CSI 121 Structured Programming Language

Course outline for Summer 2016

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Course Website

- http://rifatshahriyar.github.io/CSI121.html

Lectures

Sec NE	M W	8:30 AM – 9:50 AM	Room 1306
Sec NG	M W	11:20 AM – 12:40 PM	Room 1306

Counselling Hours

- Mon 10:00 AM – 11:00 AM (Room 1307)
- Wed 10:00 AM – 11:00 AM (Room 1307)

Text books

- Teach yourself C (3rd Edition) - Herbert Shieldt
- The C Programming Language (2nd Edition) - Brian W. Kernighan and Dennis M. Ritchie

Evaluation

Attendance	5%
Class Tests	20%
Assignments	5%
Midterm	30%
Final	40%

Tests Policy

- Schedule of the midterm: 7th week of the semester
- At least 4 class tests will be taken, best 3 will be considered.
- Mid-terms and final exams will be closed book, closed notes. The materials for the final exam will be informed in due time. There will be no grade exemptions from the final. Final examination is not comprehensive.
- If you are absent from a test, and you have not informed the faculty member before the exam, your grade for the test will be zero.

Grading

The course grade will be determined from a weighted average of the class tests, assignments, mid-term exams and the final. The letter grades will be assigned as follows:

Letter Grade	Marks	Grade Point	Grade	Marks	Grade Point
A (Plain)	90-100	4.0	C+ (Plus)	70-73	2.33
A- (Minus)	86-89	3.67	C (Plain)	66-69	2.00
B+ (Plus)	82-85	3.33	C- (Minus)	62-65	1.67
B (Plain)	78-81	3.00	D+ (Plus)	58-61	1.33
B- (Minus)	74-77	2.67	D (Plain)	55-57	1.00

Course Outline

Topics	**Contents**
1	Basic Introduction of Computer Programming: Introduction to basic C program structure (simple program), Understand the design flow, Executing a C program, Declaration of variables & data types, Assigning values to variables, Managing input/output operation
2	Use of Operators: Arithmetic operators, Relational operators, Logical operators, Assignment operators, Increment and decrement operators, Arithmetic expression evaluation, Precedence and associativity of operators, Type conversions in expression, Mathematical functions of math.h, Example of some computational problems
3	Condition statements (if, else, if-else): Decision making with if statement, Introduce if---else statement, Nesting of if---else statement, The else—if ladder, The switch statements
4	Decision making and looping: The for statement, Usage of break and continue, Introduce while statement
5	Introduction of Array (1-D): Declaration of 1-D array, Initialization of 1-D array, Simple programs related array
	MID TERM
6	Nested for loop: Advanced problems related nested for loop
7	2-D array: Declaration of 2-D arrays, Initialization of 2-D arrays, Usage of 2-D arrays to solve different problems (i.e., matrices)
8	Operations Strings: Declaring and initializing string variables, Reading string from terminals, Writing string to the console, Arithmetic operators on characters, Concatenation of two strings, Comparison of two strings, Different string handling functions
9	User defined functions: Emphasize the need for user-defined function, Definition of functions, Return values and their types, Arguments and their types, Function call, Function declaration, Function that returns multiple values, Nesting of functions, The scope of variables
10	Introduction to structure: Defining a structure, Declaring a structure, Accessing structure members, Structure initialization, Copying and comparing structure variables, Operations of individual members, Array of structure (If time permits)
	FINAL EXAM