Syllabus - COMP401 - Senior Project - Research

Spring 2015

1 Logistics

- **Where:** Center for Science and Business, Room 309
- **When:** Th, 11-11:50
- **Instructors:**

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- **Website:** `http://jlmayfield.github.io/MC-COMP401-402/`
- **Credits:** $\frac{1}{2}$ course credit

2 Course Content and Goals

The senior project is designed to be the culminating experience of a Computer Science major program. It calls upon students to draw on everything they have learned over the course of their studies. Students work in either small groups individually to plan and carry out a major research or development project.

COMP 401 is focused on developing a detailed proposal for the senior project. Students will take the semester to research topics surrounding their project and prepare themselves to immediately begin implementing their proposal the following spring. Through out the semester, students will make regular checkpoint presentations demonstrating their progress. At the end of the semester, students well present their proposed project to a general audience as well as prepare a poster highlighting the work they plan to carry out in the spring.

The overall goals are that:

- Students will plan a major computer science research or development project

- Students will prepare to undertake their project when they return in the spring by gaining working knowledge of the technology and previous work upon which their project relies
- Students will begin to form a understanding of the community of researchers and developers in which their work places them
- Students will begin to form a understanding of the impact that their current and future work will have on society at large

3 Attendance and Expectations

Students in this course are expected to be respectful of their peers and the instructor. As this course is comprised entirely of student presentations, it is crucial that you are always in class and always on time. Come prepared to listen, discuss, and present. Failure to arrive on time and be a productive member of the course will have a detrimental effect on your grade. Not only that, but it leaves a certain impression on the faculty from whom you'll soon want letters of recommendation for jobs.

4 Checkpoint Presentations

Students can expect to give a checkpoint presentation on a nearly weekly basis. In general, each checkpoint corresponds to a section of the final proposal. The schedule for checkpoints can be found below. You should refer to the proposal documents for more details about each checkpoint topic.

At each checkpoint presentation, you are expected to demonstrate progress towards understanding the week's topic as it relates to your project. These presentations are meant to be an opportunity to get feedback from your peers and the instructors. You understanding of the topic need not be complete and we expect you'll continue to flesh out details as the semester progresses. Presentations should be prepared ahead of time and should not take more than five to ten minutes.

5 Grades

At the completion of this course, the grade for both COMP401 and COMP402 is determined. Students will typically receive the same grade in both courses to reflect the work throughout the capstone project and not in one individual phase of the project. Grades will be determined based on the following items:

- Appropriateness of project difficulty (evaluated during COMP401)
- COMP401 checkpoints
- COMP401 Technical Presentation
- COMP401 Proposal Poster
- CMP401 Written Proposal
- COMP401 Proposal Presentation
- COMP402 Checkpoint Presentations
- COMP 402 Research Poster and Scholar's Day Participation
- COMP 402 Final Presentation
- A Completed Project and required components

More abstractly, what all of the above elements should reflect is a student's:

- effective use of technical and problem solving skills befitting a major in Computer Science

- professionalism
- ability to make informed, mature decisions as they relate to a larger-scale project
- understanding and appreciation of the computing disciplines

6 Schedule

Checkpoint presentations will occur on roughly a weekly basis. *This calendar is subject to change based on the circumstances of the course.*

Week	Dates	Assignments
1	1/12 - 1/16	Initial Meeting
2	1/19 - 1/23	Initial Concepts and Ideas
3	1/26 - 1/30	Initial Project Proposal
4	2/2 - 2/6	Background and History
5	2/9 - 2/13	Community & Stakeholders
6	2/16 - 2/20	Tools & Bibliography
7	2/23 - 2/27	Features & Key Research
8	3/2 - 3/6	
SPRING BREAK	3/9 - 3/13	
9	3/16 - 3/20	Pre-Tech Talk.
10	3/23 - 3/27	Technical Talk
11	3/30 - 4/3	Preliminary Design. EASTER BREAK (Friday).
12	4/6 - 4/10	EASTER BREAK (Monday). Final Design & Plan
13	4/13 - 4/17	
14	4/20 - 4/24	Pre-Proposal Wrap-Up
15	4/27 - 5/1	Proposal Presentation.
16	5/4 - 5/6	
Final's Week		

6.1 Course Engagement Expectations

The weekly workload for this course will vary by student but on average should be about 5-7 hours per week. While regular class meetings are scheduled for two hours a week, it is unlikely that we'll use all of that time each week. We therefore expect students to dedicate at least 4-6 hours a week towards the development of their project proposals. This time can include research, preliminary coding, writing, meeting with professors, and so forth.