

**Course Name:** Software Engineering II (on campus)

**Course Number:** CS 362

**Credits:** 4

### **General Information**

**Instructor:** Ali Aburas, [aburasa@oregonstate.edu](mailto:aburasa@oregonstate.edu)

**Office Hours:** By appointment

**Office:** KEC 3119

### **Course Description**

This is a course about software testing. Software systems are complex and getting them right is extremely hard (if not impossible). You probably have seen software crashes and unresponsive screens. You might have thought about why your computer's operating system needs to be updated so frequently. Most of these problems are caused by faults in software, or better known as "software bugs." The goal of testing is to catch as many as possible bugs before shipping software systems. In this course, you will learn how to test software.

**Prerequisites:** CS 261, experience with object-oriented programming and data structures (e.g., CS 161, CS 162, CS 261). CS 361 is recommended but not required.

### **Learning Objectives**

At the completion of the course, students will be able to

- Apply automated tools such as make and Git in a realistic setting
- Describe the cost-benefit trade-offs inherent in the use of automated tools for building software and configuration management
- Describe several techniques for validating and measuring the quality of software
- Apply testing techniques, including blackbox and whitebox techniques, automatic testing activities, and regression testing

- Use appropriate techniques and tools, including a debugger, to locate program faults
- Describe several types of maintenance processes associated with correcting and enhancing software systems
- Participate effectively in a software inspection
- Participate effectively in a team environment

### **Textbooks (Optional)**

This class will aim to distill the most important points from a number of books/classes into takeaway lessons.

- Software Testing (2nd Edition) by Ron Patton.– Software Testing and Analysis: Process, Principles, and Technique by Mauro Pezze and Michal Young
- Lessons Learned in Software Testing, by Cem Kaner, James Bach, and Bret Pettichord
- Debugging by David J. Agans

### **Grading**

#### **General Grading Information**

- Scores for quizzes, assignments, and exams will be posted on Canvas.
- We will strive to return your assignments and grades for course activities to you within seven days of the due date.

### **Turning in coursework**

You will turn in all coursework items through **Canvas** and **GitHub** before 23:59 (Pacific Time Zone) on the date they are due (**generally Monday**), otherwise it will be marked late.

### **Weighting of Scores**

The scores you receive on the various graded tasks in the class will be weighted as follows:

**Quizzes - 10%**

- Quizzes will be given on a weekly basis. You are expected to take all quizzes.
- All submission is via **Canvas** and **GitHub**.

**Assignments - 50%**

- There are five assignments to be completed over the course of this class.
- Assignments include a mixture of written documents and code submissions.
- All submission is via **Canvas** and **GitHub**.

**Midterm Exam – 20%**

- There is one midterm exam for this course. There is **NO FINAL EXAM**.
- The midterm exam is designed to take 70-80 minutes (during the class).
- The exam is open note, open internet, and essay exams.
- The day and the date of the midterm exam will be announced

**Final Project - 20%**

- There is a final project designed to check for your cumulative understanding, which includes some of the work for assignments.
- Final Project Groups of 2 students must be formed by the end of 4th week.
- Use discussion board/emails to contact with your classmates.
- Instructor and TAs are hands-off in team formation, work division etc.

**Grading Scale**

Grade	Average
A	>92
A-	>90 - 92

B+	>87 - 90
B	>83 - 87
B-	>80 - 83
C+	>77 - 80
C	>73 - 77*
C-	>70 - 73
D+	>67 - 70
D	>63 - 67
D-	>60 - 63
F	<=60

**\* REMINDER: A passing grade for core classes in CS is a C or above.**

### Late Policy

- Assignments must be turned in by the due date and time in order to contribute to your grade.
- **Assignments will not be accepted late.** Unless otherwise noted, all assignments should be submitted via the canvas and class github repository.

### Regrade Policy

- If you have a problem with an assignment grade, you must contact the Instructor and TAs within **one week** of receiving your grade.

- Questions about assignment grades should be written and submitted to the Instructor and TAs via **email or Canvas Inbox message**.

## **Canvas**

This course will be delivered via Canvas where you will interact with your classmates and with your instructor. Within the course Canvas site you will access the learning materials, such as the syllabus, class discussions, assignments, projects, and quizzes. To preview how an online course works, visit the [Ecampus Course Demo](#). For technical assistance, please visit [Ecampus Technical Help](#).

## **Technical Assistance**

If you experience any errors or problems while in your online course, contact 24-7 Canvas Support through the Help link within Canvas. If you experience computer difficulties, need help downloading a browser or plug-in, or need assistance logging into a course, contact the IS Help Desk for assistance. You can call (541) 737-8787 or visit the [OSU IS Helpdesk](#) online.

## **Students with Disabilities**

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

## **Accessibility of Course Materials**

All materials used in this course are accessible. If you require accommodations please contact [Disability Access Services \(DAS\)](#).

## **Academic Integrity**

Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit [Student Conduct and Community Standards](#), or contact the office of Student Conduct and Mediation at 541-737-3656.

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

1. Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.
2. It includes:
  1. CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
  2. FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
  3. ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
  4. TAMPERING - altering or interfering with evaluation instruments or documents.
  5. PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but

is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.

3. Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

### **OSU Student Evaluation of Teaching**

Course evaluation results are extremely important and are used to help me improve this course and the learning experience of future students. Results from the 19 multiple choice questions are tabulated anonymously and go directly to instructors and department heads. Student comments on the open-ended questions are compiled and confidentially forwarded to each instructor, per OSU procedures. The online Student Evaluation of Teaching form will be available toward the end of each term, and you will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. You will log in to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.

### **Expectations for Student Conduct**

Student conduct is governed by the university's policies, as explained in the [Student Conduct Code](#).