introduction to programming and problem solving</td>
<td>Reading and understanding problems, problem analysis, solution design, and implementation, program development, IPO and pseudocode, flowcharting</td>
<td>Text: Unit I Chapter 1; Handouts</td>
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<tr>
<td>TOPIC</td>
<td>CONCEPTS</td>
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<tr>
<td>Introduction to COBOL programming and program structure</td>
<td>Basic COBOL program structure, IDENTIFICATION and ENVIRONMENT divisions, data definition and the DATA DIVISION, code placement and structure and the PROCEDURE division</td>
<td>Text: Unit I Chapters 2-4; Handouts</td>
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<tr>
<td>Designing and developing COBOL programs</td>
<td>Program development process, top-down design and structured programming, HIPO</td>
<td>Text: Unit II Chapter 5</td>
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<tr>
<td>Data manipulation</td>
<td>The MOVE statement, character and numeric MOVESs, Printed report creation and formatting, edited PIC clauses, page breaks and break handling, interactive programs and screen design, the SCREEN SECTION</td>
<td>Text: Unit II Chapter 6</td>
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<tr>
<td>Arithmetic operations</td>
<td>ADD, SUBTRACT, MULTIPLY, DIVIDE, considerations for numeric data, signed operations, COMPUTE, built-in functions</td>
<td>Text: Unit II Chapter 7</td>
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<tr>
<td>Decision Making</td>
<td>IF, IF - ELSE, evaluating conditions, nested Ifs, compound statements, AND, OR, NOT, sign and class tests, using condition names EVALUATE and case structures</td>
<td>Text: Unit II Chapter 8</td>
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<tr>
<td>Iteration</td>
<td>Basic PERFORM operations, nested PERFORMs, the GOTO issue, EXIT, PERFORM ... UNTIL, PERFORM ... VARYING, WITH TEST AFTER option</td>
<td>Text: Unit II Chapter 9</td>
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<tr>
<td>Control Break Reports</td>
<td>Report types, grouping control items, generating control breaks and page breaks in reports, multiple-level control breaks</td>
<td>Text: Unit III Chapter 10</td>
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**TOPIC** | **CONCEPTS** | **READINGS**
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Data Validation | The need for validation, validation errors, validation techniques, INSPECT, error handling, performance considerations | Text: Unit III Chapter 11

**LEARNING OUTCOMES/OBJECTIVES OF COURSE:**
Upon successful completion of this course, the student should be competent to perform the following:

1. Creating readable, well-structured and easily maintained code
2. Develop good problem solving skills, focusing on analyzing problems
3. Specifying solutions to those problems in terms of appropriate code structures and incorporating appropriate design techniques, implementation of those solutions
4. Testing these solutions to determine their correctness
5. Debugging programs to determine sources of errors
6. Developing good documentation for these solutions so that others can follow the code and carry out maintenance activities on these programs as needed.

**COLLEGE-WIDE COMPETENCY:**
Through testing and projects, the student will be able to demonstrate the ability to identify and use sources of information by utilizing information-processing skills compatible with job demands in a computer-literate society.

**INSTRUCTIONAL METHODS TO APPRAISE OBJECTIVES:**
Quizzes are at the instructor’s discretion. Homework will be assigned frequently; the majority of assignments are from the text. Programs will typically be assigned as we complete a major section of our work; there are also case study assignments that will be assigned as team-oriented projects. At the end of each chapter there will be an extended quiz/exam assignment that will assess your mastery of the material in the chapter. All work is due on the assigned due date. Should you miss a class, you are responsible for checking with classmates regarding assignments that may have been given out. No late work will be accepted without instructor authorization, so pay careful attention to due dates and plan your work accordingly.
EVALUATIVE METHODS TO APPRAISE OBJECTIVES:

Quizzes are 10 points each; homework will vary depending on length and difficulty of the assignment; programs will vary based on the assignment. The exams are 100 points each.

Assignments are weighted as follows:

- Quizzes - 20%
- Homework - 20%
- Programs - 30%
- Exams - 30%

Each group of assignments is summed and weighted by the given percentages. The weighted scores are then totaled to obtain your weighted average, which is compared to the total possible weighted score to obtain your final grade.

GRADING:

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