



COURSE OUTLINE

Course Code: CSE 101

Course Title: Structured Programming Language

Level/Term: 1/II

Section: B

Academic Session: January 2019

Course Teacher(s):

Name:	Office/Room:	E-mail and Telephone: (optional)
Mohammad Saifur Rahman (MDSR) (Assistant Professor)	ECE/CSE/218	saifur80@gmail.com

Course Outline: (To be filled from the course handbook)

Data types, operators, expressions, control structures; Functions and program structure: parameter passing conventions, scope rules and storage classes, recursion; Header files; Preprocessor; Pointers and arrays; Strings; Multidimensional array; User defined data types: structures, unions, enumerations; Input and Output: standard input and output, formatted input and output, file access; Variable length argument list; Command line parameters; Error Handling; Graphics; Linking; Library functions.

Learning Outcomes/Objectives:

After undergoing this course, students should be able to:

- Formulate logic to solve problems
- Transform the logical constructs to C code
- Understand C code

Assessment

Class Tests/Assignments/ Projects:	20%
Attendance:	10 %
Term final :	70%

Text and Reference books:

- Teach yourself C, Herbert Schildt (3rd Edition)
- The C Programming Language (2nd edition), Kernighan and Ritchie

Weekly schedule :



Lecture#	Week of	Topics
1	27/04/2019	Subtopics: Overview of computers and programming; data types, constants and variables; operators and expressions; type conversion; Keywords: int, long, char, float, double, signed, unsigned, printf, scanf Operators: arithmetic (+, -, *, /, %), assignment (=), others (+=, -=, *=, /=, %=)
2	04/05/2019	Subtopics: Decision making: branching and selection structures; if-else and switch statements, conditional operators; Keywords: if, if else, if else if else, switch, case, break, default Operators: logical (!, &&,), relational (<, <=, >, >=, ==, !=), others (? :)
3	11/05/2019	Subtopics: 1-D Array and loops: for loop; while loop; do-while loop; branching and looping; loop nesting. Keywords: for, while, do while, continue Operators: increment and decrement (++ , --), array index ([])
4	15/06/2019	<No classes took place due to student protests>
5	22/06/2019	Subtopics: Top-down design with functions; parameter passing conventions, scope rules and storage classes Keywords: void, return
6	29/06/2019	Subtopics: Pointers: Concept, pointer arithmetic, multi-dimensional pointers, function pointers Keywords: NULL Operators: pointer de-referencing (*), address operator (&)
7	06/07/2019	Subtopics: Graphics Library (iGraphics). Keywords: Animation, timer, pixel, mouse handler, keyboard handler
8	13/07/2019	Subtopics: Multidimensional array; string manipulation with and without library functions; misc. library functions Keywords: null terminator
9	20/07/2019	Subtopics: Bitwise operators and macros Keywords: define, unsigned Operators: bitwise unary (~, <<, >>), binary (&, , ^) , pre-directives (#)
10	27/07/2019	Subtopics: Recursions and Dynamic Memory Allocation. Keywords: malloc, free Operators: sizeof
11	24/08/2019	Subtopics: structures, unions, bit fields, enumerations. Keywords: struct, union, enum
12	31/08/2019	Subtopics: File access. Text vs. binary mode. Different library functions for File I/O Keywords: FILE, fopen, fclose, fseek
13	07/09/2019	Variable length argument list; Command line parameters; Error Handling; Keywords: va_list, va_start, va_end
14	14/09/2019	Problem solving
	???	Problem solving (structures with self references: e.g. stack, queue, binary search tree)



CT Routine

CT No.	Date	Room no.	Time	Syllabus
1	01-07-2019	804 – 805	8:00 AM	Lectures 1-5 except functions
2	13-07-2019	804 – 805	8:00 AM	Lectures 1-6
3	31-07-2019	804 – 805	8:00 AM	Lectures 1-9 except Lecture 7
4	07-09-2019	804 – 805	8:00 AM	Lectures 1-12 except Lecture 7

Excellence through Continuous Improvement