Course Number & Name: 111CSS-4 Programming Language 1

Credits and Contact Hours: 4 crs; 3 hrs for Theory+2 hrs for Lab+1 hr for Tutorial

Course Coordinator's Name: Dr. Addin Osman

Textbook Title, Author, and Year: The C Programming Language ,*Brian W. Kernighan, Dennis M. Ritchie., Latest Edition.*

a. Supplemental Material:

- Herbert Scheldt, The Complete Reference C, Latest Edition.

- H. M. Deitel & P. J. Deitel, C How to Program, Latest Edition, Pearson Education.

- H. M. Deitel & P. J. Deitel, C++ How to Program, Latest Edition, Pearson Education.

- E. Balagurusamy, Introduction to C, Latest Edition

Specific Course Information

a. Catalog Description: 111CSS-4 (Programming Language 1) is the first programming course in the curriculum. This course is intended to cover the basic and intermediate concepts of Structured Programming using C and basic principles of Object Oriented Programming using C++. The topics included are Algorithms, Flowcharts, Data types, Identifiers, Storage classes, Constants, Operators, Expressions, Statements, Selection statements, Switch, Iteration statements, Jump statements, Function calls, Arrays, Pointers, Structures, Unions, Enumerations, File I/O.

b. Prerequisites: None

c. Required, Elective, or Selected Elective: Required

Specific Goals for the Course

a. Specific Outcomes of Instruction:

CLO_1:Describe the basic concepts of C programming.

CLO_2:Analyze computing problems to formulate practical solutions.

CLO_3:Apply the concept of algorithm and flowchart in solving problems.

CLO_4:Develop C programs involving various C statements , Arrays, Pointers, and data structures .

CLO_5:Apply functions related concepts (definition, parameters, function call …
etc) to optimize and to facility C programs .

CLO_6:Assess program execution

b. Student outcomes addressed by the course: a,b,c,i,j,k

Brief List of Topics to Be Covered
- Introduction to Programming language an its types, Introduction to assembler, interpreter and compiler
- Algorithms, Flowcharts
- Constants, Identifiers, Variables and Data types
- Expressions and Console I/O Statements
- Selection statements and Iteration statements, Continue and Break statements
- Arrays, Strings and User defined functions
- Structures, Unions, Enumerations
- Pointers and File I/O