CS 496 – Cloud and Mobile Software Development

Syllabus

Instructor

Justin Wolford – wolfordj@engr.oregonstate.edu

Textbook

No required textbook.

Class Layout

There are three smaller assignments which get progressively harder. The first may take only an hour or two. The last should take 5-10 hours if you understand the material well. However, I have heard of students spending upwards of 30 hours on it (If you are falling into this camp, something is not right, see the section on class expectations).

After this there is a how-to guide which you will write. This will require learning material outside of class which is related to mobile and cloud development and writing documentation on it for your fellow classmates.

There is then a final project which will combine elements from the three assignments and a how-to guide. The scope will be larger than the previous assignments, but it will not introduce new concepts other than the addition of the material in the how to guide.

Then there is a final which will cover all of the material covered in the course, both technical and non-technical. It is all multiple choice.

Class Expectations

All code should validate perfectly and throw absolutely no errors, warnings or notifications unless the instructor indicates it is a permissible error. Treat me like a client, it is your responsibility to prove your program is error free.

If you are having difficulty with the homework and after an hour of working on the same issue, you are making no progress, it is time to stop and seek help. In that hour you should have looked at the relevant documentation and performed numerous searches to try to resolve the problem. At that point, make a post on Piazza detailing the problem you are having and what you have learned. Spending several hours on the same problem will likely just ingrain bad habits and will likely result in more of a hack solution than an optimal solution.

You are expected to communicate frequently on Piazza and IRC. I reserve the right to make discussion required, if I do it will comprise a small portion of the assignment grade.

You will have to learn a good deal of material outside of the lectures. That is just the nature of web programming. You should get a solid understanding of the basics, but there are many options when it comes to web programming and you will have to read outside documentation to complete the assignments.

Grade Breakdown

Grade Evaluation:

Your final grade depends on 3 homework assignments, one how to guide, one final project and a final exam. All assignments have specific grading policy/rubric refer the assignment documents for it.

Homework assignments – Three assignments, 25% in total

- HW 1
  - A simple mobile web app
- HW 2
  - A cloud app
- HW 3
  - A native mobile app

How To Guide – 15%

- Describe how to use one library, API, feature, or tool that you discovered for mobile web, cloud, or native mobile development.
- This assignment will be delivered in two parts.
  - Part 1:
    - Planning and initial design document
  - Part 2:
    - Implementation
- Graded on completeness and clarity.

Project – 35%

- Create one application that includes:
  - A web service that accepts uploads of structured data files
  - An asynchronous computation that performs an analysis of uploaded data files
  - A native mobile app that enables users to upload data and view results of the analysis
  - One "cool feature" that takes advantage of 1 or more mobile hardware APIs (e.g., GPS, accelerometer, camera, etc.) as well as 1 or more cloud based APIs (e.g., image APIs, geolocation, search, etc.)
- The project will be delivered in two parts:
  - Part 1:
    Planning and initial design document
  - Part 2:
    Implementation
- Graded on completeness and quality

Final exam 25%

- Will be multiple choice
- Material from lectures will be covered

● If taking this course remotely, then plan ahead about how to be proctored
● No materials allowed during the exam.

More About the Final

The final is proctored. This means that you must sign up to have your final proctored and it must be taken within the final window which is listed on this syllabus. You should schedule this early in the term to ensure there is room at the proctoring center of your choice. If you need to take the final on a day outside of the final exam you need to get instructor approval first. This means you should do this within the drop period at the beginning of the term in case you are unable to find a suitable time. No leniency will be given if you ask for an extension within the last two weeks of the quarter.

Typical Grading Scale

A	>= 92 %
A-	90-91
B+	87-89
B	82-86
B-	80-81
C+	77-79
C	72-76
C-	70-71
D+	67-69
D	62-66
D-	60-61
F	<= 59

* REMINDER: A passing grade for core classes in CS is a C or above. A C-, 72 or below, is not a passing grade for CS majors.

Late Policy

Assignments lose 10% for every day that they are late. However, any assignment can be turned in prior to week 8 for up to 50% credit. The final exam must be taken on time. The final project may not be turned in late without prior authorization.

Code Sharing Policy

At no point will you get in trouble for sharing your code with others. Period. In fact, if you are not sharing code it will be difficult to get help when debugging your code and it will make getting discussion credit difficult if it is required. **If you use code from any source you must cite it. Other sources include but are not limited to: the lectures, other students, the internet or magic oracles.**

I reserve the right to make you explain your turned in code to me either in writing or a voice conversation. If you cite too much code from elsewhere, your odds of having to explain its working to me increase. There is no need to reinvent the wheel, but you need to know how the wheel works if you are going to use it.

Academic Dishonesty:

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.

b) It includes:

(i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.

(ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.

(iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).

(iv) TAMPERING - altering or interfering with evaluation instruments or documents.

(v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.

c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Students with Disabilities

Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at (541) 737-4098. Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should be aware of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as early as possible, and no later than the first week of the term.

Typical Schedule

Time period	Activities
Week 1	Start watching Unit 1 videos.
Week 2	Finish watching Unit 1 videos. **Submit homework 1 by end of Week 2 (4/13).**
Week 3	Start watching Unit 2 videos.
Week 4	Finish watching Unit 2 videos. **Submit homework 2 by end of Week 4 (4/27).**
Week 5	Start watching Unit 3 videos.
Week 6	Finish watching Unit 3 videos. **Submit homework 3 by end of Week 6 (5/11).**
Week 7	**Submit How-to Guide 1 by end of Week 7 (5/18).** Plan your project.
Week 8	Watch Unit 4 videos. Work on your project.
Week 9	Watch Unit 5 videos. Work on your project.
Week 10	Watch Unit 6 videos. Work on your project, **due by end of Week 10 (6/8).**
Post-week 10	**Proctored final exam occurs (6/8-6/11).**