



OTTERBEIN  
UNIVERSITY

# Syllabus

## COMP 3100-01

### Software Engineering – Writing Intensive

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*Fall Semester 2024*

#### Basic Information

**Credits:** 3.0  
**Time:** **MWF** 3:00 - 3:55 p.m.  
**Location:** Point 113  
**Prerequisites:** COMP 2100

#### Instructor Information

**Name:** Dr. Barry Wittman  
**E-mail:** [wittman1@otterbein.edu](mailto:wittman1@otterbein.edu)  
**Office:** C123  
**Phone:** (614) 823-2944  
**Office hours:** **MWF** 9:00 – 10:15 a.m.  
**MWF** 1:45 – 2:45 p.m. (in C142)  
**W** 4:00 – 5:00 p.m.  
**TR** 10:00 – 11:30 a.m.  
**TR** 2:00 – 4:00 p.m.  
and by appointment

#### Text Book

David Bernstein and Christopher Fox  
***Introduction to Software Engineering***  
Preview edition provided free to students

## Course Catalog Description

Processes and practices for developing large software systems. Topics to be emphasized include development lifecycles, requirements, design, testing, verification, project management and professional codes of ethics. Most activities are team-oriented.

## Student Learning Outcomes

By the end of the course, students will be able to:

- I. Successfully develop and deploy an application in a team environment
- II. Apply practices of software development \*
- III. Describe and work with several software development models
- IV. Apply both traditional and object-oriented techniques for requirements analysis \*
- V. Explain how the development activities they have studied in several courses (programming, testing, design, and analysis) fit together into a software process
- VI. Use selected tools commonly used for development
- VII. Describe related practices such as team organization and project planning and management
- VIII. Effectively produce the written documents required to achieve the previous objectives \*
- IX. Employ the ethical and social responsibilities of software developers and computer scientists

\* All objectives marked with an asterisk (\*) have a related writing assignment to meet the WI requirement.

## Program Learning Outcomes

The Computer Science major has a set of 10 Student Learning Outcomes (SLOs). Work in this course contributes to the following SLOs:

5. Students can apply development practices and processes to a variety of problems.
8. Students can produce written documents describing project specifications and design.
9. Students can effectively collaborate in team projects.
10. Students recognize the unique ethical responsibilities of computer scientists and are familiar with the ACM Code of Ethics and Professional Conduct.

## Method for Determining Course Grade

The final grade for this course will depend upon the grades and scores earned on course components weighted as follows:

- 55%** Team projects
  - Tentative due dates:**
  - Software Requirements Specification (Draft) (5%):** 09/13/2024
  - Software Requirements Specification (Final) (5%):** 09/20/2024
  - Design Document (Draft) (5%):** 10/11/2024
  - Design Document (Final) (10%):** 10/21/2024
  - Baseline Functionality and Tests (15%):** 11/08/2024
  - Final Program and Documentation (15%):** 12/06/2024
- 5%** Attendance on work days
- 5%** Written reflections
- 5%** Pop quizzes
- 20%** Two equally weighted midterm exams
  - Exam 1:** Tentatively scheduled for 09/23/2024
  - Exam 2:** Tentatively scheduled for 10/30/2024
- 10%** **Final Exam:** Friday, 12/13/2024 from 2:45 – 4:45 p.m.

Grades will be computed by rounding numerical percentages to the nearest integer and applying the following table:

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

Grades for each project, assignment, quiz, and exam will be recorded in [Brightspace](#). Students may compute their current average by using these scores with the weights listed above.

## Attendance and Participation Policy

Attendance is expected of every student at every lecture. Students are responsible for all content covered in class as well as assigned book chapters. Students should come to class with their text books, having read the material to be covered that day. Students who have not prepared for class may be asked to leave. Due to their nature, pop quizzes cannot be made up.

Students are expected to attend in-person class sessions as indicated on the schedule. However, if a student is not feeling well, that student should not come to the in-person class session that day. To catch up on work, students should visit the instructor during office hours or another scheduled meeting time.

Except in the case of documented emergencies, exams cannot be made up afterwards. For excused absences, students must arrange to take the exam *before* the normally scheduled time. Arrangements should be made with the instructor at least two weeks prior to the scheduled time.

Attendance on scheduled work days will be taken. Unexcused absences on those days will score zeroes for the work days in question.

Students are expected to maintain an attitude of respect at all times toward their colleagues, the equipment, and the instructor. Students are expected to refrain from using technology for non-course related purposes during class time and will be penalized 1% of the final grade for each occurrence. Students who use offensive language or are otherwise disruptive of the classroom will be asked to leave.

## Expectations for Out-of-Class Work

### Projects

All projects are team projects in this course. For each project, all students must form teams of four or five. Students are permitted to select their own teams, which will be fixed for the entire semester. Students should select their teams through [Brightspace](#).

Teams are responsible for dividing their workload. Each member of the team will receive a grade for each project based on the overall grade, weighted by that member's participation. The files for each submission should be committed to a private repository on [GitHub](#) before the due date. Projects must **not** be stored in a public folder. If the project is late, the group will receive a score of 0. **If the project does not compile, the group will receive a score of 0.**

Projects will be graded based on the following criteria:

- |                                    |   |
|------------------------------------|---|
| 1. <b>Correctness:</b>             | Meeting the specification                             |
| 2. <b>Efficiency:</b>              | Efficiently using processor and memory resources      |
| 3. <b>Formatting:</b>              | Displaying the right answer according to instructions |
| 4. <b>Testing:</b>                 | Providing appropriate tests                           |
| 5. <b>Style and Documentation:</b> | Producing readable code with appropriate comments     |

Late projects will not be accepted.

### Written Reflections

All written reflections are to be done individually and are graded for completion only. Each reflection must be uploaded into [Brightspace](#) before 11:59 p.m. on the due date. Reflections submitted after the deadline will not be accepted. Written reflections must be turned in as a Word or PDF document.

## Academic Honesty

Academic dishonesty includes cheating, complicity, falsification, multiple submission, and plagiarism. To understand better what each of these kinds of dishonesty entails, see the full statement on Academic Dishonesty in the [Campus Life Handbook](#), beginning at the bottom of page 47.

All cases of suspected Academic Dishonesty will be forwarded to Academic Affairs. To learn more about the process, see the above cited section of the [Campus Life Handbook](#). Academic Dishonesty may result in automatic failure of the assignment or the course itself, or even suspension or expulsion proceedings.

You are plagiarizing when you:

- Copy material from a source without using quotation marks and proper citation.
- Follow the movement of the source, substituting words and sentences but keeping its meaning, without citing it.
- Lift phrases or terms from a source and embed them in your own prose without using quotation marks and proper citation.
- Borrow ideas (that are not common knowledge) from a source without proper citation.
- Turn in a paper wholly or partially written by someone else.

If you are uncertain about when and how to cite sources, or what is allowable in completing assignment and exams, please speak with your professor.

All projects must be completed by the students in a given team, without assistance from anyone other than the instructor. Written reflections must be completed individually. Students can discuss the course material with each other, but all work must be done individually or within the team, as appropriate. For projects, exams, assignments, and all other activities in the course, students are expected to act according to the official policy on academic dishonesty and the highest standards of personal integrity.

Although generative AI tools like ChatGPT are impressive, they must not be used to design any software or write any documents or reflections in this course. As in the real world, ChatGPT or similar tools may be consulted as a resource when trying to finish a difficult section of code; however, its use must be noted in the comments for that code.

The first infraction of academic honesty in this course will carry a penalty of a 0 for the project, reflection, or exam in question and a reduction of a full letter grade in the final grade. If a second infraction occurs, the students involved will fail the course, and the instructor will seek the maximum penalty possible under the University's regulations, up to and including expulsion.

## Statement on Credit Hour Definition/Expectation for Student Work

For each credit hour of classroom or direct faculty instruction, students are expected to engage in two hours of out-of-class course-related work (readings, homework, studying, project preparation, etc.). A three-credit-hour course requires six hours per week of out-of-class work. These expectations are the same for blended and online courses, with some or all of the direct faculty instruction occurring online instead of in a classroom.

## Nondiscrimination at Otterbein

Otterbein University is committed to providing a welcoming environment free from unlawful discrimination. To this end, the University prohibits any form of discrimination against any person on the basis of race, color, sex, gender, pregnancy, religion, creed, marital status, partnership status, age, sexual orientation, gender identity, gender expression, national origin, disability, military status, or any other legally protected status in its programs and activities. All Otterbein faculty and staff share in the responsibility to create a safe learning environment for all students and for the campus as a whole. Students who believe they have been discriminated against should contact the Office of Human Resources, (614) 823-1805 / [hr@otterbein.edu](mailto:hr@otterbein.edu).

Any person may report sexual harassment, sexual violence, dating violence, and stalking by contacting Julie Saker, Deputy Title IX Coordinator at (614) 823-1154 / [jsaker@otterbein.edu](mailto:jsaker@otterbein.edu).

If a student would prefer to share information about sexual harassment, sexual violence or discrimination to a *confidential* employee who does not have a reporting responsibility, they can contact the Counseling Center, (614) 823-1333 / [counseling@otterbein.edu](mailto:counseling@otterbein.edu), or the WGSRC Peer Advocates, [wgsrc@otterbein.edu](mailto:wgsrc@otterbein.edu).

Information about these policies can be found [here](#).

## 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](mailto:DisabilityServices@otterbein.edu). More info can also be found [here](#). Your instructor is happy to discuss accommodations privately with you as well.

## Counseling Services

Given the level of uncertainty in the world, many students might experience feelings of threat, fear, and uneasiness. For extra support – in the way of just being able to verbalize your feelings to an interested outsider, gaining some reassurance and validation of your feelings, making plans to move forward optimistically and safely – reach out to any staff. Otterbein staff want to provide not only respect but also verbal and emotional support and encouragement. The Counseling Center can be reached at (614) 823-1333. You can also call or text 988, the Suicide and Crisis Lifeline of Ohio, for 24/7 access to a mental health professional.

## Library Services

The Courtright Memorial Library provides a broad range of services and resources, from color printing and a game collection to 24/7 access to more than 220 scholarly databases and e-books [here](#). On-campus students can access in-person help, quiet study spaces, and open computer labs during the library's [open hours](#).

Students can also access the many e-textbooks on reserve by clicking the Course Reserves tab on the library [web page](#) or find help for a specific subject area by searching [LibGuides](#).

Need more help? Students can chat with a librarian by clicking the Ask Me tab on the right side of the library homepage. Students also may e-mail the library at [library@otterbein.edu](mailto:library@otterbein.edu). For in-depth research help, make an appointment for a virtual research consultation with your [personal librarian](#).

## Tentative Schedule

The following is a tentative schedule of the topics to be covered in each week. This schedule is subject to change as need dictates. Students will be informed of changes by the instructor in class. A schedule will be kept on the [course webpage](#).

Week	Starting	Topics	Chapters	Notes
1	08/26/24	Introduction and Git	1, notes	
2	09/02/24	Software Requirements	5	Labor Day
3	09/09/24	Software Processes	2	Draft Requirements Due
4	09/16/24	Scrum	3	Final Requirements Due
5	09/23/24	Software Quality Assurance	4	Exam 1
6	09/30/24	User Interaction Design and Software Engineering Design	6, 7	
7	10/07/24	Construction Techniques	8	Draft Design Document Due

<b>8</b>	10/14/24	Quality Assurance in Construction	9	October Break
<b>9</b>	10/21/24	System Testing and	10	Final Design Document Due Monday
<b>10</b>	10/28/24	Deployment	11	Exam 2
<b>11</b>	11/04/24	Task Identification and Effort Estimation	12	Baseline Functionality and Tests Due
<b>12</b>	11/11/24	Financial and Economic Planning	13	
<b>13</b>	11/18/24	Scheduling	14	
<b>14</b>	11/25/24	Execution and Control	15	Thanksgiving
<b>15</b>	12/02/24	Review	All	Final Project and Manual Due