

# 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 Spring 2022



← Dwight Browne, TA



← Roshan Nellore Prasad, class manager



Max Donovan, class manager →



Gayathri Padmanabhan, grader →

We 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, but for Spring 2022 we remain under CU's COVID rules – for at least the first two weeks, we will be holding class via Zoom only – no classroom meetings
- Once we get the all clear, I will be on campus – however, I will not still not hold office hours this semester in person, but I will be very available by Zoom or Piazza or e-mail
  - If we need to meet in person, you can make an appointment
- I will make allowances for impacts to submissions or participation due to COVID or other personal/medical issues, just contact me as soon as possible
  - Note that you do NOT have to disclose the nature of any health issue
- Even with some of us on-campus, many of you will likely be interacting with your teammates over Zoom for projects
  - It can be more difficult than co-located 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

- This Spring, the last six of seven projects in OOAD are intended to be done by two or three person teams
- You must be on a team for projects, no solo work (unless there's a real reason for it – in which case, see me)
- Forming your team is up to you (use Piazza and the “team-finder” folder!)
  - Teams may only be two or three people
  - Graduate students, your research project is also a two or three person effort, you may want to partner with someone different (another graduate student) for that work
- All projects in OOAD will require:
  - A private Github source repository for code and readme documentation
    - We'll review Git and Github 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 will be more/other deliverables to submit
- There will be something due for projects most Wednesdays this semester

# Projects/Homework – Specific (subject to change)

1. OO definitions – 25 points (this will be solo work)
2. OO programming exercises – Java – 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

For Spring, you will have deliverables on these projects almost every week

# Projects – Semester Project

The semester project (made up of projects 5, 6, and 7) has a subject for development that 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
- Required 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:

- Total of 250 points
- Performed by a two- or three-person team, you will research or review OO-related topics
- Deliverables (and points) will be due on Fridays (mostly) including
  - Topic Selection (20 points)
  - Draft Presentation (40 points)
  - Peer Review (40 points)
  - Updated/Final Presentation (100 points)
  - Pecha Kucha summary presentation for class (20 slides, 20 seconds per slide) (50 points)
    - Can be derived from the information in your final presentation
- Projects 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 shortly



# Other Work/Points

- Quizzes (200 points)
  - Eleven 20-point Quizzes over the semester (on Canvas)
    - Posted by Saturday noon
    - Usually, due the following Thursday
    - Usually, 5 to 10 multiple choice/answer questions
    - Two attempts – keep highest grade
    - Drop lowest quiz grade at end of semester
- ~~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 topic question on Piazza for you to respond to
  - There is no set participation level required
  - At the end of the semester, I will rank your Piazza participation in topic discussions with the rest of the class
  - 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 team for class projects (and grad students for the research project)
- In upcoming lectures, 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
- I am available
  - on Piazza at <http://piazza.com/colorado/spring2022/csci44485448/home>
  - by email at [bruce.r.montgomery@colorado.edu](mailto:bruce.r.montgomery@colorado.edu)
  - by appointment on Zoom at <https://brucem.appointlet.com>
  - and at office hours on Zoom – Monday and Wednesday 3 to 5 PM at <https://cuboulder.zoom.us/j/3844137608>