

Course Syllabus

CS 5220 Advanced Topics in Web Programming

Fall 2020

Computer Science Department

California State University, Los Angeles

Class Meetings	Mondays and Wednesdays from 1:40pm - 2:55pm (Zoom Link: https://calstatela.zoom.us/j/99145120020 _(https://calstatela.zoom.us/j/99145120020)_)
Instructor	Chengyu Sun, csun@calstatela.edu (mailto:csun@calstatela.edu)
Office Hours	Monday and Wednesday 3pm - 4pm (Zoom Link: https://calstatela.zoom.us/j/92835598081 _(https://calstatela.zoom.us/j/92835598081)_)

Course Description

Catalog Description: Technologies, architectures, methodologies, design patterns, and frameworks that help create scalable, robust, and maintainable web applications and web services.

This course picks up where CS 3220 left off and discusses more advanced topics in web application development. In particular, we will cover development tools, libraries, frameworks, and methodologies that help create sophisticated, robust, and maintainable web applications. Emerging technologies and research issues related to the web will also be discussed.

Course Structure

This course is to be conducted entirely online. You will participate in the course using Cal State LA learning management system Canvas.

Prerequisites

CS 3220.

Textbook and References

We will cover many subjects in the class. References to various resources will be provided along with the lectures. In particular, all reference books used in the class are either freely available online, or on [Safari Books Online](http://www.oreilly.com/library/view/temporary-access/?email=) (<http://www.oreilly.com/library/view/temporary-access/?email=>).

To access Safari Books Online, in the "Select your institution" dropdown list, select "Not Listed? Click here.", then enter your CSULA email address.

Hardware and Software

You must have access to a computer and the internet. The university has a Laptop and WiFi Hotspot Loan Program. If you need a laptop and/or a WiFi hotspot, please email Dean of Students Office at deanofstudents@calstatela.edu (<mailto:deanofstudents@calstatela.edu>). Please explain why you need the equipment in the email, and cc the email to me.

You only need a browser to access course materials. For communications, email software and [Zoom](https://zoom.us/) (<https://zoom.us/>) are needed.

Assignment and Grading Policy

You may take each quiz three times before it's due. The highest score of the three attempts will be the score for the quiz.

All quizzes and labs are due by midnight Sunday in the week they are assigned (we consider Monday as the start of a week) . Homework assignments are usually due in 10-14 days after they are assigned. No late submission of quizzes or labs will be accepted. We will accept homework submissions up to 2 days after the due date. There will be 10% penalty for being late for one day, and 25% penalty for two days.

Midterm and Final will be group presentations conducted at pre-determined time.

All assignments will be graded within 10 days after the due date.

Homework 25%, Labs 20%, Quizzes 15%, Midterm 20%, Final 20%

90 - 100	A
80 - 90	B
60 - 80	C
Below 60	NC

Schedule

Week	Topics
1	Course Overview Understand Build and Build Tools
2	Data Modeling with Relational Databases Object-Relational Mapping with Hibernate and JPA (I)
3	<i>Labor Day</i> Object-Relational Mapping with Hibernate and JPA (II)

4	Spring - Inversion of Control Spring - Aspect Oriented Programming
5	Spring MVC Web Services
6	REST API with Spring Boot
7	Secure REST API
8	MIDTERM
9	Node.js Basics
10	More Node.js
11	Introduction to MongoDB
12	<i>Veterans Day</i> Introduction to Express Framework
13	Develop Web Applications and Services Using Express
14	<i>Thanksgiving Week</i>
15	React for Building UI Components
16	React for Building Single-Page Applications
17	FINAL

Academic Integrity

Cheating will not be tolerated. Cheating on any assignment or exam will be taken seriously. All parties involved will receive a grade of F for the course and be reported to the department for further disciplinary actions.