

Syllabus and Projects

CSCI 4448/5448: Object-Oriented Analysis & Design

Lecture 3

Learning Objectives

- Students will be able to...
- Understand the class mechanics
- Consider the class projects

Your Class Staff for Fall 2020

Dwight Browne

Teaching Assistant



Saptarshi Mitra

Class Manager



Ji Zhao

Class Support Staff



The Class Staff (and I) are here for you. You can ask questions about anything class related, ask for help with debugging, etc. Don't hesitate to reach out if you need a hand.

COVID Impacts on Class

- Normally, I enjoy being on campus for class and for seeing you in person
- For Fall, I will not teach or hold office hours this semester in person – I will be very available by Zoom or Piazza or e-mail
 - If we must meet in person, we'll arrange for a safe space
- The Class Staff will largely interact with you remotely as well
- Right now the only reason to attend class in person is if you need to for residency or visa requirements
 - I will publish a list soon of which students can come to class on which days
- I will make allowances for impacts to submissions or participation due to COVID or other personal issues, just contact me as soon as possible
 - Note that you do NOT have to disclose the nature of any health issue
- Many of you will likely be interacting with your teammates over Zoom for projects
 - It can be more difficult than colocated teams but... it's a good skill to develop and it's a common situation in software development...
 - If you have communication issues for project work, see me or the class staff as soon as possible for help
- Be smart, careful, and safe

Projects – General

- Most projects in OOAD are intended to be done by two to three person teams. This term you must be on a team for assignments, no solo work.
 - Forming your team is up to you (use Piazza!)
 - Teams may only be two or three people – not 4, 5 is right out
- All projects in OOAD will require:
 - A Github source repository for code and readme documentation
 - We'll review Git a bit in class, but if you're new to it, find a tutorial!
 - Possibly a demonstration to me or the class staff
 - Depending on the project, there may be more or other deliverables to submit

Projects/Homework – Specific (subject to change)

1. OO definitions – 25 points
2. OO programming exercises – Java, Git – 50 Points
3. UML exercises, OO program – Java(?) – 75 Points
4. OO program – Java – 75 Points
5. Semester Project – Design – 100 Points
6. Semester Project – Interim Report, Demonstration – 75 Points
7. Semester Project – Final Report, Demonstration – 100 Points

Projects – Semester Project

The semester project subject for development is largely up to you and your team. It can be a web app, a mobile app, a game, a utility, a cloud-based application, an IoT device or system, etc.

Content is somewhat negotiable, but generally I'm looking for:

- Any OO language (or a non-OO language used in a clearly OO style, like C for instance)
- (G)UI development
- Data storage
- OO Pattern applications

If you would like to try to create a device or system of devices, I can provide single board computers or microprocessors (Raspberry Pi, Beaglebone, Arduino, etc.)

Also consider leveraging cloud elements from AWS, Google, or Azure – student accounts are available

More details and discussion as we move into the semester...

Graduate Research Project

For graduate (CSCI 5448) students only:

- A two or three person team, you will research or review OO- or pattern-related topics
- Deliverables (and points) will include
 - Topic Selection (10)
 - Topic Outline (25)
 - Peer Review (25)
 - Draft of Research Presentation (40)
 - Pecha Kucha summary Presentation (for class, 20 slides, 20 seconds per slide) (50)
 - Final Research Presentation (thoroughly researched, 40 slide minimum) (100)
 - Can include development of code examples
- The topic could include a language review, language comparisons, patterns reviews, object-oriented methods or principles, OO or other pattern libraries (web, architectural, etc.), or related book reviews
 - I am fairly open on the content of the submission if you have an area of interest or research you like, although topics must be reviewed and approved
 - You cannot directly duplicate submissions for other classes
- More details soon...

Other Work/Points

- Quizzes (now 200 points)
 - Ten 20-point Quizzes over the semester (on Canvas) – you'll have 3 to 4 days minimum to do them – usually 5 to 10 multiple answer or T/F questions – two attempts – keep highest grade
- Participation/Attendance (100 points):
 - Because of the online nature of the class, I will not be scoring attendance – you may attend the lecture in the class period – or watch the recorded video
 - I will post a weekly(-ish) topic question on Piazza
 - There is no set participation level required
 - At the end of the semester I will rank your Piazza participation in topic discussions, and you will be awarded points accordingly to your level of participation

Syllabus

You can find the Syllabus on the class Canvas site under Syllabus and Files

I'm going to walk you through the highlights, lets review it together...

Next Steps

- If you're staying in the class (which of course you should!)...
- Make sure you sign up for Piazza and Canvas notifications
- Get access to the OO Head First Patterns book
- If your Java or Git skills are a concern, you might want to review some tutorials...
- Start thinking about your 2-3 person team for class projects and (grad students) for the research project
- In upcoming classes, more OO elements and review to set the stage for starting pattern reviews
 - My goal is to get to the most important patterns before you start your semester projects at the midterm