

# Mainframe Cobol Training

*COURSE CONTENT*

## GET IN TOUCH



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## About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

## About Course

Mainframe COBOL training at Multisoft Systems is designed to equip aspiring and existing programmers with comprehensive knowledge and skills in COBOL, one of the most enduring programming languages used in business-critical applications across various industries.

## PART 1

### Module 1: Course Introduction

### Module 2: Your First Enterprise COBOL Program

- ✓ What is Enterprise COBOL
- ✓ COBOL divisions
- ✓ Analyzing a sample COBOL program
- ✓ Column layout
- ✓ Exercise: First Program

### Module 3: Compiling and Linking Your First Program

- ✓ Creating a Loadlib PDS
- ✓ Compile and Link PROC
- ✓ Compile and Link JCL
- ✓ Exercise: Compile Program

### Module 4: Running Your First Program and Helpful

#### References

- ✓ Compile, Link and GO PROC
- ✓ Enterprise COBOL IBM Manuals
- ✓ Language Environment IBM Manuals
- ✓ Exercise: Run Program

### Module 5: Identification Division, Load Libraries and Documentation

- ✓ Coding the Identification Division
- ✓ Load Libraries and CSECTs
- ✓ Self-Documentation

- ✓ Exercise: Identification Division

## **Module 6: Data Division Essentials: Part 1**

- ✓ The four sections of the DATA division
- ✓ Naming COBOL Variables/Identifiers
- ✓ Level Numbers
- ✓ Group and Elementary Items
- ✓ Picture Clauses
- ✓ Value Clause
- ✓ Exercise: Data Division Part 1

## **Module 7: Data Division Essentials: Part 2**

- ✓ Numeric Edited Pictures
- ✓ Figurative Constants
- ✓ Data Continuation
- ✓ Numeric and Alphanumeric Literals/Values
- ✓ Exercise: Data Division Part 2

## **Module 8: Data Division Essentials: Part 3**

- ✓ FILLER and Implied FILLER
- ✓ Blank When Zero
- ✓ Justified
- ✓ QUALIFICATION - for Duplicate Variables
- ✓ REDEFINES
- ✓ WORKING-STORAGE Layout
- ✓ Exercise: Data Division Part 3

## **Module 9: COBOL Numbers**

- ✓ COBOL Numbers

- ✓ Hexadecimal in COBOL
- ✓ Data Representation
- ✓ USAGE IS DISPLAY - EBCDIC
- ✓ USAGE IS COMP-3
- ✓ Big Decimal Numbers - 31 Digits
- ✓ Exercise: COBOL Numbers

## **Module 10: Procedure Division Essentials: Arithmetic and Assignment**

- ✓ ADD
- ✓ SUBTRACT
- ✓ MULTIPLY
- ✓ DIVIDE
- ✓ COMPUTE
- ✓ MOVE
- ✓ Exercise: Arithmetic and Assignment

## **Module 11: Procedure Division Essentials: Conditions, 88's and IF's**

- ✓ Conditions
- ✓ Numeric and Alphabetic Class Tests
- ✓ IF and Nested IF
- ✓ Coding and Setting 88's
- ✓ Exercise: Conditions

## **Module 12: Procedure Division Essentials: Looping with PERFORM**

- ✓ IN-LINE PERFORMs
- ✓ OUT-OF-LINE PERFORMs

- ✓ Referencing Modification - Substring
- ✓ Exercise: Looping

## **Module 13: Structured Programming Concepts Part 1**

- ✓ Structured Programming Concepts
- ✓ Modular Programming
- ✓ Functional Decomposition
- ✓ Pseudocode
- ✓ Structured Code
- ✓ Meaningful Names
- ✓ Exercise: Sequential I/O

## **Module 14: Structured Programming Concepts Part 2**

- ✓ More Functional Decomposition
- ✓ Pseudocode
- ✓ Structured Code and Meaningful Names
- ✓ Testing
- ✓ Exercise: Structured Programming

## **Module 15: Sequential File I/O**

- ✓ I/O Processing
- ✓ SELECT...ASSIGN...
- ✓ FD - File Definition
- ✓ OPEN and CLOSE
- ✓ READ and READ INTO
- ✓ WRITE and WRITE FROM
- ✓ A Sample Program for Sequential I/O
- ✓ Sample JCL

## PART 2

### Module 1: Course Introduction

### Module 2: I/O for Raw Data, Stored Data, and Reports

- ✓ Reading Raw Data
- ✓ Writing Stored Data
- ✓ Reading Stored Data
- ✓ Writing Simple Reports
- ✓ Exercise: Basic I/O

### Module 3: Conditional Processing with EVALUATE

- ✓ Object EVALUATE
- ✓ Logical EVALUATE
- ✓ Next Sentence vs. Continue
- ✓ Periods
- ✓ Exercise: EVALUATE

### Module 4: Binary Numbers in COBOL

- ✓ USAGE IS COMP
- ✓ Data Type comparison
- ✓ Big Binary - COMP-5 and TRUNC(BIN)
- ✓ Efficient coding of COMP numberbers
- ✓ Exercise: Advanced Numbers

### Module 5: Structured Programming Logic for Application Programs

- ✓ Functional Decomposition
- ✓ Structured COBOL Code

- ✓ Chaining, Coupling and Cohesion
- ✓ Exercise: Structured Programming Logic

## **Module 6: Structured Walkthrough**

- ✓ What is a Structured Walkthrough
- ✓ How To Conduct One
- ✓ Benefits

## **Module 7: Logic for Simple Reports**

- ✓ Headers, Column Headers and Footers
- ✓ Counting Detail Lines
- ✓ Creating Test Data
- ✓ Exercise: Simple Reports

## **Module 8: Logic for Validation and Error Reports**

- ✓ Error Reports
- ✓ Validating Input Data
- ✓ Defensive Programming, I/O Counters
- ✓ Page # of # Reports
- ✓ Exercise: Error Reports

## **Module 9: Logic for One-Level Control-Break Reports**

- ✓ One-Level Control Break Logic
- ✓ Cover Pages and Trailer/Summary Lines
- ✓ Creating Test Data
- ✓ Exercise: One-Level Control Breaks

## **Module 10: Advanced Reports and Dates**

- ✓ Multiple-Level Control Break Logic



- ✓ Today's Date-Using ACCEPT
- ✓ Pseudo Registers for Dates
- ✓ Intrinsic Functions for Dates
- ✓ Creating Test Data
- ✓ Exercise: Advanced Reports

## **Module 11: Copybooks and Compiler Options for Debugging**

- ✓ COPY and Other Compiler Directing Statements
- ✓ COPYLIB JCL - SYSLIB DD
- ✓ COPY xxx REPLACING xxx BY xxx
- ✓ EJECT and SKIP
- ✓ TEST and SSRANGE compiler options for debugging
- ✓ Exercise: Copybooks

## **Module 12: Logic for Transaction Master Updates**

- ✓ Transaction Master Update Logic
- ✓ Creating Test Data
- ✓ Exercise: Transaction Master

## **Module 13: One-Dimensional Tables Part 1**

- ✓ Table Processing
- ✓ Table Definition, Fixed Length
- ✓ Indexing
- ✓ Display the Value of an Index
- ✓ Initializing a Table
- ✓ Looping Through a Table
- ✓ Exercise: One-Dimension Tables Part 1

## Module 14: One-Dimensional Tables Part 2

- ✓ Table Example
- ✓ Initialize a Table Using REDEFINES
- ✓ INITIALIZE verb
- ✓ Initialize a Table with VALUE
- ✓ Exercise: One-Dimension Tables Part 2

## Module 15: Searching A Table

- ✓ Searching Using PERFORM
- ✓ Linear SEARCH and Example
- ✓ Binary SEARCH and Example
- ✓ Exercise: Search

## Module 16: More Table Processing

- ✓ Subscripts
- ✓ Indexing Vs. Subscripting
- ✓ SSRANGE Debug Option
- ✓ Table Efficiencies
- ✓ Variable-length Tables
- ✓ Exercise: More Tables