University of Arkansas – Fort Smith
5210 Grand Avenue
P. O. Box 3649
Fort Smith, AR 72913-3649
479-788-7000

General Syllabus

CS 3123 Business Application Programming I

Credit Hours: 3 Lecture Hours: 3 Laboratory hours: 0

Prerequisite: CS 1024 Foundations of Programming II

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Introduces programming business applications using the COBOL programming language. The student will use the concepts of programming learned earlier and implement them using COBOL.

II. Student Learning Outcomes

A. Subject Matter

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

1. Design, construct, and test a COBOL program that reads an input file, validates the data, writes out a file of valid data records, and produces a report of invalid data records.
2. Design, construct, and test a COBOL program that puts information in single and multi-level tables and retrieves information from the tables.
3. Design, write, and test a COBOL program that produces a report with a one-level control break.
4. Design, and implement a COBOL program that produces a report with a two-level control break.

B. University Learning Outcomes (ULO)

Analytical Skills
Critical Thinking Skills: Students will identify a problem, break it down into its component parts, and develop an algorithm using COBOL for solving the problem.

III. Major Course Topics

A. Compiling, linking, and executing program(s) using appropriate tools
B. Structured program design using sequential and subroutine calls
C. Identification division defining the program's 1st division
D. Environment division defining the program's 2nd division
E. Data division defining data and structure in 3rd division
F. Procedure division defining all the processes to solve problems in 4th division
G. Control structures - sequence, selection, repetition, nesting in Cobol in a non-object-oriented structure
H. Data validation using the structures in G to validate the data
I. Tables, normally referred to as arrays or a matrix
J. Control breaks to produce grouping in both reports and display
K. Design, code, test and debug a single-level control break application