



Green University of Bangladesh (GUB)

Dept. of Computer Science and Engineering



COURSE OUTLINE

1	Faculty	Faculty of Science and Engineering (FSE)			
2	Department	Computer Science and Engineering			
3	Program	B.Sc. in Computer Science and Engineering			
4	Name of Course	Structured Programming			
5	Course Code	CSE 103			
6	Trimester	Spring 2022			
7	Pre-requisites	None			
8	Status	Core Course			
9	Credit Hours	3			
10	Section (s)	PC-213 DA, PC-213 DB			
11	Class Hours				
		Section	Class Day	Class Hours	Venue
		PC-213 DA	Monday + Wednesday	3:30 PM-5:00 PM	Online
		PC-213 DB	Monday + Wednesday	2:00 PM-3:30 PM	Online
12	Class Location	Online			
13	Course website	https://classroom.google.com/u/0/c/NDYzOTIyNTE4MTkz (PC-213 DA) https://classroom.google.com/u/0/c/NDYzOTI0Mzg5OTA5 (PC-213 DB)			
14	Instructor	Md. Solaiman Mia			
15	Contact	solaiman@cse.green.edu.bd			
16	Office	NA (due to online classes)			
17	Counseling Hours				
		Section	Day	Counseling Hours	Venue
		PC-213 DA	Sunday	5:00 PM-6:30 PM	Online
		PC-213 DB	Sunday	6:30 PM-8:00 PM	Online
18	Textbook	1. K. N. King (2014). C Programming: A Modern Approach, 2nd Edition. W. W. Norton publisher			
19	Reference books	1. McGraw-Hill, Schaum's Outline of Programming with C, 2nd Edition. 2. Schildt, H (2000). The Complete Reference C, 4 th Edition. McGraw-Hill.			

		<div>3. Kernighan, B. W., & Ritchie, D. M. (2006). The C programming language. Prentice-Hall.</div> <div>4. Kanetkar, Y. P. (2016). Let us C. BPB publications.</div> <div>5. Video Tutorials on C for Beginners</div> <div>6. https://www.w3resource.com/c-programming-exercises/</div> <div>7. https://blog.udemy.com/c-tutorial-learn-c-in-20-minutes/</div>											
20	Equipment & Aids	<div>Bring your own materials (<i>calculator, pen, paper, etc.</i>) to participate effectively in classroom activities. You are not allowed to borrow from others inside the classroom during class activities.</div> <div><i>Note: Besides class notes, please keep at least one blank A4 size paper per class with you.</i></div>											
21	Course Rationale	<div>This course is all about the basics of all programming languages, and also the knowledge of initial software development. We all know that software is very essential for all devices, organizations, institutes, or companies. And software is nothing but a package of programs. This course facilitates gathering knowledge about programs, developing small software and will teach the students enough about the modern-world miracle. The course assumes students are familiar with programming covered by most introductory courses.</div>											
22	Course Description	<div>Overview: data types, operators and expression; control structure: decision making and branching, decision making and looping, jumping statements; array and strings: linear array, multidimensional array, and strings; managing input and output operations; user-defined functions: defining, calling, declaring functions; user-defined data types: structure and union; pointer, dynamic memory allocation, and file handling; sound and graphics.</div>											
23	Course Outcomes (CO)	<div>After completing this course student will be able to:</div> <div>CO1: Explain the basic concepts of structured programming language, syntax, and semantics of various data types, decision making, and looping structures, array, pointer, file processing, etc. [Cognitive]</div> <div>CO2: Develop codes in structured programming language for solving simple and moderately complex problems. [Cognitive]</div> <div>CO3: Demonstrate teamwork skills aiming at implementing and presenting a moderately complex real-life problem. [Affective]</div>											
24	Teaching Methods	<div>Maximum topics will be covered from the textbook. For the rest of the topics, reference books will be followed. Some class notes will be uploaded on the web. Whiteboard will be used most of the time. For some cases, a multimedia projector will be used for the convenience of the students. Students must participate in classroom discussions for case studies, problem-solving, and project developments.</div>											
25	<div>Topic Outline</div> <div>All topics and problems are from the main text if not specified otherwise.</div>												
	<table><tr><td>Lecture</td><td>Selected Topics</td><td>Article (Text)</td><td>Suggested Problems. (Text)</td></tr><tr><td rowspan="4">(1)</td><td>Socialization and Introduction to the course</td><td rowspan="4">-</td><td rowspan="4">-</td></tr><tr><td>Overview</td></tr><tr><td>Importance of C programming</td></tr><tr><td>Introduction of IDE and Compiler</td></tr></table>		Lecture	Selected Topics	Article (Text)	Suggested Problems. (Text)	(1)	Socialization and Introduction to the course	-	-	Overview	Importance of C programming	Introduction of IDE and Compiler
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CSE 103 Course Outline Spring 2022

	(2)	Writing a simple C program	2.1	1-5	
		The General form of a simple program	2.2		
		Comments	2.3		
		Variables & Assignments	2.4		
		Input/Output	2.5		
	(3-4)	Arithmetic operators	4.1	1-6	
		Assignment operators	4.2		
		Increment/Decrement operators	4.3		
		Expression Evaluation	4.4		
	(5-6)	Logical Expressions	5.1	1-10	
		The if statement	5.2		
		The switch statement	5.3		
	(7-10)	The while statement	6.1	1-14	
		The do-while statement	6.2		
		The for statement	6.3		
		Exiting from a loop	6.4		
	(11-12)	One dimensional array	8.1	1-8	
		Multidimensional array	8.2		
	(13-15)	Defining and calling function	9.1	1-11	
		Function declarations	9.2		
		Arguments	9.3		
		Return statements	9.4		
		Program termination	9.5		
		Recursion	9.6		
		File operations	22.2		
	(16-17)	String literals	13.1	1-10	
		String variables	13.2		
		Reading and writing strings	13.3		
		Accessing the characters in a string	13.4		
		Using the C string library	13.5		
		Arrays of strings	13.6		
	(18-19)	Structure variables	16.1	1-6	
		Structure types	16.2		
		Nested arrays & structure	16.3		
	(20-22)	Pointer variables	11.1	1-7	
		The address and indirection operators	11.2		
		Pointer assignment	11.3		
		Pointer as arguments	11.4		
		Pointer as return values	11.5		
		Dynamic memory allocation			
	(23-24)	Pointer arithmetic	12.1	1-9	
		Using pointers for array processing	12.2		
		Using an array name as a pointer	12.3		
		Pointers & multidimensional arrays	12.4		
26	Assessment and Marks Distribution:	Students will be assessed on the basis of their overall performance in all the exams, quizzes, and class participation. The final numeric reward will be the compilation of (tentative): <div>❖ Class Test (15%) ❖ Group Assignment (5%) ❖ Individual Presentation (5%) ❖ Class Attendance (5%) ❖ Mid-Term Exam (30%) ❖ Final Exam (40%)</div>			

27	Assessment Methods of COs	Assessment methods of COs are given below: <table><tr><td></td><td colspan="3">Course Outcomes</td></tr><tr><td>Assessment Methods</td><td>CO1</td><td>CO2</td><td>CO3</td></tr><tr><td>Class Test</td><td>15%</td><td></td><td></td></tr><tr><td>Group Assignment, Individual Presentation, Attendance</td><td></td><td>5%</td><td>10%</td></tr><tr><td>Mid-Term Exam</td><td>10%</td><td>20%</td><td></td></tr><tr><td>Final Exam</td><td>15%</td><td>25%</td><td></td></tr><tr><td>Total (100%)</td><td>40%</td><td>50%</td><td>10%</td></tr></table>		Course Outcomes			Assessment Methods	CO1	CO2	CO3	Class Test	15%			Group Assignment, Individual Presentation, Attendance		5%	10%	Mid-Term Exam	10%	20%		Final Exam	15%	25%		Total (100%)	40%	50%	10%																																					
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28	Mapping of COs with POs	Mapping of COs with program outcomes (POs) are given below: <table><tr><td colspan="13">Program Outcomes (POs)</td></tr><tr><td>COs</td><td>PO1</td><td>PO2</td><td>PO3</td><td>PO4</td><td>PO5</td><td>PO6</td><td>PO7</td><td>PO8</td><td>PO9</td><td>PO10</td><td>PO11</td><td>PO12</td></tr><tr><td>CO1</td><td>√</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO2</td><td></td><td>√</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>√</td><td></td><td></td><td></td></tr></table>	Program Outcomes (POs)													COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	CO1	√												CO2		√											CO3									√			
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29	Grading Policy	The following chart will be followed for grading. This has been customized from the guideline provided by the School of Engineering and Computer Science. <table><tr><td>A+</td><td>A</td><td>A-</td><td>B+</td><td>B</td><td>B-</td><td>C+</td><td>C</td><td>D</td><td>F</td></tr><tr><td>80 and above</td><td>75- <80</td><td>70- <75</td><td>65- <70</td><td>60- <65</td><td>55- <60</td><td>50- <55</td><td>45- <50</td><td>40- <45</td><td><40</td></tr></table>	A+	A	A-	B+	B	B-	C+	C	D	F	80 and above	75- <80	70- <75	65- <70	60- <65	55- <60	50- <55	45- <50	40- <45	<40																																													
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30	Additional Course Policies	<div>Assignments</div> <div>One group assignment will be given to the student where the students may have to explore new topics related to structured programming. <i>Note: Any kind of copy in the assignment will carry zero marks.</i></div> <div>Class Test</div> <div>There will be at least three CTs, best of two will be counted. A CT can be taken with an announcement prior to or without any announcement.</div> <div>Exams</div> <div>The mid-term and final exams will be closed book, closed notes. Mobile is strictly prohibited in the exam hall. Please bring your own watch and synchronize time during exam hours.</div> <div>Test Policy</div> <div>If you are absent from a test, and you have not spoken to the teacher personally beforehand, your grade for the test will be zero. No make-up for the class test will be taken because it has an alternative (three out of four). No make-up for mid will be entertained without the presence and recommendation of the guardian and written permission of the department. Make-up test of mid will be much harder than the regular test.</div>																																																																	
31	Additional Information	a. Academic Calendar Spring 2022: http://www.green.edu.bd/academics/academic-calendar																																																																	

		<ul style="list-style-type: none">b. Academic Information and Policies: http://www.green.edu.bd/academics/academic-rules-a-regulationsc. Grading and Performance Evaluation: http://www.green.edu.bd/academics/academic-rules-a-regulationsd. Proctorial Rules: http://www.green.edu.bd/administrator/proctors-office
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