Fall Semester L-2, T-II

COURSE INFORMATION			
Course Code: Course Title: Course Teachers:	CSE 224 Advanced Programming Language Sessional Lt Col Nazrul, Lt Col Azim, Lec Raiyan, Lec Muhaimin	Contact Hours Credit Hours	: 1.50 : 0.75

PRE-REQUISITE

N/A

CURRICULUM STRUCTURE

Outcome Based Education (OBE)

SYNOPSIS/RATIONALE

To be able to solve advanced level industry problems and develop real time projects professionally.

OBJECTIVE

1. To give idea about advanced level programming.
2. To prepare students for the advanced level works of industry
3. To design real time projects in web platform.
4.To increase practical knowledge to identify the relative merits of different project designs, programming constructs and data structures

LEARNING OUTCOMES& GENERIC SKILLS

No.	Course Learning Outcome	Bloom's Taxonomy	CP	CA	KP	Assessment Methods
CO1	Identify advance programming language and technique to solve complex problems, to design real time projects and to increase the depth of knowledge in programming.	C3-C4, C6, P7	1	1	5	PR, Q
CO2	Practice good programming style and identify and adapt to the changes in style of developing and maintaining systems.	C2, C5, P6	5	5	6	PR
CO3	Illustrate practical knowledge to identify the relative merits of different Information architectural designs, programming constructs and data structures.	C2-C4, C6, A5	3	2	2	PR, Q

(CP- Complex Problems, CA-Complex Activities, KP-Knowledge Profile, T – Test; PR – Project ; Q – Quiz; ASG – Assignment; Pr – Presentation; R - Report; V - Viva; F – Final Exam, CE- Class Evaluation)

COURSE CONTENT

Laboratory works based on current industry requirement of advanced level programming language.

SKILL MAPPING

No.	Course Learning Outcome	PROGRAM OUTCOMES (PO)											
		1	2	3	4	5	6	7	8	9	10	11	12
CO1	Identify advance programming language and technique to solve complex problems, to design real time projects and to increase the depth of knowledge in programming.	M	M	H									
CO2	Practice good programming style and identify and adapt to the changes in style of developing and maintaining systems.					H							
CO3	Illustrate practical knowledge to identify the relative merits of different Information architectural designs, programming constructs and data structures.												H

(H – High, M- Medium, L-low)

TEACHING LEARNING STRATEGY

Teaching and Learning Activities	Engagement (hours)
Face-to-Face Learning	
Lecture	-
Practical / Tutorial / Studio	21
Student-Centred Learning	-
Self-Directed Learning	
Non-face-to-face learning	10.5
Assessment Preparations	-
Formal Assessment	
Continuous Assessment	04
Total	35.5

TEACHING METHODOLOGY

Lecture and Discussion, Co-operative and Collaborative Method, Problem Based Method

COURSE SCHEDULE

Lecture	Topics	Remarks
Lab 1	Intro to Web development, info architectural design of web systems, Sample Projects	
Lab 2	Front end development of Web based Systems using HTML & CSS	
Lab 3	Frontend development with frameworks and project version control with git.	Project selection
Lab 4	Intro to java script: Dynamic web front end programming, concurrent and asynchronous JS programming, debugging a web system with JavaScript	Project Update - 01
Lab 5	Intro to NoSQL Databases, Intro to collections. Data store, Retrieval and hosting using Firebase and JavaScript.	Project Update - 02
Lab 6	User access control using Firebase. Project integration.	Project Update + Pre-Final Feedback
Lab 7	Project Final Submission & Quiz	Final Submission

ASSESSMENT STRATEGY

Components			Grading	CO	Blooms Taxonomy
Continuous Assessment (100%)	Class Performance & Observation		10%	CO1	C3-C4, C6, P7
	Project	Project Proposal (10%)	70%	CO1	C3-C4, C6, P7
		Project update-1(20%)			
		Project Final Submission (40%)		CO2	C2, C5, P6
				CO3	C2-C4, C6, A5
	Quiz		20%	CO1	C3-C4, C6, P7
				CO3	C2-C4, C6, A5
Total Marks			100%		

(CO = Course Outcome, C = Cognitive Domain, P = Psychomotor Domain, A = Affective Domain)

REFERENCE BOOKS

1. Learning Web App Development: Build Quickly with Proven JavaScript Techniques - by Semmy Purewal
2. Go Web Programming – by Chang Sau Sheong

REFERENCE SITE

https://classroom.google.com