



OTTERBEIN  
UNIVERSITY

# Syllabus

## COMP 3100-01

### Software Engineering – Writing Intensive

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*Fall Semester 2018*

#### Basic Information

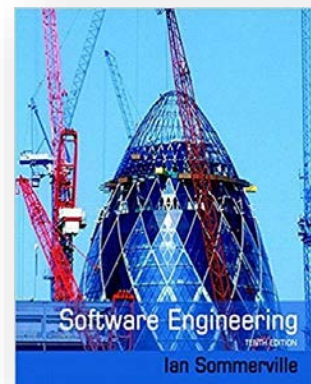
**Credits:** 3.0  
**Time:** MWF 1:50 - 2:45 p.m.  
**Location:** The Point 113  
**Prerequisites:** COMP 2600

#### Instructor Information

**Name:** Dr. Barry Wittman  
**E-mail:** [wittman1@otterbein.edu](mailto:wittman1@otterbein.edu)  
**Office:** The Point 105  
**Phone:** (614) 823-2944  
**Office hours:** MWF 1:00 – 1:50 p.m.,  
MWF 3:00 – 5:00 p.m.,  
TR 1:00 – 4:00 p.m.,  
and by appointment

#### Text Book

Ian Sommerville  
**Software Engineering**  
10<sup>th</sup> Edition, 2015, Pearson  
ISBN-10: 0133943038  
ISBN-13: 978-0133943030



## 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 the Computer Science Practicum project in a team environment
- II. Apply practices of Agile software development \*
- III. Describe and work with several other software development models \*
- IV. Apply both traditional and object-oriented techniques for requirements analysis \*
- V. Explain how the development activities you have studied in several course: 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 project planning and management, and team organization
- 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 11 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%** Four team projects  
**Tentative due dates:**  
**Initial Specification (10%):** 09/07/2018  
**Design Document (10%):** 10/05/2018  
**Baseline Functionality and Tests (15%):** 11/02/2018  
**Final Program and Documentation (20%):** 11/30/2018
- 10%** Written assignments
- 5%** Pop quizzes
- 20%** Two equally weighted midterm exams  
**Exam 1:** Tentatively scheduled for 09/24/2018  
**Exam 2:** Tentatively scheduled for 10/29/2018
- 10%** **Final Exam:** 2:00 – 3:45 p.m., 12/05/2018

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 [Blackboard](#). 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.

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 must be made with the instructor at least two weeks prior to the scheduled time.

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 the computers for non-course related purposes during class time and will be penalized 1% of the final grade for each occurrence. Cell phones and similar devices should be turned off before entering the classroom. Students who use offensive language, misuse computing facilities, 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 [Blackboard](#).

Teams are responsible for dividing their workload. Except under extreme circumstances, all members of the team will receive the same grade for each project. 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, with the following exception. Each team has 3 grace days. These grace days may be used together or separately to allow a 24-hour extension of the project deadline per grace day. A team wishing to use a grace day must inform the instructor via e-mail *before* the normal deadline.

### Written Assignments

All written assignments are to be done individually. Each assignment must be uploaded into [Blackboard](#) before 11:59pm on the due date. Assignments submitted after the deadline will not be accepted. Written assignments must be turned in as a LaTeX, Word, or PDF document. LaTeX is strongly encouraged and will earn extra credit. Grace days are not available for assignments.

In addition to office hours, students are encouraged to ask questions and discuss projects and assignments on Piazza.

## Academic Honesty

All academic work should be your own. Academic dishonesty (plagiarism and cheating) may result in automatic failure of the assignment or the course itself, and you will be referred to the Academic Affairs Office for suspension or expulsion proceedings.

You are plagiarizing when you:

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

The complete statement on Plagiarism, Cheating and Dishonesty can be found in the [Campus Life Handbook, page 33](#).

All projects must be completed by the students in a given team, without assistance from anyone other than the instructor. Written assignments 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, homework, 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.

The first infraction of academic honesty in this course will carry a penalty of a 0 for the project, assignment, 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.

## Learning Differences

If you have a documented learning difference please contact Kera McClain Manley, the Disability Services Coordinator, to arrange for whatever assistance you need. The Disability Services is located in Room #13 on the second floor of the Library in the Academic Support Center. You are welcome to consult with me privately to discuss your specific needs. For more information, contact Kera at [kmanley@otterbein.edu](mailto:kmanley@otterbein.edu), (614) 823-1618 or visit [Disability Services](#).

## 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 work (readings, homework, studying, project preparation, etc.). A three semester credit hour course requires six hours per week of out-of-class work.

## 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. Please know that as members of the campus community, all faculty and staff (other than those designated as confidential reporters) are designated as responsible employees and therefore have the duty to report any instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination. Students who want to report cases involving sexual misconduct should contact either Julie Saker, Deputy Title IX Coordinator at (614) 823-1154/[jsaker@otterbein.edu](mailto:jsaker@otterbein.edu) or Scott Fitzgerald, Title IX Coordinator, (614) 823-1130/[sfitzgerald@otterbein.edu](mailto:sfitzgerald@otterbein.edu). Students who believe they have been discriminated against should contact Scott Fitzgerald, Director of Human Resources, (614) 823-1130/[sfitzgerald@otterbein.edu](mailto:sfitzgerald@otterbein.edu). Information about these policies can be found at our [Title IX website](#) and our [Discrimination and Harassment Policy](#). If a student would prefer to share information about sexual harassment, sexual violence or discrimination to a confidential employee who does not have this reporting responsibility, a list of those individuals is here:

- University Counselors: Kathy Ryan & Caleb Tipple at [counseling@otterbein.edu](mailto:counseling@otterbein.edu) or (614) 823-1250
- University Chaplain: Judy Guion-Utsler at [jguionutsler@otterbein.edu](mailto:jguionutsler@otterbein.edu) or (614) 823-1409
- WGSRC Coordinator: Suzanne Ashworth at [sashworth@otterbein.edu](mailto:sashworth@otterbein.edu) or (614) 823-1028

## 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	08/20/18	Software Processes	2	
2	08/27/18	Agile Development	3	
3	09/03/18	Requirements Engineering	4	Initial Specification Due
4	09/10/18	Modeling and Design	5, 6	
5	09/17/18	Design and Implementation	7	
6	09/24/18	Testing	8	Exam 1
7	10/01/18	More Testing	9	Design Document Due
8	10/08/18	Reliability and Safety	11, 12	Project 2 Due
9	10/15/18	Security	13, 14	
10	10/22/18	Reuse and Components	15, 16	
11	10/29/18	Software as a Service	18	Baseline Functionality and Tests Due and Exam 2
12	11/05/18	Systems Engineering	19, 20	
13	11/12/18	Project Management	22, 23	
14	11/19/18	Quality	24	Thanksgiving
15	11/26/18	Review	All	Final Project Due