

CSCI – 4135: Web Application Engineering - Spring 2022

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Office hours: **Tuesday, Thursday (5:30 PM – 7:30 PM) through zoom** *[You can always email me for a zoom meeting outside office hours.]. Please find below the zoom details:*

Join from PC, Mac, Linux, iOS or Android: <https://stockton.zoom.us/j/104562834>

Or iPhone one-tap :

US: +13017158592,,104562834# or +13126266799,,104562834#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 301 715 8592 or +1 312 626 6799 or +1 929 436 2866 or +1 253 215 8782 or +1 346 248 7799 or +1 669 900 6833

Meeting ID: 104 562 834

International numbers available: <https://stockton.zoom.us/j/104562834>

Class Time and Location:

10:30 AM – 12:20 PM (Tuesday), F – 207

10:30 AM – 12:20 PM (Thursday), D – 027

Topics:

- **Module – 1: Web Engineering methods and techniques:**

- Web application development approaches
 - Process models
 - Web project management
- Product development
 - Requirement Engineering
 - Web application modeling
 - Web application architectures
 - Technologies and tools
 - Testing web applications
 - Maintenance
- Quality aspects
 - Web security

- **Module - 2: Web application development:**
 - Hypertext Markup Language (HTML)
 - Cascading Style-sheets (CSS)
 - Bootstrap
 - JavaScript
 - Angular
 - PHP
 - MySQL

Course Description:

This course provides a solid foundation on web engineering concepts. The contents of the course have been organized into two modules. In the first module, the theoretical aspects of web application engineering will be covered. The focus of the first module will be how to engineer web applications efficiently so that it meets the functional and performance requirements as specified by the user. This module is based on concepts of Software Engineering and extends principles of Software Engineering into web application development. The second module is focused on learning skills which are essential for developing practical web applications. Students will gain hands on experience in designing and building web applications on their own.

Objectives:

- To develop a thorough understanding of web-based applications.
- To learn how to define the structure of a web page.
- Learning how to control the appearance of a web page.
- Learning client-side and server-side operations.
- Learning to manipulate data on a Relational Database.

Textbook:

- Web Engineering: The Discipline of Systematic Development of Web Applications, by Gerti Kappel , Birgit Pröll , Siegfried Reich , Werner Retschitzegger , John Wiley & Sons, Ltd.
- Beginning HTML, XHTML, CSS, and JavaScript, by Jon Duckett, Wiley Publishing, Inc.
- Beginning PHP and MySQL: From Novice to Professional, by W Jason Gilmore, Apress.

Grading:

Coding assignments	:	30%
Quizzes	:	10%
Class participation	:	10%
Midterm	:	25%
Final Project	:	25%

Grading scale:

Your final grade will be a Letter Grade in the range from **A** to **F**, as per the [Stockton Grading System](#).

Participation in Live Programming:

You will need to actively participate in the live programming sessions in class and submit your work through blackboard. This counts towards your class participation and will carry a certain weightage towards your final grade for the course (Refer to the grading division). Your active participation in the live programming sessions will help you develop strong programming skills.

Note: To make sure that you get the full credit for class participation grade, you **must** actively participate in class. That not only includes voluntary participation in some problems, but also your participation in live programming sessions. Please always do remember that when you work on a problem during a live session, you will be guided by the instructor, as well as there will be inputs from your classmates, if you are stuck at some point. Please always be assured that we all are there to help you learn and your active participation and interaction with your instructor, as well as with your classmates will help you learn a lot more than what you would from just being a passive observer.

Assignments/Quizzes:

To make sure that you get the full credit for class participation grade, you **must** actively participate in class activities. An example of that could be your participation in solving a coding problem in a live programming session (either voluntarily, or if you are called upon).

For the first part of the course (Module - 1), there will be quizzes which will be assigned through blackboard. I will send notifications through blackboard once a quiz is posted. For Module - 2 of the course, there will be programming assignments, all of which will be graded. You are expected to submit the quizzes and programming assignments by the **due date**. I allow you to have 2 free late days. You can treat them as pre-approved extensions. However, I encourage you not to use any of your late days and submit all homework assignments by the due date, just to ensure that you don't fall behind the class.

For the quizzes, 50% of the marks you will get by simply attempting them. The rest 50% will depend on your answers.

Midterm Exam:

The midterm exam will be a take-home exam and will be posted on blackboard after the Spring Break. You'll have a week's time to work on it. It will be based on the topics covered in the class until then.

Final Project:

There will be a final project for the course, in which you will need to build a web application, applying the technologies that you'll learn in the course. You can either work individually, or work in a group. If you choose to work in a group, please state the contribution of each group member in your project report.

Academic Honesty policy:

You are requested to adhere to the [Academic Honesty policy of the university](#).

Tentative schedule (Likely to change):

Date	Topic
January 18 th	Syllabus, Introduction to the course
January 20 th	Process model, Web project management
January 25 th	Requirement Engineering, Web Application Modeling
January 27 th	Web application Architectures, Technologies and tools
February 1 st	Testing and Maintenance of web applications, Web security
February 3 rd	Introduction to HTML
February 8 th	HTML
February 10 th	Live Programming – 1
February 15 th	HTML
February 17 th	Live Programming – 2
February 22 nd	CSS
February 24 th	Live Programming – 3
March 1 st	CSS
March 3 rd	Live Programming – 4
March 8 th	Bootstrap
March 10 th	Live Programming – 5
March 15 th	Spring Break
March 17 th	Spring Break
March 22 nd	JavaScript
March 24 th	Live Programming – 6
March 29 th	Preceptorial advising day, no classes
March 31 st	Angular
April 5 th	Live Programming – 7
April 7 th	PHP
April 12 th	Live Programming – 8
April 14 th	PHP and MySQL
April 19 th	Live Programming – 9
April 21 st	More on Database Applications
April 25 th	Live Programming – 10
April 28 th	Course Recap