USC Annenberg

JOUR 555: Advanced Coding for Creative Storytelling
2 Units

Spring 2022 – Wednesdays – 12-2:20 p.m.
Section: 21577D
Location: ANN 413

Instructor: Annelise Bamberg
Office: ANN lobby or classroom
Office Hours: By appointment
Contact Info: abamberg@usc.edu

Course Description
In this course you will learn the advanced web technologies (JavaScript, JSON, SQL, MySQL) needed to build modern interactive and data-driven news projects, which is crucial to the burgeoning field of data journalism. In addition, you will use modern journalism skills to create advanced online data-driven story packages with multiple elements, including text, visuals (video, photos, graphics, etc.) maps and games, with an emphasis on pushing data journalism and storytelling to the next level with code. You will report, design, code and produce an advanced interactive and data-driven package.

Student Learning Outcomes
The goal of this course is to teach you how to use Web technologies to produce engaging and innovative data-driven and interactive stories.

By the end of this course you should be able to sketch, design and code a "news app," using JavaScript and database technologies (JSON, CSV, SQL, MySQL) to tell a rich interactive story. Building on your journalistic, storytelling skills, this class focuses solely on the creation and production of stories told only via the Web.

The class will meet once a week for direct instruction, hands-on exercises and more. You will practice your coding skills with focused, bi-weekly assignments. In addition to your bi-weekly assignments, you must pitch and produce one longer project during the semester. This can be an individual project or a group project of no more than two people working together.

While coding is the next crucial skill for journalists to incorporate, not everyone will come out of this course as a developer. But no one will be left behind, and at the very least you will understand the role and potential for data-driven web development in the present and future of the news business. That in itself is invaluable in getting you a job in today's market.

Prerequisite(s): JOUR 320, JOUR 553 or equivalent coding experience with HTML, CSS and JQuery

Description and Assessment of Assignments

Assignment 1: HTML/CSS and jQuery review: problem set. Due before class Week 4
Assignment 2: JS Basics: Loops, conditionals, functions: problem set. Due before class Week 8
Assignment 3: Getting data into your app: problem set. Due before class Week 11
Final Project: Interactive, data-driven news application, the topic of your choice. You will be asked to pitch your ideas early on in the course. This will require original reporting and significant coding. Please do not start working on this the night before it is due.

Assignment 1: HTML/CSS and jQuery review: problem set. Due before class Week 4
The first few weeks of class are a review of the HTML, CSS and JQuery techniques we learned in Intro Coding. This assignment -- building a "calculator" -- will use all those skills and add the first larger steps into the JavaScript programming language that we will be concentrating on for much of the semester.

Assignment 2: JS Basics: Loops, conditionals, functions: problem set. Due before class Week 8
You will create a "ranking" app based on the example provided, to practice using JavaScript arrays, loops, conditionals and functions.

Assignment 3: Getting data into your app: problem set. Due before class Week 11
You will create a gallery of your classmates with details (favorite food, hometown, zodiac sign etc.) that pop up into a modal when the image is clicked. You will practice using JavaScript objects, loops and arrays.

Final Project: Interactive, data-driven news application, the topic of your choice. This will require original reporting and significant coding. Please do not start working on this the night before it is due.

Assessment:
This is a coding class so format, neatness and documentation will be graded. I will take up to 2 (of 20) points off for bad formatting on any given assignment.

Your submissions should look as much as possible as the demo page, not just sort of like it. An 'A' submission is so accurate that I can't tell the difference between the demo page and your submission. Creativity: If you love design and want to go to town on a particular assignment, please do, BUT only after you have proven you know how to make it look as close to the particular assignment example as possible. You can't break grammar rules until you have proven you know and can implement the grammar rules, otherwise it is just a grammatical error.

Points will be taken off if problems on assignments are not completed.

If on your assignments you simply copy and paste a classmate's work into your assignment, your instructor will be able to tell, and you will not get any credit. That is also called plagiarism. If you hire someone or get your engineering roommate to do your assignments, we will also be able to tell and this is grounds for failing the course (and worse: see the plagiarism policies below under IX. Policies and Procedures).

The content of your projects must meet all journalistic standards: adherence to AP style, grammatically correct, well proofed, and most importantly, the work must be your own (see the plagiarism policies below under IX. Policies and Procedures).

Participation will be graded on a number of criteria, including (but not exclusively) collaboration and helping out classmates if you understand something that someone else is struggling with.

I also grade on effort. Not everyone will find this course material easy, but if you try your hardest (and I can tell), your grade will reflect that. However, simply passing in an incomplete assignment does not count as effort. Effort means that you have tried to complete the assignment, identified where you are having trouble and then sought out your instructor for extra help.

As noted above, this is complicated material, which will be easy for some and more challenging for others. If you feel at all tentative about the material, please arrange a meeting with me so we can go over the material one-on-one. Don't wait. Find me earlier rather than later. You will get extra credit for making the effort to understand something that may not be easy for you.

Please, note, however, that if you set up a meeting right before an assignment is due and expect your instructor to teach you everything they have been teaching during class the previous weeks or try to maneuver your instructor into doing your assignment for you, the instructor will not be pleased. So don't do that.

Assignment submission policy:
All assignments are due on the dates specified. Lacking prior discussion and agreement with the instructor, late assignments will automatically be given a grade of F.

Assignments should be submitted via a Dropbox link that will be provided to you. All coding assignments should be .zipped up before submission. The folder and the zip file should be named like so: "lastname-firstname-assignment[number]"

Course Notes and Policies

Journalism is a team sport. I expect you to collaborate with your classmates, help each other out and generally treat each other with respect and courtesy.

The subject matter for this course is in the technology realm. While not an engineering class, it is still in the technology sector of journalism, hence this area of the journalism industry has many of the prejudices and pitfalls of the currently problematic technology industry, namely, an assumption that people of certain demographics – in particular women and BIPOC (Black and Indigenous People of Color) – don't have the aptitude to code. This is ironic since Ida Lovelace (1815-1852) is considered the first computer programmer and Grace Hopper (1906-1992) was one of the first programmers of the Harvard Mark I computer and invented numerous innovations that are the foundation of today's programming languages and consequently of the Internet. Hopper also coined the phrase "computer bug" after finding that a moth was mucking up the works in one of the large mainframe computers she was working with. Black women "human computers" (mathematicians) were a crucial part of NASA's success. Their history was documented in the book (and movie) "Hidden Figures." In the 1970s, any given business' computer programming department was about 50% women.

The idea that women and BIPOC can't code started in the 80s with the rise of "hacker culture" and the idea that coding is "cool." Hacking became a club of sorts and participants made themselves feel better by excluding people who didn't look like them.

This is obviously completely inappropriate and exceptionally damaging to the tech industry *and* more importantly damaging to the journalism business. Any attitude or behavior like this will not be tolerated. Any whiff of implicit biases, micro-aggressions or outright discriminatory behavior in class will be called out, discussed and noted.

Collaboration and helping out classmates if you understand something that they are struggling with is very important to success in this class. I also grade on effort. Not everyone will find this course material easy, but if you try your hardest (and I can tell), your grade will reflect that.

Each class builds on the previous one, so it is crucial that you do not miss a class or fall behind. If you have to miss a class, let me know in advance so we can discuss how to keep you up to speed. If you are struggling with some concepts or code, let me know and I will meet with you separately to go over it.

This can be complicated material, especially if you are not paying attention. Do not text, chat with your friends on Facebook, or play on your computer during the instruction.

Required Readings, hardware/software, laptops and supplementary materials

While there is no required text in this course, here are some recommended books, websites and tutorials, some of which you will be asked to read and work your way through, including:

- JavaScript tutorial: http://w3schools.com/js/default.asp
- JQuery tutorial: http://w3schools.com/jquery/default.asp
- HTML tutorial: http://w3schools.com/html/default.asp
- CSS tutorial: http://w3schools.com/css/default.asp

Jon Duckett's "JavaScript and JQuery: Interactive Front-End Web Development" and "HTML and CSS: Design and Build Websites" are good reference books.

These are also good reference and learning sites:

LinkedIn Learning (https://itservices.usc.edu/linkedin-learning/)
W3Schools (http://www.w3schools.com/)
Codecademy (http://www.codecademy.com)

News Consumption and Knowledge of Current Events

As journalists, you should keep up with what is happening on campus, in the Los Angeles area, in the United States and around the world. USC provides subscriptions for students, staff and faculty to The New York Times and the Los Angeles Times, as well as the Wall Street Journal.

Through the USC library, you have access to many regional news outlets and a variety of publications that cover specific communities. You should be familiar with publications covering the many communities of Los Angeles such as The Los Angeles Sentinel, The Los Angeles Blade, The Los Angeles Wave, La Opinión, L.A. Taco, The Eastsider, The Armenian Weekly, High Country News, the Asian Journal and others. You should keep up with the Daily Trojan and uscannenbergmedia.com, including USC student-led verticals Dímelo and Black., listen to NPR and news radio, watch local and national television news, read news email newsletters and push alerts and follow news organizations social networks, including Twitter, Instagram and TikTok. You're encouraged to sign up for Nieman Lab's newsletter, which publishes brief, readable articles on important issues in the media. Following the news will sharpen your judgment and provide good (and bad) examples of the state of mainstream journalism.

Grading

a. Breakdown of Grade

Assignment	Points	% of Grade
Assignment 1: HML/CSS/jQuery review	20	20%
Assignment 2: JavaScript Basics: Loops, conditionals, functions	20	20%
Assignment 3: Getting data into your app	25	25%
Final Project	30	30%
Participation	5	5%
TOTAL	**100**	**100%**

b. Grading Scale

95% to 100%: A	80% to 83%: B-	67% to 69%: D+
90% to 94%: A-	77% to 79%: C+	64% to 66%: D
87% to 89%: B+	74% to 76%: C	60% to 63%: D-
84% to 86%: B	70% to 73%: C-	0% to 59%: F

c. Grading Standards

The content of your projects must meet all journalistic standards: adherence to AP style, grammatically correct, well proofed, and most importantly, the work must be your own (see the plagiarism policies below under IX. Policies and Procedures).

This is a coding class, so format, neatness and documentation will be graded. Participation will be graded on a number of criteria, including (but not exclusively) collaboration and helping out classmates if you understand something that they are struggling with. I also grade on effort. Not everyone will find this course material easy, but if you try your hardest (and I can tell), your grade will reflect that.

"A" and "B" projects/assignments should have ALL components; i.e., students should not get higher than a C+ unless everything is turned in. Extra design and creativity is given extra credit.

- "A" project/assignment is submitted on time, has only minor bugs, JS well formatted and documented, and shows exceptional effort and creativity.
- "B" project/assignment is on time, and completed but requires more than minor bug fixes (CSS styling as well as JavaScript/JS functionality) and/or is not documented correctly or is badly formatted. Fulfills all basic requirements, but nothing beyond that.
- "C" project/assignment is late, is not complete and/or functioning. Requires major bug fixes. The student should have requested help from the professor.
- "D" project/assignment is late, incomplete, failed to meet the major criteria of the assignment, has numerous errors. Should not have been submitted.
- "F" project/assignment has not been submitted or is plagiarized from someone else's code or project. You can use someone else's code as example or inspiration, but you can not present someone else's project as your own.

In addition, style errors and other breaches of journalistic standards will result in point deductions.

• Fabricating a story or making up quotes or information.
• Plagiarizing a script/article, part of a script/article or information from any source.
• Staging video or telling interview subjects what to say.
• Using video shot by someone else and presenting it as original work.
• Shooting video in one location and presenting it as another location.
• Using the camcorder to intentionally intimidate, provoke or incite a person or a group of people to elicit more "dramatic" video.
• Promising, paying or giving someone something in exchange for doing an interview either on or off camera.
• Missing a deadline.

Students are encouraged to submit their work for consideration to Annenberg Media or the Daily Trojan, or pitch it to mainstream media outlets. Visit http://bit.ly/SubmitAnnenbergMedia for more information about that submission and review process and email Daily Trojan news editors at dt.city@gmail.com for more on how to pitch work to the campus newspaper.

Add/Drop Dates for Session 001 (15 weeks: 1/10/2022 – 4/29/2022; Final Exam Period: 5/4-11/2022)

Link: https://classes.usc.edu/term-20221/calendar/
Last day to add: Friday, January 28, 2022
Last day to drop without a mark of "W" and receive a refund: Friday, January 28, 2022
Last day to change enrollment option to Pass/No Pass or Audit: Friday, January 28, 2022 [All major and minor courses must be taken for a letter grade.]

Last day to add/drop a Monday-only class without a mark of "W" and receive a refund or change to Audit: Tuesday, February 1
Last day to withdraw without a "W" on transcript or change pass/no pass to letter grade: Friday, February 25, 2022 [Mark of "W" will still appear on student record and STARS report and tuition charges still apply.
*Please drop any course by the end of week three for session 001 (or the 20 percent mark of the session in which the course is offered) to avoid tuition charges.]
Last day to drop with a mark of "W": Friday, April 8, 2022

Course Schedule: A Weekly Breakdown

Important note to students: *Be advised that this syllabus is subject to change - and probably will change - based on the progress of the class, news events, and/or guest speaker availability.*

Week 1, 1/12: Orientation and Intro. HTML/CSS/JQuery review
Introductions. Class goals/infrastructure. Skills assessment. Review HTML, CSS and jQuery.

- Preparation: HTML, CSS and jQuery tutorials | http://bit.ly/w3html

Week 2, 1/19: JQuery in-depth review
Review jQuery, including getting and setting element values, dynamically changing CSS and HTML elements, and event triggers.

- **Assignment 1:** HTML/CSS/JQuery review problem set
- Preparation: JQuery tutorial: http://w3schools.com/jquery/default.asp

Week 3, 1/26: JQuery in-depth review plus CSS3 animation [REALLY: START ELEMENTS OF PROGRAMMING]

Further review of jQuery, including getting and setting element values, dynamically changing CSS and HTML elements, and event triggers. Learn CSS3 animation. Fun!

Assignment 1 due before class Week 4

Week 4, 2/2: The elements of programming using JavaScript: Arrays and loops
Learn the basics components of programming: variables, functions, loops, conditionals and data structures. Looping is highly powerful and can help automate large tasks that would otherwise require onerous data entry—and increase possibilities for error.

- **Assignment 2:** JavaScript basics problem set that includes using loops and arrays.
- Preparation: JavaScript tutorial: http://w3schools.com/js/default.asp

Week 5, 2/9: JavaScript in depth: Objects and loops
Use JavaScript variables, functions, loops, conditionals and data structures. Objects are a powerful data structure used for creating complex web projects.

- Preparation: JavaScript tutorial: http://w3schools.com/js/default.asp

Week 6, 2/16: JavaScript in depth: Objects and conditionals
Use conditionals to specify different results based on user interaction.

- Preparation: JavaScript tutorial: http://w3schools.com/js/default.asp

Week 7, 2/23: JavaScript in depth: Putting it all together
Further exercises and techniques for using JavaScript variables, functions, loops, conditionals and data structures to build web projects.

- Preparation: JavaScript tutorial: http://w3schools.com/js/default.asp

Assignment 2 due before class Week 8

Week 8, 3/2: Intro to data: common formats to store and import content : Part 1

Overview of data storage formats commonly used in news apps: Google spreadsheets, JSON files and CSVs. We'll look at examples of how each is used in a news app.

- **Assignment 3:** Getting data into your app using Google Spreadsheet, CSV and JSON
- Preparation: JSON tutorial: http://www.w3schools.com/json/default.asp. Also, please have a Google account and a copy of Excel.

Week 9, 3/9: Intro to data: common formats to store and import content : Part 2 [REALLY: GSHEETS AND START QUIZ]
Overview of data storage formats commonly used in news apps: Google spreadsheets, JSON files and CSVs. We'll look at examples of how each is used in a news app.

- Preparation: JSON tutorial: http://www.w3schools.com/json/default.asp. Also, please have a Google account and a copy of Excel

Spring Break, 3/16: No class

Week 10, 3/23: Putting it all together: Further connection to Google Spreadsheets
A further look at how to import data into an application directly from a spreadsheet that can be shared with multiple users, creating possibilities for collaboration with reporters who do not know how to code.

Assignment 3 due before class Week 11

Week 11, 3/30: Putting it all together: Mapping
Using Leaflet to create the kinds of interactive maps you find on sites such as LATimes.com and NYTimes.com

Week 12, 4/6: Building a quiz: Part 1
Quizzes are used widely on the web, and they can be more complex than they appear. Many of the skills you've learned so far this semester will come together there.

Week 13, 4/13: Building a quiz: Part 2
Quizzes are used widely on the web, and they can be more complex than they appear. Many of the skills you've learned so far this semester will come together there.

Week 14, 4/20: CSS3 and advanced design
Adding polish to your interactivity by reviewing CSS3 and building specific examples.

Week 15, 4/27: Production/hack-a-thon
Last formal day of class, focused on production and tying up loose ends.

Study days: April 30-May 3

Final Exam Period, Friday, 5/6, 11 a.m.-1 p.m.: Summative experience
Final Project due on the scheduled date of the final exam.

Internships

The value of professional internships as part of the overall educational experience of our students has long been recognized by the School of Journalism. Accordingly, while internships are not required for successful completion of this course, any student enrolled in this course that undertakes and completes an approved, non-paid internship during this semester shall earn academic extra credit herein of an amount equal to 1 percent of the total available semester points for this course. To receive instructor approval, a student must request an internship letter from the Annenberg Career Development Office and bring it to the instructor to sign by the end of the third week of classes. The student must submit the signed letter to the media organization, along with the evaluation form provided by the Career Development Office. The form should be filled out by the intern supervisor and returned to the instructor at the end of the semester. No credit will be given if an evaluation form is not turned into the

instructor by the last day of class. Note: The internship must by unpaid and can only be applied to one journalism or public relations class.

Statement on Academic Conduct and Support Systems

a. Academic Conduct

Plagiarism

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

USC School of Journalism Policy on Academic Integrity

The following is the USC Annenberg School of Journalism's policy on academic integrity and repeated in the syllabus for every course in the school:

"Since its founding, the USC School of Journalism has maintained a commitment to the highest standards of ethical conduct and academic excellence. Any student found plagiarizing, fabricating, cheating on examinations, and/or purchasing papers or other assignments faces sanctions ranging from an 'F' on the assignment to dismissal from the School of Journalism. All academic integrity violations will be reported to the office of Student Judicial Affairs & Community Standards (SJACS), as per university policy, as well as journalism school administrators."

In addition, it is assumed that the work you submit for this course is work you have produced entirely by yourself, and has not been previously produced by you for submission in another course or Learning Lab, without approval of the instructor.

b. Support Systems

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org
Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault
Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
usc-advocate.symplicity.com/care_report
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

The Office of Student Accessibility Services - (213) 740-0776
osas.usc.edu/
Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710
uscsa.usc.edu
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101
diversity.usc.edu
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
dps.usc.edu, emergency.usc.edu
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call
dps.usc.edu
Non-emergency assistance or information.

Annenberg Student Success Fund
https://annenberg.usc.edu/current-students/resources/annenberg-scholarships-and-awards
The Annenberg Student Success Fund is a donor-funded financial aid account available to USC Annenberg undergraduate and graduate students for non-tuition expenses related to extra- and co-curricular programs and opportunities.

About Your Instructor

Annelise Bamberg is a digital marketing consultant for sustainable beauty brands and has recently become an adjunct instructor at USC Annenberg for Communication and Journalism. A former USC graduate with a master's degree in Strategic Public Relations, she attributes her experience in the Introduction to Coding for Interactive Storytelling course for spurring her passion for website design and development. She also has a bachelor's degree in Spanish and Business Administration from the University of Manchester, which took her to work in Buenos Aires for a year. British-born and raised, Annelise is happy to currently reside in sunny Southern California.