CAPSTONE ORIENTATION

Spring/Summer 2018

April 2, 2018 to August 31, 2018

The PSU/CS Capstone Model

- Teams of 7-8 students – engineers + Team Lead
- Team Leads interview students and select who will be on their team
- Sponsors from around the community propose projects – teams select projects in week 6
- Teams begin working on their project on May 14, and have until the week of August 20 to complete them and have them evaluated by their sponsors – the Final Presentation is in the evening during the week of August 27-31 (Friday is the default)
- Mandatory presentation participation on June 11 and the week of August 27-31 (Friday is the default)

Admission Requirements

- CS300
- CS333
- CS350
- CS320
- Programming Intensive CS Elective or CS321
- Missing **one** of these requirements? Appeal
  - *Must be able to convince us that your **graduation** will be substantially delayed if you wait to take Capstone in the Fall – review your DARS, we will*
  - ***ALL** prerequisites must be complete in order to be allowed to register for CS470 in the Summer regardless of being admitted to CS469. Don't overwhelm yourself by trying to rush through courses you've had trouble with in the past.*

Skills for Developing Software *Products*

- Very few software products are built by a single person in the 21st century
- Teamwork skills
  - *Organizational/Coordination*
  - *Communication*
    - With the customer (external)
    - Within the team (internal)
- Planning/Documentation
- Technical – just-in-time learning instead of just-in-case
- Creativity/Problem Solving

Team Meetings

- At the core of team projects is coordinating and synchronizing with the rest of your team. This entails having regular meetings.
- Every team must have a weekly in-person meeting on Monday evenings. These meetings will take the place of class time, so there is no excuse to not attend them. There may also be additional meetings from time to time, arranged with mutual agreement of the team that team members will also be expected to attend.
- Once meetings are scheduled, team members are required to attend them, arrive on time, and participate. If a team member is going to be late, or something comes up that prevents the team member from attending, they must notify the team lead.

Schedule – *April 3 to August 31*

- Weeks 1-4
  - *Organization*
- Weeks 5-6
  - *Sponsor Presentations on April 30 @ 6:40PM*
  - *May 7 @ 6:40PM – Project request presentations*
- Weeks 7-11
  - *Teams work on developing the problem and planning the implementation*
  - ***June 11 @ 7:30PM – midterm project presentations***
- **Week 12 – Spring-Summer break**
- Weeks 13-21
  - *Teams implement their project*
- Weeks 22-23
  - *Project delivery, feedback and presentation*
  - ***Week of August 27-31 @ 7:30PM – final project presentations – Friday is the default***

Commitments

- You make a commitment to your team and your sponsor
  - *Delivering on your promises and pulling your weight*
  - *Showing up on time to meetings and team events*
  - *Participating in discussions*
  - *Accommodating each other's schedules*
  - *Presenting solutions, not problems*
  - *Helping each other – be a resource, not a roadblock*
  - *Abiding by team rules*

What Do These Commitments Mean?

- A Capstone student is expected to work a minimum of 9-12 hours per week over the life of the project. (Summer Term Capstone will be a ten-week (plus finals week) course offering, not eight weeks.) You can expect to put in about 200 hours of work once the project begins. Work is **weekly** with mandatory weekly standups.
- You must be available during the entire 23 week period (except for Spring-Summer break). This includes mandatory weekly team meetings on Monday evenings. If any lengthy absence is planned during the Capstone, you should wait for a later offering.
- Capstone will require significant out-of-class time, including out-of-class collaboration. You will need a reasonably flexible schedule to be able to accommodate this. Students must keep the Monday night Capstone class period available for the entire duration of the Capstone: this is when many team meetings and other activities will be held.
- You are required to attend and present at the Intermediate Project Presentation (end of first quarter) and the Final Project Presentation (end of second quarter). Students not attending this presentation will fail the course.
- All students will contribute to all aspects of their project. Students must be comfortable with programming, including potentially learning a new programming language, as well as with documentation and communication.
- You must be able to work in a group: to take and give direction as appropriate, and to be collegial and cooperative co-workers. Any incident of unprofessional behavior (racism, sexism/genderism, harassment, abuse, etc.) will result in immediate removal from Capstone with a failing grade.

The Performance Improvement Plan (PIP)

- When unacceptable behavior repeatedly occurs (for example, missing or being late for scheduled meetings, failure to follow team rules, etc.) the offender will be issued a Performance Improvement Plan.
- The Performance Improvement Plan clearly lays out the behavior that is occurring and the behavior the student must observe during a probationary period. For example, if a student repeatedly misses meetings or shows up late, they maybe asked to attend all meetings, on time, for the following six weeks. Failure to meet the expectation, will result in the student being awarded a “No Pass” for the Capstone, meaning they’ll have to take the next one (Fall/Winter).
- Each team will be required to have their weekly Team Meetings on Monday evenings when they would normally be in class, so there is no excuse for not being available on Mondays.

What We Need From You

- Barbara's info sheet/contract
- You being registered by March 1, 2018
- A copy of your resume once you are registered (I will send you a template) – I need it back no later than March 12, 2018
- If you are interested in being a Team Lead, let me know – it will require extra meetings and training sessions scheduled outside of class
- I recommend this text, especially if you aren't familiar with Agile Development:
  - *Head First Software Development: A Learner's Companion to Software Development by Dan Pilone (Author), Russ Miles (Author) published by O'Reilly - ISBN-10: 0596527357*
  - This is a good, understandable introduction to agile development and Amazon sells it used for $20.