

CE384: Advanced Web Technology

Detailed Syllabus:

1.	JavaScript Essentials
	Variables, Primitive data types, Analyzing and modifying data types, Operators, JavaScript Multiple Values, Arrays and their properties, Array methods, Multidimensional arrays, Objects in JavaScript, Working with objects and arrays, Basic functions, Parameters and arguments, Special functions and operators, Returning function values, Variable scope in functions, Recursive functions, Nested functions, Anonymous functions.
2.	JavaScript Modules and Object Oriented programming
	Object-oriented programming, Classes and objects, Classes Inheritance, Prototypes, Modules with Classes, Objects, and Closures, Modules in ES6: ES6 Exports, ES6 Imports, Imports and Exports with Renaming, Re-Exports, JavaScript Modules on the Web, Dynamic Imports with import (), Iterators and Generators: yield* and Recursive Generators, Advanced Generator Features
3.	Asynchronous JavaScript
	Asynchronous Programming with Callbacks, Promises, async and await, Asynchronous Iteration
4.	Learning about the Internals of Node.js
	NodeJs Architecture, understanding event Loop, Package manager: npm and yarn, Create and publish custom package Understanding Requests, Sending Responses, Routing Requests, Redirecting Requests, Parsing Request Bodies Understanding Event Driven Code Execution, Blocking and Non-Blocking Code
5	Working with ExpressJs and Form Handling
	Adding Middleware, How Middleware Works? Express.js, Handling Different Routes, Parsing Incoming Requests, Middleware Execution to POST Requests, Using Express Router, Adding a 404 Error Page, Model View Controller Working with Forms, Validation and sanitization, Form Handling with ExpressJS.
6	MongoDB
	overview of MongoDB Fundamentals - the document model, how to create, update, read, and delete documents, collections, and documents, Connecting to a MongoDB Database, MongoDB CRUD Operations: Delete Documents, Modifying Query Results, MongoDB