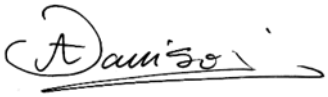
Approved by Chair:



Jan 6, 2023

Signature

COURSE SECTION INFORMATION

Course Title **Program Title (If applicable)**

Teacher's Name Pritesh Patel

Email Pritesh.patel2@georgebrown.ca

Phone

Office

Out of Class Assistance

Course Code COMP3133

Course Section ALL

Academic Year 2022-2023

Term Winter 2023

Course Outcomes:

All academic inquiries will be replied to within three business days

List of textbooks and other teaching Aids:

LIST OF TEXTBOOKS AND OTHER TEACHING AIDS:

Node.js, MongoDB and Angular Web Development: The definitive guide to using the MEAN stack to build web applications (2nd Edition) – Oct 23, 2017, by Brad Dayley, Brendan Dayley, Caleb Dayley

The free online full text here, access through Toronto Public Library

Recommended Resources:

1. https://angular.io/docs
2. https://nodejs.org/api/

Assignment Policy:

Testing Policy:

Detailed Evaluation System

Assessment	Description	Outcome(s) assessed:	EES assessed:	Week	Weight

Lecture Quiz 8	The best 8 out of 10 quizzes will count. **Note:** • **Due NEXT DAY end of lecture** • **No extension, No extra time and No makeup quizzes are allowed as these may affect other courses and 8/10 quizzes are available**	3,4,5,6	1,2,3,4,5	TBA	8%
Lab Test x 2	Hands on test, covers previous weeks topics	1,2,4,5,7	1,2,3,4,5, 6,7,10	5, 12	12%
Lab exercises 8	8 Weekly lab exercises and AtKlass participation **Note:** • **Due Sunday DAY end of lecture** • **No extension, No extra time and No makeup quizzes are allowed as these may affect other courses**	1,2,3,4, 5,6,7	1,2,3,4,5	TBA	8%
Assignment 1	Individual assignment **GitHub required for code verification**	1,2,3,4, 5,6,7	1,2,3,4,5,6, 7,10,11	6	12%
Assignment 2	Individual assignment **GitHub required for code verification**	1,2,3,4, 5,6,7	1,2,3,4,5,6, 7,10,11	13	16%
Mid-Term Exam	Mixed format and multiple-choice test.	1,2,3,4	1,2,4	7	18%
Final Exam	Mixed format and multiple-choice test on week 1 to week 14	4,5,6,7	2,4,5	15	26%
				TOTAL	**100%**

COURSE OUTCOMES:

At the end of this course, the student will reliably demonstrate the ability to:

1. Design and implement a simple front-end web solution using Angular
2. Utilize native features of Node.js using built-in modules.
3. Implement a data storage solution using MongoDB.
4. Store and retrieve data to a MongoDB using Mongoose ODM.

5. Implement and consume REST APIs with Node.js and Express

Learning Schedule / Topical Outline (subject to change with notification)

TOPICAL OUTLINE:

Week	Outcome(s)	Topics	Chapter/ Reference
1	1	– Administrative & Course Outline – Introduction to MEAN Stack – Review of JavaScript & ES6 features – Review Node's core concept	Class notes, Chapt 2 https://nodejs.org/api/
2	2	Node.js – Accessing Local File System (read/create/update/delete/rename file or directory) – Readable & Writable Streams o reading & writing chunk of data o using pipe – Buffer Object	Chapt 5, 6, 8 https://nodejs.org/api/
3	2	– Interaction with Socket.IO – Working with Multiple Sockets – Testing and Debugging o Intro to testing framework Mocha	Chapt 9, https://nodejs.org/api/ https://mochajs.org/
4	3, 4	– MongoDB and Mongoos – Review building the Schema and Models o Query and Sorting with Mongoose o Methods and Statics – Middleware	Chapt 16 https://mongoosejs.com/docs/
5	3, 4	– Mongoose Validation o Built-in Validators o Custom Validators o Handling Validation Errors	https://mongoosejs.com/docs/
6	2, 5	– Introduction to GraphQL o REST vs GraphQL o Setting up GraphQL to work with Express o Schemas o Types and Queries	https://graphql.org/
7		---------- Midterm Exam -------	

8		**** Intersession week ****	
9	1, 2	– NPM: Node Package Manager – Getting started with Angular – Introduction to TypeScript	Chapt 20,
10	2	– The Architecture of Angular Apps o Structure of Angular Projects – Angular Fundamentals – Components o Angular CLI	Chapt 21, 22
11	2	– Displaying Data and Handling Events o Data Binding and Event Binding – Directives	Chapt 24, 25, 27
12	2	– Building Reusable Components o View Encapsulation/Shadow DOM – Routing & Navigation	Chapt 22, https://angular.io/api/
13	2, 5	– Consuming HTTP Services o Observables & RxJS o Pipes – Template Driven Forms o Angular Material	Chapt 23, 27, 28 https://material.angular.io/
14	2	– Authentication & Authorization	
15		---------- Final Exam -------	