**THE OHIO STATE UNIVERSITY**
COLLEGE OF ENGINEERING

# Business Programming with File Processing

## CSE 2133

**Credit Hours:**
3.00

**Course Levels:**
Undergraduate (1000-5000 level)

**Course Components:**
Lecture

**Course Description:**
Business data processing principles and programming: sequential file processing algorithms, sorting, data validation; COBOL is taught.

**Prerequisites and Co-requisites:**
Prereq: 2123, and enrollment in Business Info Sys MAJOR or CIS minor.

**Course Goals / Objectives:**
- Be competent with the following algorithms: single and multiple control breaks; matching, verification, and merge/purge; 1- and 2-dimensional tables
- Be competent with designing and coding of well-structured COBOL programs and subprograms to process sequential files using system flowcharts, hierarchy (structure) charts, flowcharts, pseudocode, print or screen charts
- Be familiar with the COBOL reference card
- Be familiar with debugging techniques including using the COBOL debugger
- Be exposed to testing and data validation techniques
- Be exposed to the definition, use and creation of makefiles

**Course Topics:**
- Vocabulary; columns; margins; basic coding rules; typing in, compiling and running a COBOL program
- Identification and environment division; data names; symbols; data division - file section; working storage
- Picture clauses; value clauses; group items; literals; constants; figurative constants; non-numeric literals
- Procedure division statements w/ file I/O (open, close, read, write); move statement (simple)
- Perform statement (simple); putting it together; display; accept omitted; stop run; move statement rules; edited I/O
- Compute and other arithmetic statements; accept time and date; scope terminators
- Control structures; relational operators and relational expressions, sign and class tests; logical operators (AND,OR, NOT); implied conditions; condition names; evaluate statement
- Single control break algorithm; string, unstring; double control break algorithm; debugging techniques; perform statement variations
- Redefines; initialize; 2-dimensional tables; sort logic
- Subprograms; sort/merge files
- Makefiles; testing and data validation techniques; additional sequential processing issues

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**Designation:**
Elective