Software Engineering (CS 454/554)  
Ref. No: 10838/10862  
Fall 2021

Course Objective

▪ To survey the field of software engineering and to study the methods, techniques, and theory of the state-of-the-art software development practice.

Class Homepage


Instructor

▪ Prof. Fei Xie  
  Office: FAB 120-10  
  Phone: (503) 725-2403  
  Email: xie@cs.pdx.edu  
  Homepage: [http://www.cs.pdx.edu/~xie](http://www.cs.pdx.edu/~xie)

Office Hours

▪ By appointment

Prerequisites:

▪ Interests in learning software engineering

Meeting Time and Location

▪ T/Th 12:00-1:50PM, EB 103 / Attend Anywhere  
  (You can attend this class anywhere remotely. You don't need to come to the classroom if you have concerns about health, safety, security or it is just more convenient. The class experiences will be exactly the same in classroom or remotely. All lectures are available through Zoom synchronously, lecture recordings are available after class, and all class assignments will be conducted online through D2L.)

Textbooks


Grading

▪ Exams: 50%  
  o Exam 1 (Take-home, 20%) will be announced on Oct. 21 and due on Oct. 28.  
  o Exam 2 (In-class, 30%) on Dec. 2.  

▪ Individual term project: 20%  
  o A list of topics for term projects will be announced on Nov. 4.
The term project report is due on Dec. 2.

**Group project and class participation:** 30%
- Group programming project will be carried out throughout the term.
- Project consists of four scrum sprint each of which is two weeks.

### Class Schedules

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Focuses</th>
<th>Topics</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1</td>
<td>Sep. 28</td>
<td>Introduction to Software Engineering</td>
<td>Introduction, Software Processes</td>
<td>Chapter 1, Chapter 2</td>
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<td></td>
<td>Sep. 30</td>
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<td>2</td>
<td>Oct. 5</td>
<td></td>
<td>Agile Software Development, Requirements Engineering (Group Project Kickoff)</td>
<td>Chapter 3, Chapter 4</td>
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<td>Oct. 7</td>
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<td>3</td>
<td>Oct. 12</td>
<td></td>
<td>System Modeling, Architectural Design</td>
<td>Chapter 5, Chapter 6</td>
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<td>Oct. 14</td>
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<tr>
<td>4</td>
<td>Oct. 19</td>
<td></td>
<td>Design and Implementation</td>
<td>Chapter 7</td>
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<td></td>
<td>Oct. 21</td>
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<td>5</td>
<td>Oct. 26</td>
<td>Advanced Software Engineering</td>
<td>Software Evolution (Group Project Sprint 1 Demo) (Take-home exam will be announced)</td>
<td>Chapter 8, Chapter 9</td>
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<td></td>
<td>Oct. 28</td>
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<tr>
<td>6</td>
<td>Nov. 2</td>
<td></td>
<td>Component-Based Software Engineering (Take-home exam due in class)</td>
<td>Chapter 15, Chapter 16</td>
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<td>Nov. 4</td>
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<td>7</td>
<td>Nov. 9</td>
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<td>Distributed Software Engineering</td>
<td>Chapter 17</td>
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<td>Nov. 11</td>
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<td>8</td>
<td>Nov. 16</td>
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<td>Service-oriented Software Engineering (Group Project Sprint 2 Demo) (Term project topics will be announced)</td>
<td>Chapter 18</td>
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<td>Nov. 18</td>
<td>Software Management</td>
<td>Project Management (Group Project Sprint 3 Demo)</td>
<td>Chapter 19, Chapter 22</td>
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<td>Nov. 23</td>
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<td>9</td>
<td>Nov. 25</td>
<td>Project Planning</td>
<td>Project Planning (Thanksgiving)</td>
<td>N/A</td>
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<td>Nov. 30</td>
<td>Quality Management</td>
<td>Quality Management (Group Project Sprint 4 Demo)</td>
<td>Chapter 24</td>
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<td>Dec. 2</td>
<td>In-class exam</td>
<td>In-class exam, Term project report due in class</td>
<td>N/A</td>
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(This schedule is subject to changes according to the need of the class. All suggested readings are from the recommended textbook, *Software Engineering* by Ian Sommerville)

### Academic Integrity

- Academic misconducts will be handled according to the rules of the Department of Computer Science, Maseeh College of Engineering and Computer Science, and Portland State University.
Classroom Requirements for All Students and Faculty Due to Covid-19

The University has established rules and policies to make the return to the classroom as safe as possible. It is required for everyone to follow all the Return to Campus rules and policies. To participate in this class, PSU requires students to comply with the following.

Masks Required at all Times in Classroom

- **Wear a mask or face covering indoors** at all times. Your mask or face covering must be properly worn (fully covering nose and mouth and tight fitting). Mesh masks, face shields, or face covering that incorporates a valve designed to facilitate easy exhalation are not acceptable. **Because a mask must be worn in the classroom, there should be no eating or drinking in the classroom.** If you have a medical condition or a disability that prevents you from wearing a mask or cloth face covering, you must obtain an accommodation from the [Disability Resource Center (DRC)](https://www.pdx.edu/drc) to be exempt from this requirement.
- CDC, State, and County guidance does not limit class size for in-person instruction or require physical distancing.

Vaccination

- Be vaccinated against COVID-19 and complete the [COVID-19 vaccination attestation](https://www.pdx.edu/drc) form. Those students with medical or nonmedical exemptions or who will not be on campus at all must complete the process described on “COVID-19 Vaccine Exemption Request Form” to establish those exemptions.

Health Check, Illness, Exposure or Positive Test for COVID-19

- Complete the [required self-check for COVID-19 symptoms before coming to campus each day](https://www.pdx.edu/drc).
- If you are feeling sick or have been exposed to COVID-19, do not come to campus. Call SHAC to discuss your symptoms and situation (503.725.2800). They will advise you on testing, quarantine, and when you can return to campus.
- If you test positive for COVID-19, [report your result to SHAC](https://www.pdx.edu/drc) and do not come to campus. SHAC will advise you on quarantine, notification of close contacts and when you can return to campus.
- Please notify me, (i.e. your instructor), should you need to miss a class period for any of these reasons so that we can discuss strategies to support your learning during this time.
- If I become ill or need to quarantine during the term, either I or the department chair will notify you via PSU email about my absence and how course instruction will continue.
Failure to Comply with Any of these Rules
As the instructor of this course, the University has given me the authority to require your compliance with these policies. If you do not comply with these requirements, I may ask you to leave the classroom or I may need to cancel the class session entirely.

In addition, failure to comply with these requirements may result in a referral to the Office of the Dean of Student Life to consider charges under PSU’s Code of Conduct. A student found to have violated a university rule (or rules) through the due process of student conduct might face disciplinary and educational sanctions (or consequences). For a complete list of sanctions, see Section 14 of the Student Code of Conduct & Responsibility.

Guidance May Change
Please note that the University rules, policies, and guidance may change at any time at the direction of the CDC, State, or County requirements. Please review the University’s main COVID-19 Response webpage and look for emails from the University on these topics.