Parsons School of Design
Design & Technology
PGTE 5505; CRN 4890
Spring 2017
Thursday, 7:00pm – 9:40pm EST. 6 East 16th Street, 1202

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Office hours by Slack/Email

Course Description Applications rarely are comprised of a tangled set of static files. They're dynamic. They update. They remember things. The course will introduce the concepts of a database and Web applications as a set of design problems. The class will investigate server-side applications, third-party data sources and APIs and how applications can become dynamic and highly functional. To approach the design and construction of applications that derive from data sources and databases, this course builds upon an essential knowledge of Web Standards, user interface design, and usability to support the creation of functional and responsive projects for the Web across multiple devices and platforms. Students will incorporate interaction design, visual design, user experience and code to rapidly sculpt data into content. By the end of the course, students should be able to design, build and deploy data-driven Web applications. The course employs a pedagogy suitable for designers, artists and technologists who seek an empowerment achieved by being able to build data-driven applications. We will learn JavaScript properly. Then, we will learn useful design patterns. Then we will pick up useful tools for making cool things better.

The first five classes cover a general workflow of a full-stack Javascript project. We'll go through the essential tools and utilities required to get up and running with a full-stack JS environment. After mid-terms, we'll dive deeper into the asynchronous nature of Javascript and learn what it takes to tackle it. You'll pick up industry standard practices to write and document good code. The class discussions will be focused on looking at a given problem and constructing methodologies to write code in effective and clean manner. We'll touch upon deploying your projects on the web, communicating with prototyping boards like Raspberry Pi, registering users with your applications and much more.

Learning Outcomes
By the successful completion of this course, students will be able to:
1. Strong understanding of JavaScript programing language (and some ES6) and its applications.
2. Ability to use Node.js as a Web Server and deploy its applications on the internet.
3. Thorough comprehension of the workflow and the body of Web Applications.
4. Ability to leverage from various types of Web APIs available to client browsers.
5. Clear insight on Client/Server Architecture, communication with Web Servers

Assessable Tasks
Requirements: All homework assignments must be submitted through Class Github Repository. Students will be assessed on their in-class effort and devotion towards homework assignments. The assignments must be functional upon submission. The code should be well commented and self-explanatory. All references must be properly cited. Finally, students are highly encouraged to participate in class discussion and problem solving.

Effort, Creativity & Communication	40%
Functionality & Organization	40%
Timely Submission	20%

Final Grade Calculation

Participation & Attendance	10%
Assignment 1	20%
Assignment 2	20%
Assignment 3	20%
Assignment 4	20%
Quiz #1 & #2	10%
TOTAL	**100%**

Course Outline

WEEK 1	1/26	Introduction, Syllabus Handed Out	
WEEK 2	2/2	JS Basics	
WEEK 3	2/9	*-Class Cancelled-*	
WEEK 4	2/16	Intro: Nodejs, Express, NPM	Assignment:1 Due: Week 7
WEEK 5	2/23	Workflow Essentials + Class project: Part 1	
WEEK 6	3/2	Workflow Essentials + Class project: Part 2	
WEEK 7	3/9	Mid-Term Presentations + HTTP Requests	Quiz #1
WEEK 8	3/16	Chat App: Starter Code + Socket IO	Assignment:2 Due: Week 11
WEEK 9	3/23	*-No Class – Spring Break-*	
WEEK 10	3/30	Chat App: MongoDb + Mongoose	
WEEK 11	4/6	Async Programming: Callbacks & Promises	Assignment:3 Due: Week 13
WEEK 12	4/13	Async Programming: Event Driven Programming	Quiz #2
WEEK 13	4/20	AWS/Heroku/C9 Deployment	Assignment:4 Due: Week 16
WEEK 14	4/27	Authentication with Passport.js || Course Revision	
WEEK 15	5/4	In-class Workshop	
WEEK 16	5/11	Final Presentations	

NSU calendar http://www.newschool.edu/student-services/academic-calendar/

Readings
How Browsers Work: Behind the Scenes of Modern Web Browsers by Tali Garsiel and Paul Irish
Killed By A Machine: The Therac-25 by Adam Fabio
What is Grid Layout? by Mozilla
The Biggest UX Challenges of 2017 by Mark Wilson
Successful Git branching model by Vincent Driessen
Bluebird Promises in NodeJS by Alexander Perry
ES6 Basics by Martin Brennan

More readings will be shared through readme.md files for respective class.

Materials and Supplies
Mac/Windows/Linux Computer

Resources
The university provides many resources to help students achieve academic and artistic excellence. These resources include:

- The University (and associated) Libraries: http://library.newschool.edu
- The University Learning Center: http://www.newschool.edu/learning-center
- University Disabilities Service: www.newschool.edu/student-disability-services/

In keeping with the university's policy of providing equal access for students with disabilities, any student with a disability who needs academic accommodations is welcome to meet with me privately. All conversations will be kept confidential. Students requesting any accommodations will also need to contact Student Disability Service (SDS). SDS will conduct an intake and, if appropriate, the Director will provide an academic accommodation notification letter for you to bring to me. At that point, I will review the letter with you and discuss these accommodations in relation to this course.

Grading Standards

Undergraduate
A student's final grades and GPA are calculated using a 4.0 scale. Please note that while both are listed here, the 4.0 scale does not align mathematically with the numeric scale based on percentages of 100 points.

A [4.0; 95 – 100%]
Work of exceptional quality, which often goes beyond the stated goals of the course

A- [3.7; 90 – <95%]
Work of very high quality

B+ [3.3; 87 – <90%]
Work of high quality that indicates higher than average abilities

B [3.0; 83 – <87%]
Very good work that satisfies the goals of the course

B- [2.7; 80 – <83%]
Good work

C+ [2.3; 77 – <80%]
Above-average work

C [2.0; 73 – <77%]
Average work that indicates an understanding of the course material; passable
Satisfactory completion of a course is considered to be a grade of C or higher.

C- [1.7; 70 – <73%]
Passing work but below good academic standing

D [1.0; 60 – <70%]
Below-average work that indicates a student does not fully understand the assignments;
Probation level though passing for credit

F [0.0; 0 – <60%]
Failure, no credit

Graduate

A	Work of exceptional quality
A-	Work of high quality
B+	Very good work
B	Good work; satisfies course requirements

Satisfactory completion of a course is considered to be a grade of B or higher.

B-	Below-average work
C+	Less than adequate work
C	Well below average work
C-	Poor work; lowest possible passing grade
F	Failure
GM	Grade missing for an individual

Grades of D are not used in graduate level courses.

Grade of W
The grade of W may be issued by the Office of the Registrar to a student who officially withdraws from a course within the applicable deadline. There is no academic penalty, but the grade will appear on the student transcript. A grade of W may also be issued by an instructor to a graduate student (except at Parsons and Mannes) who has not completed course requirements nor arranged for an Incomplete.

Grade of Z
The grade of Z is issued by an instructor to a student who has not attended or not completed all required work in a course but did not officially withdraw before the withdrawal deadline. It differs from an "F," which would indicate that the student technically completed requirements but that the level of work did not qualify for a passing grade.

Grades of Incomplete
The grade of I, or temporary incomplete, may be granted to a student under unusual and extenuating circumstances, such as when the student's academic life is interrupted by a medical or personal emergency. This mark is not given automatically but only upon the student's request and at the discretion of the instructor. A Request for Incomplete form must be completed and signed by student and instructor. The time allowed for completion of the work and removal of the "I" mark will be set by the instructor with the following limitations:
[You should include one the following standards, depending on the level of your course].

Undergraduate students: Work must be completed no later than the seventh week of the following fall semester for spring or summer term incompletes and no later than the seventh week of the following spring semester for fall term incompletes. Grades of "I" not revised in the prescribed time will be recorded as a final grade of "F" by the Office of the Registrar.

Graduate students: Work must be completed no later than one year following the end of the class. Grades of "I" not revised in the prescribed time will be recorded as a final grade of "WF" (for Parsons and Mannes graduate students) or "N" (for all other graduate students) by the Office of the Registrar. The grade of "N" does not affect the GPA but does indicate a permanent incomplete.

Divisional, Program and Class Policies

● Responsibility
Students are responsible for all assignments, even if they are absent. Late assignments, failure to complete the assignments for class discussion and/or critique, and lack of preparedness for in-class discussions, presentations and/or critiques will jeopardize your successful completion of this course.

● Participation
Class participation is an essential part of class and includes: keeping up with reading, assignments, projects, contributing meaningfully to class discussions, active participation in group work, and coming to class regularly and on time.

● Attendance
Parsons' attendance guidelines were developed to encourage students' success in all aspects of their academic programs. Full participation is essential to the successful completion of coursework and enhances the quality of the educational experience for all, particularly in courses where group work is integral; thus, Parsons promotes high levels of attendance. Students are expected to attend classes regularly and promptly and in compliance with the standards stated in this course syllabus.

While attendance is just one aspect of active participation, absence from a significant portion of class time may prevent the successful attainment of course objectives. A significant portion of class time is generally defined as the equivalent of three weeks, or 20%, of class time. Lateness or early departure from class may be recorded as one full absence. Students may be asked to withdraw from a course if habitual absenteeism or tardiness has a negative impact on the class environment.

Whether the course is a lecture, seminar or studio, faculty will assess each student's performance against all of the assessment criteria in determining the student's final grade.

● Canvas
Use of Canvas may be an important resource for this class. Students should check it for announcements before coming to class each week.

● Delays
In rare instances, I may be delayed arriving to class. If I have not arrived by the time class is scheduled to start, you must wait a minimum of thirty minutes for my arrival. In the event that I will miss class entirely, a sign will be posted at the classroom indicating your assignment for the next class meeting.

● Electronic Devices
The use of electronic devices (phones, tablets, laptops, cameras, etc.) is permitted when the device is being used in relation to the course's work. All other uses are prohibited in the classroom and devices should be turned off before class starts.

● Academic Honesty and Integrity
Compromising your academic integrity may lead to serious consequences, including (but not limited to) one or more of the following: failure of the assignment, failure of the course, academic warning, disciplinary probation, suspension from the university, or dismissal from the university.

Students are responsible for understanding the University's policy on academic honesty and integrity and must make use of proper citations of sources for writing papers, creating, presenting, and performing their work, taking examinations, and doing research. It is the responsibility of students to learn the procedures specific to their discipline for correctly and appropriately differentiating their own work from that of others. The full text of the policy, including adjudication procedures, is found at http://www.newschool.edu/policies/# Resources regarding what plagiarism is and how to avoid it can be found on the Learning Center's website: http://www.newschool.edu/university-learning-center/student-resources/

The New School views "academic honesty and integrity" as the duty of every member of an academic community to claim authorship for his or her own work and only for that work, and to recognize the contributions of others accurately and completely. This obligation is fundamental to the integrity of intellectual debate, and creative and academic pursuits. Academic honesty and integrity includes accurate use of quotations, as well as appropriate and explicit citation of sources in instances of paraphrasing and describing ideas, or reporting on research findings or any aspect of the work of others (including that of faculty members and other students). Academic dishonesty results from infractions of this "accurate use". The standards of academic honesty and integrity, and citation of sources, apply to all forms of academic work, including submissions of drafts of final papers or projects. All members of the University community are expected to conduct themselves in accord with the standards of academic honesty and integrity. Please see the complete policy in the Parsons Catalog.

● Intellectual Property Rights: http://www.newschool.edu/policies/#