Computer Science Practicum

COMP 4100

Who am I?

- Dr. Barry Wittman
- Not Dr. Barry Whitman
- Education:
  - PhD and MS in Computer Science, Purdue University
  - BS in Computer Science, Morehouse College
- Hobbies:
  - Reading, writing
  - Enjoying ethnic cuisine
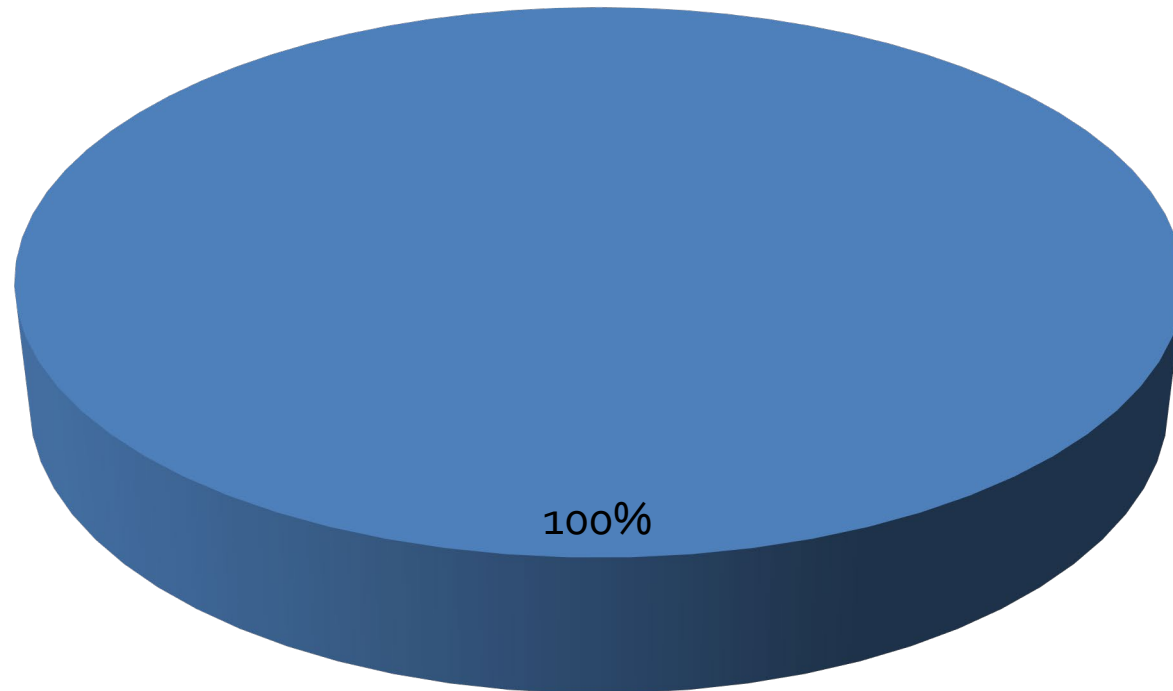 - DJing
  - Lockpicking
  - Stand-up comedy

How can you reach me?

- **E-mail:** `wittman1@otterbein.edu`
- **Office:** Art & Communication C123
- **Phone:** (614) 823-2944
- **Office hours:** MWF 10:15 – 11:15 a.m.,
  MW 3:00 – 4:00 p.m.,
  F 3:00 – 5:00 p.m.,
  T 10:00 – 11:15 a.m.,
  TR 2:00 – 4:00 p.m.,
  and by appointment
- **Website:**
  `http://faculty.otterbein.edu/wittman1/`

Who are you?

Major

■ Computer Science

100%

Why are we here?

- What's the purpose of this class?
- What do you want to get out of it?
- How would you like it to be different from COMP 3100?
- Do you want to be here?

Course Overview

Course focuses

- Agile software development
- Testing
- Meeting client requirements
- Working as a team

More information

- For more information, visit the webpage:
  `http://faculty.otterbein.edu/wittman1/comp4100`

- The webpage will contain:
  - The most current schedule
  - Notes available for download
  - Reminders about projects and assignments
  - Syllabus (you can request a printed copy if you like)
  - Detailed policies and guidelines

Projects

One giant project

- 75% of your grade is one giant project
- You will work on teams of four to five students
- Each team gets to pick its project
  - I am arranging possibilities, mostly with non-profit entities
  - If you have contacts in the non- or for-profit world, I am happy to consider them

Initial product backlog

- To start the Scrum process, you need to create an initial product backlog
- I will also ask for a product vision statement
- **Due: 01/24/2025**

Sprints

- Following a Scrum approach, the development in this course will happen in six two-week sprints on the following schedule

Sprint	Start Date	Due Date
1	1/27/2025	2/07/2025
2	2/10/2025	2/21/2025
3	2/24/2025	3/07/2025
4	3/17/2025	3/28/2025
5	3/31/2025	4/11/2025
6	4/14/2025	4/25/2025

Roles

- Each team will have a Product Owner
- Each team will have a Scrum Master
- All other team members will be Developers
- Because the teams are small, Product Owner and Scrum Master are **not** full-time positions
- The Product Owner and Scrum Master are expected to use 50% of their time for their own roles and working as Developers during the other 50% of their time

Role	Duties
Product Owner	- Communicating with the client - Updating PBIs based on client feedback - Documenting the sprint review
Scrum Master	- Making sure everyone has tasks assigned to them - Running story poker - Updating Trello as work gets done - Documenting the sprint retrospective
Developer	- Researching tools, platforms, and algorithms as needed - Implementing code - Writing tests

Sprint grading

- Sprints will be graded on the following criteria:

Criteria	Description	Source	Weight
User Stories Selected	Selecting high-priority user stories	Trello board	10%
User Stories Completed	Completing user stories selected for this sprint	Trello board	20%
Quality of Implementation	Writing effective and efficient code with good style and formatting	GitHub repository	30%
Testing	Providing appropriate tests for completed user stories	GitHub repository	10%
Client Satisfaction	Meeting the client's expectations	Direct communication between instructor and client	10%
Review	Review with client is done to assess state of the product and decide the direction for the next sprint	Sprint review document	10%
Retrospective	Team retrospective is done to assess what went well on this sprint and what could be done better in the future	Sprint retrospective document	10%

Product Owner grading

- 50% of the Product Owner grade will be the sprint grade
- The other 50% will be based on the following criteria:

Criteria	Description	Source	Weight
Client Communication	Communicating with the client throughout the sprint process	Direct communication between instructor and client	15%
Updating PBIs	Adding, removing, and refining PBIs based on client and team feedback	Direct communication between instructor and client as well as team feedback on Sprint Reflections	20%
Documenting Sprint Review	Reporting what the goal of the sprint was, why it was important, what stories were completed, and what stories were not completed	Sprint review document	15%

Scrum Master grading

- Like the Product Owner, 50% of the Scrum Master grade will be the sprint grade
- The other 50% will be based on the following criteria:

Criteria	Description	Source	Weight
Team Organization	Making sure that everyone on the team has something to work on and ways of overcoming challenges that are preventing work	Team feedback on sprint reflections	12.5%
Story Poker	Running the story poker session to select stories and estimate their point value	Team feedback on sprint reflections	12.5%
Updating Trello	Updating Trello to assign team members to user stories, to record story point values, and to mark stories done	Trello board and team feedback on Sprint Reflections	12.5%
Documenting Sprint Retrospective	Reporting what went well about the sprint, what went poorly, what new ideas the team has, and what actions the team will take to have better sprints in the future	Sprint retrospective document	12.5%

Turning in projects

- The files for each submission should be part of a tagged release on a private repository on GitHub (https://github.com/) created before the due date
- Each release is due before midnight on the last day of each sprint
- If the project is late, the group will receive a score of 0
- The tagged release must include a zipped archive containing the following deliverables:
  - Current source code, including tests
  - Compiled executables (if appropriate)
  - Sprint review document
  - Sprint retrospective document

Sprint review document

- A sprint review document is necessary for every sprint, but it does not have to be long
- It must list the following, in a readable format:
  - Goal of the sprint
  - Why the goal was important
  - What stories were fully completed
  - What stories were not completed
  - Client feedback

Sprint retrospective document

- Like the sprint review document, the sprint retrospective document does not have to be long or complicated
- It must list the following, in a readable format:
  - What about the sprint went well
  - What about the sprint went poorly
  - What new ideas the team has
  - What actions the team will take to have better sprints in the future

Sprint reflection forms

- In addition to the deliverables provided by the group for each sprint release, each team member must complete a sprint reflection form

  - A reflection form template is provided on the course website here
- These reflections are confidential and allow students to communicate to the instructor how teams are functioning
- Ratings on the sprint reflection form are used to weight the contributions to the sprint grade as well as provide feedback on the Product Owner and the Scrum Master
- Each sprint reflection is due by midnight on the Monday following the end of a sprint
- Sprint reflections are graded for completion only

Final presentation

- During the time scheduled for the final exam, your team must demo your project for the class and for the clients
- You should give a brief overview of your product, explain its purpose, show off its most impressive features, and take questions
- Your presentation should be polished and smooth and take about 10 minutes
- Use of a presentation tool such as PowerPoint is expected
- Team members who do not participate in the final presentation will score a 0 on it

Course Schedule

Tentative schedule

Week15	Starting	Topics	Notes
1	01/13/25	Team Selection	
2	01/20/25	Preparation	MLK, Initial Backlog Due
3	01/27/25	Sprint 1	
4	02/03/25	Sprint 1	
5	02/10/25	Sprint 2	
6	02/17/25	Sprint 2	
7	02/24/25	Sprint 3	
8	03/03/25	Sprint 3	
	03/10/25	**Spring Break**	
9	03/17/25	Sprint 4	
10	03/24/25	Sprint 4	
11	03/31/25	Sprint 5	
12	04/07/25	Sprint 5	
13	04/14/25	Sprint 6	Good Friday
14	04/21/25	Sprint 6	
15	04/28/25	Exam Week	Presentation During Final Exam

Policies

Grading breakdown

5%
- Initial Backlog

60%
- Sprints

10%
- Final Presentation

10%
- Sprint Reflections

15%
- Attendance
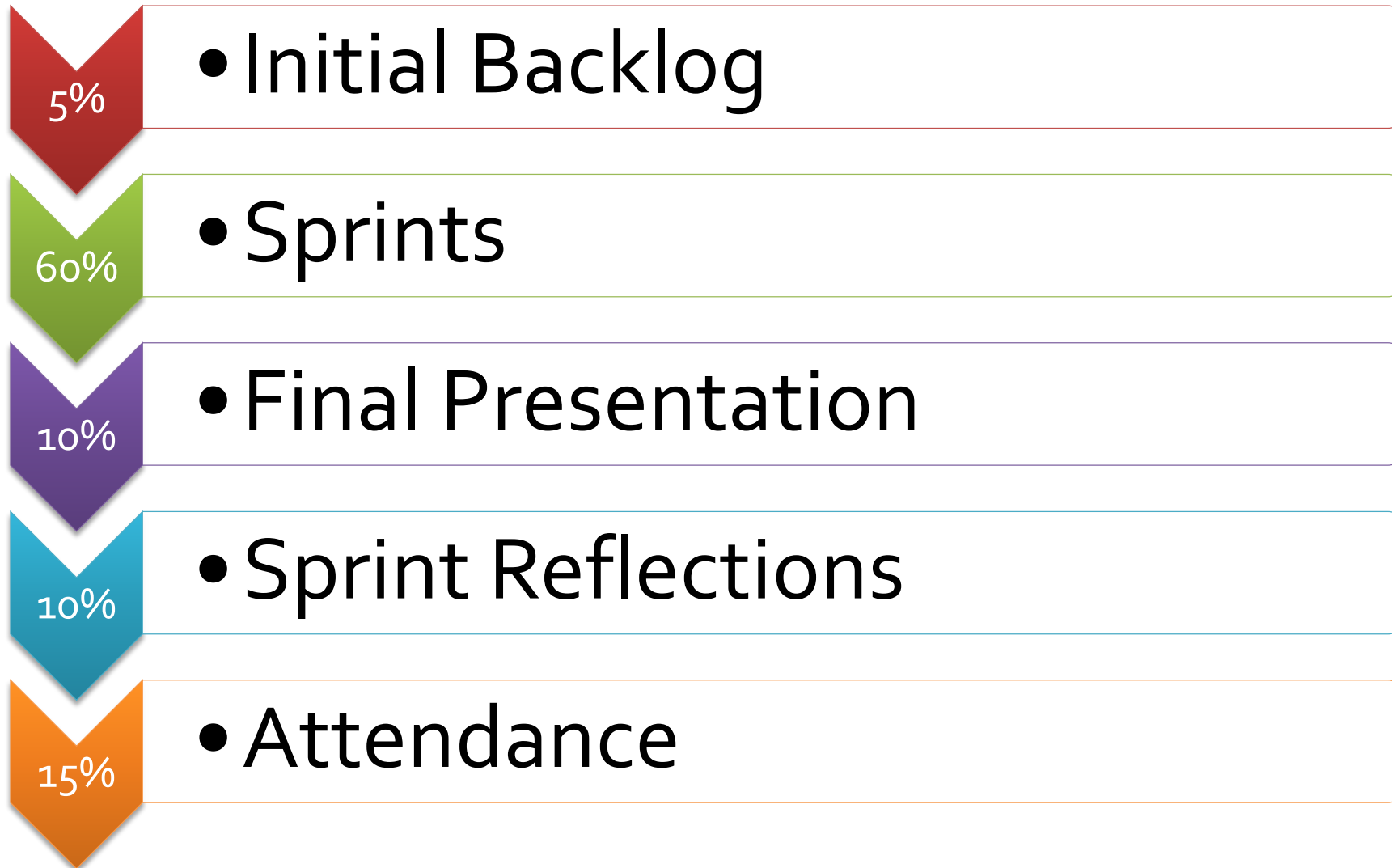
Grading scale

A	93-100	B-	80-82	D+	67-69
A-	90-92	C+	77-79	D	60-66
B+	87-89	C	73-76	F	0-59
B	83-86	C-	70-72		

Attendance

- You are expected to attend class
- Attendance is expected of every student at every class meeting
- Class meetings will be used to work on team projects
- Unexcused absences hurt the team and will be penalized

Academic dishonesty

- Don't cheat
- **First offense:**
  - I will try to give you a zero for the assignment, then lower your final letter grade for the course by one full grade
- **Second offense:**
  - I will try to fail you for the course and try to kick you out of Otterbein
- Refer to the syllabus for the school's policy
- Ask me if you have questions or concerns

AI statement

- Artificial Intelligence (AI) is any computer system designed to perform a cognitive or behavioral task historically believed to be one only humans can perform. Generative AI is a term used for recent AI systems that generate significant quantities of content such as text, images, audio, or video from a short input prompt, usually text.
- Because this course aims to provide a hands-on experience similar to working in industry, generative AI can be used for assistance with code. However, it is forbidden for any written assignments, including retrospectives, reflections, and reviews. Students have the responsibility to review all AI output for inaccuracies and bias, both of which are persistent problems with current tools. Students must provide attribution for any submitted content from a generative AI tool, including the name of the tool and date of access. Failure to do so shall be considered an act of academic dishonesty.

Disability Services

- The University has a continuing commitment to providing access and reasonable accommodations for students with disabilities, including mental health diagnoses and chronic or temporary medical conditions. Students who may need accommodations or would like referrals to explore a potential diagnosis are urged to contact Disability Services (DS) as soon as possible. DS will facilitate accommodations and assist the instructor in minimizing barriers to provide an accessible educational experience. Please contact DS at DisabilityServices@otterbein.edu. More info can also be found here. Your instructor is happy to discuss accommodations privately with you as well.

Housekeeping

Form teams!

- You are not required to be on the same teams as last semester
- But you are free to be
- Please use Brightspace to record the teams so that I have a record of it
- There will be three teams with four members and two teams with five

Available projects

1. Matching tool for scheduling Hebrew tutors with their students
2. Tool for tracking required activities for Otterbein professors
3. Tool for Education Department to record information for student teachers
4. Tool to scrape Banner to show which INST and Skills courses are still available
5. Tracking volunteers for Office of Student Engagement

Upcoming

Reminders

- Form teams
- Pick projects
- Contact clients as soon as possible