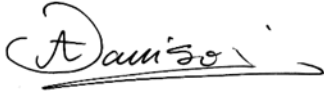


Approved by Chair:



Sep 6, 2020

Signature

### COURSE SECTION INFORMATION

#### Full Stack Development I

**Teacher's Name:** Pritesh Patel

**Email** pritesh.patel2@georgebrown.ca

**Phone**

**Office**

**Out of Class Assistance**

**Course Code** COMP 3123

**Course Section:** all

**Academic Year** 2020-2021

**Term** Fall 2020

### LIST OF TEXTBOOKS AND OTHER TEACHING AIDS:

#### Required:

1. Pro MERN Stack: Full Stack Web App Development with Mongo, Express, React, and Node 2nd Edition ISBN 978-1-4842-4391-6

The instructional methods of this course are comprised of a combination of lectures, demonstrations, hands-on exercises, and take-home assignments. The chapters of the textbook provide a deep exploration of a different subject. The course will cover only specific sections of the book. The students will have a general overview of the skills and knowledge needed to delve deeper into current subjects or future studies.

#### **Recommended Resources:**

1. <https://reactjs.org/>
2. <https://nodejs.org/api/>

### Detailed Evaluation System

Assessment	Description	Outcome(s) assessed:	EES assessed:	Week	Weight
Lecture Quiz 8	The best 6 out of 8 quizzes will count.	1-6	1,2,3,4,5	TBA	8%
Lab Test x 2	Hands on test, covers previous weeks topics	2-4	1,2,3,4,5, 6,7,10	5, 13	12%

Lab exercises	Weekly lab exercises and AtKlass participation	1-6	1,2,3,4,5	TBA	8%
Assignment 1	Individual assignment	1,3,4,5	1,2,3,4,5,6,7,10,11	6	10%
Assignment 2	Individual assignment	1-6	1,2,3,4,5,6,7,10,11	13	12
Mid Term Exam	Mixed format and multiple-choice test.	1,3,4,5	1,2,4	7	20%
Final Exam	Mixed format and multiple-choice test on week 1 to week 14	1-6	2,4,5	15	30%
				<b>TOTAL</b>	<b>100%</b>

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

#### TOPICAL OUTLINE:

Week	Topic	Outcome (s)	Content / Activities	Chapter / Reference
1	1		<ul style="list-style-type: none"> <li>- Administrative &amp; Course Outline</li> <li>- Introduction to Full Stack and MERN Stack</li> <li>- Review of JavaScript &amp; ES6 features</li> <li>- Enhanced Object Literals</li> </ul>	Ch 1
2	2	1	<ul style="list-style-type: none"> <li>- Arrow Functions</li> <li>- Classes/Subclasses</li> <li>- Callbacks</li> <li>- Promises</li> <li>- Async/await</li> </ul>	Class notes
3	3	3	<ul style="list-style-type: none"> <li>- Node.js</li> <li>- Introduction &amp; installation</li> <li>- Node package manager (NPM)</li> <li>- Versioning and package.json</li> <li>- Core Node API</li> <li>- Global Object</li> <li>- Modules, Export, Require</li> <li>- Intro to Events and Event Emitter</li> </ul>	Ch 1 <a href="https://nodejs.org/api/">https://nodejs.org/api/</a>
4	4	3	<ul style="list-style-type: none"> <li>- Node as a web server <ul style="list-style-type: none"> <li>- Serving static files using http and file system module</li> </ul> </li> <li>- ExpressJS framework <ul style="list-style-type: none"> <li>- Introduction to RESTful API</li> <li>- Using Routes (GET)</li> <li>- Working with route params &amp; query string</li> </ul> </li> </ul>	<a href="https://nodejs.org/api/">https://nodejs.org/api/</a>
5	5	6, 7	<ul style="list-style-type: none"> <li>- ExpressJS framework <ul style="list-style-type: none"> <li>- Using Routes (POST/PUT/DELETE)</li> <li>- Serving static files with express</li> <li>- Express Router</li> </ul> </li> </ul>	Ch 3, 5, <a href="https://nodejs.org/api/">https://nodejs.org/api/</a> <a href="https://expressjs.com/">https://expressjs.com/</a>

6	6	4-5	<ul style="list-style-type: none"> <li>- MongoDB               <ul style="list-style-type: none"> <li>- SQL vs No SQL</li> <li>- Local Installation &amp; cloud (MongoDB Atlas)</li> <li>- Mongoose</li> <li>- Intro to Mongoose schemas and datatypes</li> <li>- CRUD Operations with Mongoose</li> </ul> </li> </ul>	Ch 6
7	<b>MID-TERM EXAM</b> Mixed format test week 1-6			
8	<b>Intersession Week</b>			
9	7	2	<ul style="list-style-type: none"> <li>- React:               <ul style="list-style-type: none"> <li>- Introduction to frontend tools</li> <li>- The architecture of React Application</li> <li>- Setting up React environment</li> <li>- JSX &amp; HTML view</li> <li>- Single Page Application scope and objectives</li> <li>- State</li> <li>- Props</li> </ul> </li> </ul>	Ch 1,3 <a href="https://reactjs.org">https://reactjs.org</a>
10	8	2	<ul style="list-style-type: none"> <li>- React continued               <ul style="list-style-type: none"> <li>- Dev Tools and environment</li> <li>- DOM &amp; Component events</li> <li>- Life Cycle of React Components</li> <li>- Functional vs Class Components</li> </ul> </li> </ul>	Ch 4 <a href="https://reactjs.org">https://reactjs.org</a>
11	9	2-7	<ul style="list-style-type: none"> <li>- React Router and route parameters</li> <li>- React Forms</li> <li>- Form Element &amp; Validation</li> <li>- Submitting data to the backend using Axios</li> </ul>	Ch 9, 10 <a href="https://reactjs.org">https://reactjs.org</a>
12	10	2	<ul style="list-style-type: none"> <li>- Context API</li> </ul>	<a href="https://reactjs.org">https://reactjs.org</a>
13	11	2	<ul style="list-style-type: none"> <li>- Introduction to hooks               <ul style="list-style-type: none"> <li>- useState,</li> <li>- useEffect</li> <li>- useRef</li> </ul> </li> </ul>	<a href="https://reactjs.org">https://reactjs.org</a>
14	12	2	<ul style="list-style-type: none"> <li>- Authentication</li> </ul>	Ch 14
15	<b>FINAL EXAM</b> Mixed format test week 1-14			
	<b>Please note: this schedule may change as resources and circumstances require.</b> For information on withdrawing from this course without academic penalty, please refer to the College Academic Calendar: <a href="http://www.georgebrown.ca/Admin/Registr/PSCal.aspx">http://www.georgebrown.ca/Admin/Registr/PSCal.aspx</a>			