

SYLLABUS

CS 491/691 – Summer 2025

Instructor: Jordan T. Hastings, PhD hastings@unr.edu 775/771-3166 mobile (Emergency only)

Teaching Assistant: Muhammed Ayaan muhammedayaanm@unr.edu

Office Hours: Tuesdays 2-4p in WPEB 213, and by appointment on GMeet or Zoom

Class Meetings: Mondays & Wednesdays 1-3p in WPEB 200

Synopsis

This course explores how full-featured applications can be built with minimal complexity using one elegant programming language, JavaScript across front-end browsers and back-end servers, the latter with Node.js and Express.js. As a practical example, a more sophisticated university ClassSearch application is realized in HTML5, with persistence in SQLite communicated via JSON.

Course Objectives

0. Situate JavaScript within the panoply of computer programming languages
1. Competently program in JavaScript in both browser and server environments
2. Develop familiarity with common cloud-supported development tools for JavaScript
3. Construct a variety of typical JavaScript apps: games, search, and transaction processing

Students progressively learn and practice these technologies in twice-a-week class meetings structured as lectures (first half) and labs (second half) – detailed schedule below. In the labs, students are invited to present “extra” material based on their own interest and/or experience, informally, utilizing abundant Web materials.

Prerequisites

Undergraduates must be juniors or seniors. All students are expected to be proficient in C and/or Java programming. In addition, all students should have a basic understanding of HTML and CSS, and Web programming in general.

Textbooks (available *free* online at oreilly.com; hardcopies from Amazon and other resellers)

Utilized

Beer (2018) <i>Introducing GitHub</i> , 2/e	ISBN: 978-1491981818
Brown (2019) <i>Web Development with Node and Express</i> , 2/e	ISBN: 978-1492053514
Crockford (2008) <i>JavaScript: The Good Parts</i>	ISBN: 978-0596517748

Remedial

Freeman & Robson (2014) <i>Head First JavaScript Programming</i>	ISBN: 978-1449340131
Robson & Freeman (2012) <i>Head First HTML with CSS</i> , 2/e	ISBN: 978-0596159900

Hardcopies of these and other reference materials are on 2-hour Reserve in DeLaMare Library.

Computing Equipment

All programming is done on the Web, using whatever laptop equipment – Mac or PC, not linux – the student prefers; phones and tablets are welcome for testing but not development. Students are expected to bring laptops, and optionally tablets, to all class meetings.

Course Mechanics

All development will be in HTML/CSS and JavaScript, managed on GitHub, and primarily edited using VSCode. For the project, an AWS Windows 2019 Sever with IIS Webserver will host the full-stack application.

Twice during the semester, on pre-assigned weeks, each student will meet 1-1 with instructor to discuss specifics of the group project per their interest: back-end, front-end, or server-ops.

Assessment

Whole-letter grading is used, as follows:

A – 90+ pts, B – 80+ pts, C – 70+ pts, D – 60+ pts, else F.

Assessment consists of: regular attendance (20 pt), six in-class quizzes (30 pt), three tutorial programming assignments (15 pts), and two-phase, small-group project (35 pt), in lieu of final.

Schedule

	Monday			Tuesday	Wednesday			Saturday	
Wk	Date	Quiz	Topics	1-1 Mtgs	Date	Topics	Extras	Date	Asgn
1	5/19		HTML/CSS, JSFiddle		5/21	JavaScript 1/3, CSx91.net			
2	5/26		* HOLIDAY *		5/28	GitHub 1/3, Markdown		5/31	Tut'I 1
3	6/02	1	GitHub 2/3, GDrive, GColab		6/04	VSCode + Github, CI/CD			
4	6/09	2	JavaScript 2/3	S/Ops	6/11	JavaScript 3/3	tbd	6/14	Tut'I 2
5	6/16	3	SQLite 1/2	B/End	6/18	SQLite 2/2	tbd		
6	6/23	4	Node.js 1/3	F/End	6/25	Node.js 2/3	tbd	6/28	Tut'I 3
7	6/30	5	Express 1/3	B/End	7/02	Express 2/3	tbd		
8	7/07	6	Node 3/3	F/End	7/09	Express 3/3	tbd	7/12	Proj-I
9	7/14		Workday REST API	S/Ops	7/16	GCalendar API	tbd		
10	7/21		GitHub 3/3, Docs		7/23	Presos (ilo Final)		7/25	Proj-II

NB: All material in this syllabus and schedule is subject to change.

This is an ambitious course within several rapidly evolving segments of computer technology. The instructor reserves the right to make changes to the syllabus during the semester if needed, in which case all students will be promptly informed via Webcampus.

Please, do **not** use Dr Hastings' UNR eMail and mobile phone contacts above (top of Syllabus) *except* in a true emergency. Rather keep all course-related communications on Webcampus, where they are easily referenced.

University Policies

Class Absences (UAM 3,020)

As per the University Administrative Manual (3,020), students are expected to attend classes in which they are enrolled.

Regular attendance at class meetings is an integral part of this course, which emphasizes didactic learning that is shared both from instructor to students and from student to student.

In-class Quizzes (during first hour of class) and collaboration during Labs (second hour) provide two concurrent measures of attendance together with points toward assessment. At most two class meetings can be missed unexcused without a grade-letter consequence.

Academic Standards (UAM 6,502)

Unless otherwise specified, all assignments are expected to be new, individual efforts. The penalty for intentional academic dishonesty on quizzes, programming assignments, or the final project is dismissal from the course with a grade of F.

However, it is recognized that computer programming encourages “best practices”, which unlike narrative writing may result in (near) identical code expression(s). Explication of the code in supplemental comments inline and orally when requested distinguishes individually perfected from plagiarized material. Uncommented and barely commented code, along with AI/machine-generated code is not accepted in this class. See the University Academic Standards policy: UAM 6,502 for further discussion of academic dishonesty and sanctions.

Disability Services

Any student with a disability needing academic adjustments or accommodations should speak with the instructor and/or the Disability Resource Center (Pennington Achievement Center, Suite 230) at the outset of the course to arrange for appropriate accommodations.

This course actively leverages third-party web/multimedia content, if you experience any issues accessing this content, please notify the instructor.

Recording of Class Sessions (Board of Regents Handbook, Title 4, Ch.12)

Student-created recordings: Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, all students should understand that their comments during class may be recorded.

Instructor-created recordings: Class sessions may be audio-visually recorded for students in the class to review and for enrolled students who are unable to attend live to view. Students who

participate with their camera on or who use a profile image are consenting to have their video or image recorded. If you do not consent to have your profile or video image recorded, keep your camera off and do not use a profile image. Students who un-mute during class and participate orally are consenting to have their voices recorded. If you do not consent to have your voice recorded during class, keep your mute button activated and only communicate by using the "chat" feature.

Equal Opportunity and Title IX: Maintaining a Safe Learning Environment

The University of Nevada, Reno is committed to providing a safe learning and work environment for all. If you believe you have experienced discrimination, sexual harassment, sexual assault, domestic/dating violence, or stalking, whether on or off campus, or need information related to immigration concerns, please contact the University's Equal Opportunity & Title IX office at 775-784-1547. Resources and interim measures are available to assist you. For more information, visit: <https://www.unr.edu/equal-opportunity-title-ix>.

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