

Spring 2020

IS 322-102: Mobile Applications Design

Bryan Nissen

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Course Number: IS322
Course Title: Mobile Applications Design
Section: 102
Semester: Spring 2020
Date & Time: W 6:00PM – 9:05PM
Location: 2305 GITC
Credits: 3
Contact Hours: 3 Hours Face-to-Face

Instructor Information:

Name: Bryan Nissen
Office: 3100 GITC
Email (preferred): bcn3@njit.edu
Slack Handle: bryannissen

Office Hours:

Wednesday: 4:00PM – 6:00PM
Through Slack Anytime
On Campus at another time by appointment

Course Materials

All course materials will be provided through Moodle.

Catalog Description

In this intensive hands-on course, students will learn how to design computer programs to “grab” information from social networking systems such as Facebook, and analyze this to reveal useful but hidden information about the users and their interconnections. Since math is the only language that computers understand, the goal of this class is to build connections between the human language one finds in social network postings and profiles, and mathematical formulas. The skills and techniques utilized in the course will prepare students for advanced courses in data mining and business analytics. This course requires basic statistical knowledge and Java programming skills.

Prerequisite: Completion of computing GUR (CS 100, CS 101, CS 103, CS 104, CS 111, CS 113, CS 115 or BNFO 135) AND statistical GUR (MATH 105, MATH 120, MATH 225, MATH 244, MATH 279, MATH 305, MATH 333, IE 331, ECE 321 or MNET 315).

Learning Outcomes

1. Students will be able to create an application using JavaScript and ReactJS
2. Students will be able to design and implement a user interface that is responsive and works on screens of various resolution sizes.
3. Students will be able to understand the different design challenges faced by desktop and mobile applications.
4. Students will be able to demonstrate fundamental concepts in web application development such as Unidirectional flow design pattern.
5. Students will be able to demonstrate the ability to collaborate using version control software.
6. Students will be able to demonstrate asynchronous client-server communication using JavaScript.

Grading Category Weights

Project #1: 25%
 Project #2: 25%
 Project #3: 40%
 Participation: 10% (each = 0.66%)

Grading Scale

A: 90 - 100
B+: 88-89
B: 80 - 87
C+: 78-79
C: 70 - 77
D+: 68 - 69
D: 60 - 67
F: 0 - 59

Incompletes are only given for extenuating and documented medical or personal issues.

Late Grading policy

No free late days for projects and homework. 10% off from full credits per day late. (e.g. if you were late for one day, the instructor would start grading your work at 90%).

Attendance

Attendance will be taken for each class meeting. Attendance is worth 10% of your final grade. Students who miss 5 or more than 5 will receive a 'F'.

Academic Integrity Policy

My expectation is that each person will complete original work for this course and will not copy from fellow students or tutorials online. It is OK to refer to tutorials online; however, you will be considered in violation of the NJIT honor code by submitting work found online. Any violations of the honor code will be referred to the Dean of Students for investigation and possible disciplinary action. For more information about the NJIT honor code, you should refer to this document:

<http://www.njit.edu/academics/pdf/academic-integrity-code.pdf>

TENTATIVE CLASS SCHEDULE (Subject to Change)

Below are the TOPICs covered in the course.

Week Meetings	Topics	Assignments
1	Development Environment & Tools	
2	Responsive Design and Styling	
3	Vanilla JavaScript	
4	React and JSX Basics	

5	React Props, Components, and Lifecycle	<i>Project #1 Due</i>
6	Handling Forms and User Input in React	
7	API Requests & Firebase	
8	Redux Basics 1 – Unidirectional Flow	
-	Spring Break	
9	Redux Basics 2 – Events and Stores	<i>Project #2 Due</i>
10	React Router	
11	Redux Form	
12	Authentication & Authorization with Redux	
13	Application Wrappers - Cordova/ElectronJS	
14	Last Day of Class - Final Project in Class Help	
15	Final Project Due	<i>Final Project Due</i>