

# CS350/491: Web and Database Application Development

(Online Course, Summer 2021)

## INSTRUCTOR

Professor Dunren “Daren” Che  
Undergrad Programs Director  
Office: Engr. Bldg. A307B  
Phone: 453-6046  
Email: [dche@cs.siu.edu](mailto:dche@cs.siu.edu) (preferred!)

## COURESE DESCRIPTION

This course introduces students to (and equip them with) the mainstream methods and development tools/languages/technologies being currently used in construction and development of today’s websites and web-based applications. The course delivers a comprehensive coverage on both client-side and server-side technologies, including *HTML5*, *CSS*, *JavaScript*, *AJAX*, *Node.js*, and *MongoDB*, *Express.js*, and *Angular.js* (which makes a *compact* but *full coverage* of the *MEAN stack*).

**Note:** This course has been one of the most popular a useful courses of our programs since I initiated in spring 2002. The contents of this course had recently been significantly updated – it now includes a compact but full coverage of the *MEAN stack*. *The course is only offered in summer* once a year (**NOT** in regular semesters, fall and spring).

The course is purposefully designed to a fun course, with only one (midterm) exam and *tremendous emphasis on hands-on and project* experience (including intriguing *game* projects).

## PREREQUISITES

Entry-level programming skills and experiences, e.g., CS221/CS202 or instructor’s consent.

## TEXTBOOK

1. Text(s): Node.js, MongoDB and Angular Web Development, 2nd Edition. Author(s): Brady Dayley, Brendan Dayley, Caleb Dayley; ISBN-13: 978-0-13-465553-6, Pearson (2018)
2. Web Programming with HTML5, CSS, and JavaScript, 1st Edition. John Dean; ISBN-13: 9781284091793; Publisher: Jones & Bartlett Learning (01/26/2018)

**Note:** These two books are strongly *recommended*, especially the first one, but not required. Digital and/or online reading and study materials will be provided by the instructor as needed. Possession of these books will give you tremendous convenience, and is strongly recommended, especially the first one.

## GRADING POLICY

Students' final letter grades (A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F) will be decided per their overall percentage average of performance assessed mainly per the following three aspects.

- Exam (Midterm): 30%
- Lab/Projects: 70%

**Lab/Project assignments:** Considering the online nature (limited instructor-student interactions) and the accelerated pace of the summer semester (only 8 weeks), big comprehensive projects will not be assigned; instead, about 6 lab assignments (smaller projects) will be given to the students to reinforce their understanding and incrementally build their development skills. The 6 lab assignments are carefully designed as smaller component projects in a cumulative style, i.e., each subsequent one will build on the prior one by adding additional features requiring newly learned skills/knowledge as the course proceeds, eventually rolling into completion of big comprehensive projects. So, it is very important for each student to keep up pace with the class and not to miss any single assignment, which otherwise would affect your subsequent projects and your overall performance and grade.

**Exams:** considering the accelerated pace of the summer semester and the hands-on nature of the subject, the instructor plans to have only one (midterm) exam, leaving students more time to spend on the projects.

**Academic Integrity:** All assignments and exam(s) by default must be *independently* and entirely done by yourself. Code submitted must **NOT** be copied from anywhere else. **Any form of dishonesty or cheating is not tolerated;** in case cheating is identified and confirmed, prompt punishment will be enforced on the individuals according to the institutional and departmental policies, including potential failure of the entire course or expulsion from the program.

## COURSE TENTATIVE SCHEDULE (subject to change)

Week	Topics to be Covered	Lab Assignments
1	Fundamentals of Internet, Web, and HTML5	
2	CSS and Basic JavaScript	Lab Assignment 1
3	Advanced JavaScript and Dynamic Web Pages	Lab Assignment 2

4	Page Layout Design and Ajax	Lab Assignment 3
<b>Mid exam</b>	<b>Monday, July 3, 2020 Tentative time: 8pm ~ 9pm</b>	
5	NodeJS	Lab Assignment 4
6	ExpressJS	Lab Assignment 5
7	MongoDB	Lab Assignment 6
8	AngularJS	
<b>Final Exam</b>	<b>Friday, July 31, 2020 Tentative time: 8pm ~ 9pm (if we do have one)</b>	

### Important Notes and Information

- As many students may have summer jobs, the instructor will not make scheduled live lectures, but post new study materials at D2L regularly on MWF during the summer session. A [weekly live class meeting on Zoom](#) will be scheduled (tentatively at 8pm of each Monday), which is not intended for lecturing, but as a direct channel to interact with the students, usually for Q&A and addressing any course related issues that may arise.
- As an online course, the course will heavily rely on emails for communication between the instructor and the students. To ensure prompt and effective communication, please ALWAYS put “CS350/491” in the subject line of your email sent to the instructor. Students are responsible for timely (at least on a daily basis) checking/accessing the course’s website hosted at D2L and keeping up pace with the course’s progress.
- The course number CS491 is mainly intended for graduate students. Undergraduates should register for CS350.
- CS350 is eligible for being counted to [fulfill 400-level elective course requirement](#).
- CS350 can be counted [as a substitute for CS484 or CS487](#) to fulfill the school’s requirement for [“Computer Graphics & and Game Development” concentration certificate](#).

Shall you have any questions, please feel free to **send email to me at [dche@cs.siu.edu](mailto:dche@cs.siu.edu)** with subject line including “CS350/491”