

Web Development Foundations

Session No#	Session mode	Session Details	Week-Day	Duration Hrs
1	EL-Async	IU 1: Fundamentals of SDLC & Technical Design <ul style="list-style-type: none"> Familiarization of software development process and technical design SDLC & Technical Design - Phases in SDLC, System Requirements Specifications, UML Diagrams Complete MCQ	Before Sync session	2
2	FC -Sync	IU 1: Fundamentals of SDLC & Technical Design Discussion on software development process and technical design Explain assignment 1	1-1	3
3	AS -Sync	Complete below assignments and submit Assignment-1: Application Design: Develop system block diagram and UML diagrams	1-2	3
4	EL-Async	IU 2: Back-end development principles and techniques <ul style="list-style-type: none"> Back-end development Handling of HTTP requests and responses, connecting with the database Building responses, managing the request lifecycle IU 3: Design patterns <ul style="list-style-type: none"> Development using MVC pattern Backend framework overview, developing presentation layer, data layer, web layer & application logic layer Complete MCQ	Before Sync session	2
5	FC- Sync	IU 2: Back-end development principles and techniques Discussion on Back-end development principles and techniques IU 3: Design patterns Discussion on Development using MVC pattern Explain assignment 2	2-3	3
6	AS- Sync	Complete below assignment and submit	2-4	3

		Assignment 2: Application Development: Create the application components and web pages based on the functionality		
7	EL-Async	IU 4: Development using framework Application creation with insert, update, and delete records from a database IU 5: Testing & Documentation Login, exception handling Unit Testing, Integration Testing, User Acceptance Testing Complete MCQ	Before Sync session	2
8	FC-Sync	IU 4: Development using framework Discussion on CRUD using framework and database IU 5: Testing & Documentation Discussion on different types of testing and documentations Explain assignments 3 & 4	3-5	3
9	AS -Sync	Complete below assignment and submit Assignment 3: Application Development: Implement business logics and test. Assignment 4: Test Report Review and Bug Fixing	3-6	3
10	PM-Sync	Project Mentoring – Explain project and its tasks <ul style="list-style-type: none"> Architect a modular and secure backend web application based on a business case. Implement database-integrated server-side logic with authentication and API endpoints. 	4-7	3
11	PI-Async	Complete project task 1	Before Sync session	3
12	PI-Async	Complete project task 2	Before Sync session	3
13	PM-Sync	Project Mentoring – Explain project and its tasks <ul style="list-style-type: none"> Evaluate system performance through testing, documentation, and optimization strategies 	4-8	3
14	PI-Async	Complete Project task 3 Submit Project report	Before Assessment	3
15	SA-Sync	Summative Assessment (Each learner)	5-9	30 min

EL-E-Learning

FC-Flipped Class

AS-Assignment

PM-Project Mentoring

PI-Project Implementation

SA-Summative Assessment

Sync- Synchronous Session &

Async- Asynchronous Session