UE18CS325: WEB TECHNOLOGIES- II (4:0:0:0:4)

# of Hours: 56

Class #	Chapter Title/Reference Literature	Topics to be Covered	% of Portions Covered	
			% of Syllabus	Cumulative %
1.	**Unit #1** T1: Chapter 2 R1 : Chapter 5	Javascript Objects, Object Oriented Concepts	**17.85%**	**17.85%**
2.		Prototypal Inheritance		
3.		Hidden Frames Technique - GET		
4.		Hidden Frames Technique - POST		
5.		Image-based AJAX,JSON vs XML		
6.		XMLHttpRequest Object		
7.		XMLHttpRequest Object		
8.		Fetching binary data with XHR		
9.		Maintaining history in AJAX calls		
10.		Cross-domain access (CORS)		
11.	**Unit #2** T1: Chapters 3,6,7,8	Introduction to Ajax patterns, Predictive Fetch	**21.42%**	**39.27%**
12.		Multi-Stage Download		
13.		Periodic Refresh and Fallback Patterns		
14.		Periodic Refresh and Fallback Patterns		
15.		Submission Throttling		
16.		Submission Throttling		
17.		Comet Techniques, Long Polling		
18.		HTTP Streaming		
19.		Server Sent Events		
20.		Server Sent Events		
21.		Principles of REST		
22.		SOAP Based Services		
23.	**Unit #3** T2: Chapters 2,3,4	Introduction , HTTP methods and Verbs, NodeJS process and child process	**21.42%**	**60.69%**
24.		buffers, streams, File system		
25.		timers, events, call backs		
26.		query string, TLS/SSL and web module		
27.		Leveraging with Express REST API's		
28.		Express Installation and Server setup, Building the application stack		
29.		Routing, List API, Create API		
30.		Error Handling		
31.		Express Scaffolding		
32.		Templates		
33.		Cookies & File Upload		
34.		Cookies & File Upload		
35.	**Unit #4** T2: Chapters 5,6	Introduction to MVC	**21.42%**	**82.11%**
36.		Typescript basics		
37.		Introduction to Angular		
38.		Modules, Components		
39.		Component Lifecycle		
40.		Angular forms		
41.		Controls and Validations		
42.		Template and Views		
43.		Component metadata		
44.		Data binding		
45.		Directives, Pipes		

46.		Services and Dependency Injection		
47.	**Unit #5** R1 – Chapter 6	Performance Considerations - Timeouts, Retries, Handling Server Errors,	**17.85%**	**100%**
48.		Multiple Requests, The HTTP 1.1 Two Connection Limit		
49.		Caching on Client Side		
50.		Compression of Data		
51.		HTTP 2.0 – New Features, HTTP 2.0 vs 1.1.		
52.		Various Vulnerabilities and Precautions,		
53.		SQL Injection		
54.		XSS		
55.		CSRF		
56.		Guest Lecture		

Literature

Book Type	Code	Title & Author	Publication Information		
			Edition	**Publisher**	**Year**
Text Book	T1	"Professional AJAX", Nicholas C. Zakas et. al	2nd	Wiley Publishing	2007
Text Book	T2	"Node.js, MongoDB and Angular Web Development": The definitive guide to using the MEAN stack to build web applications, by Brad Dayley, Brendan Dayley, Caleb Dayley	2nd	Addison-Wesley Professional	11 October 2017
Reference Book	R1	Web Application Security, A Beginner's Guide by by Bryan Sullivan and Vincent Liu	1st	McGraw Hill Education	10th January 2012