

SFWE 491: Software Engineering Preceptor

Course Syllabus



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Office: Engineering Room 255 or via Zoom

Preceptors meets bi-weekly either in person or over synchronously via Zoom
(students will select / be assigned to a course they will be a preceptor for and must follow the schedule of associated class meetings with the instructor of record for the course)

Office Hours: Mon and Wed from 12pm – 1pm and 3pm – 4pm (AZ time zone)
Appointments can be made outside of normal office hours by contacting the instructor to schedule a time that is mutually convenient

Course Description

This course provides the opportunity for software engineering majors to work in engineering courses / labs with students taking ECE 175, ECE 275, SFWE 101, CSC 355, SFWE 301 or other similar courses (any of these courses may be referred to as **“host course”** in other parts of this syllabus). The students in this course, also known as **“preceptors”**, will help students in a host course set up their software development environments and tools, work on related course projects as defined by the host course instructor, and provide guidance and help with designing, implementing, debugging/integration testing software developed for those projects.

Preceptors are highly motivated students who have previously taken the given course (or a similar course). They serve a unique role because they provide support both in and out of the classroom. Preceptors do not serve as content experts, but rather function instead as student mentors and guides and as instructional assistants.

This course follows University of Arizona policy and guidelines as outlined in the following document: [University of Arizona Preceptorship Policies and Guidelines](#)

Learning Format:

This course is designed to allow advanced standing students to engage, share, and build a collaborative community with other preceptors as they assist/mentor students in courses that they have previously successfully completed. During meeting times, students will meet with the preceptor course coordinator who will share effective strategies in mentoring / coaching students in the classroom or labs that they are working in. Preceptors may also break into small teams to work on activities to share lessons learned and develop strategies for being effective in their preceptor roles.

Course Objectives:

During this course, students will be able to:

1. Assist students in completing software engineering projects/lab exercises in the course they are a preceptor for.
2. Provide effective ways of coaching and mentoring students to discover solutions to their projects without giving out specific answers/solutions.
3. Provide feedback to the host course instructor for students they have helped/mentored.
4. Share lessons learned and best practices with other preceptors.
5. Develop effective communication skills related to software product/project development and implementation.
6. Share their software development and programming knowledge with other students.

Expected Learning Outcomes:

Upon the completion of this course, students should be able to:

- 1) Assist / coach other software engineering students in identifying, formulating, and solving complex engineering problems in the courses they are providing preceptor support to. *[ABET Student Outcome 1]*
- 2) Assist / coach students in methods to analyze the functionality and performance of software application programs. *[ABET Student Outcomes 6 and 7]*
- 3) Describe and demonstrate software engineering principles effectively by working directly with students enrolled in the host class. *[ABET Student Outcome 3]*

- 4) Prepare written reports and/or verbal presentations to faculty for: the courses they are a preceptor for, the preceptor coordinator, and/or with other preceptors. *[ABET Student Outcome 3]*
- 5) Demonstrate both ethical and professional responsibilities of a software engineer. *[ABET Student Outcome 4]*
- 6) Assist students in building a foundation for academic success in the Software Engineering degree program. *[ABET Student Outcome 7]*

Course Prerequisites:

Department consent is required to enroll in this course.

Advanced standing and successful completion of the course with a minimum of a B that the student is a preceptor for.

As specified in the *University of Arizona Undergraduate Preceptorship Policies and Guidelines*, the preceptor must:

1. Be in good academic standing with the University of Arizona and have maintained at least a 2.25 grade point average at the University of Arizona prior to applying for a preceptorship.
2. Undergraduates cannot be a preceptor in more than one course per semester.
3. Undergraduates should be granted no more than two (2) semesters of preceptorship in their major field, with the possibility of an additional semester, contingent upon quality of classroom performance.

Course Format and Teaching Methods:

This course is structured around bi-weekly “check-ins” with the preceptor coordinator in addition to regularly attending the course that the student is a preceptor for. It will also include small group activities with other preceptors to enhance their leadership and mentoring skills. The required deliverables and weekly progress are outlined in the course schedule for both the host course the preceptor is working in **AND** this course D2L sites.

Preceptor Responsibilities: *(per University of Arizona Undergraduate Preceptorship Policies and Guidelines)*

The preceptor works with the host course instructor to ensure that students have adequate opportunities to develop, hone and demonstrate competence specific to the host course objectives and learning outcomes. The preceptor’s interaction with other students should facilitate student development. In assuming some responsibility for student development, the preceptor should facilitate those tasks and/or activities identified by the instructor as relevant to the course. Both in and outside of the classroom, preceptors should serve as a role model for other students.

The preceptor should maintain frequent communication with the preceptor coordinator or host course instructor. As an instructional assistant, preceptors should participate in planning and coordinating class experiences to meet the course objectives, should comply with program policies and procedures (e.g., abiding by FERPA confidentiality regulations with respect to students and grades), and attend applicable preceptor training classes or workshops. Comments and/or recommendations from preceptors to improve or enhance the experience are encouraged.

Preceptors who have access to student grades and records must complete FERPA training per university policy.

In-Class Assistance: Preceptors serve as additional classroom managers and mentors. Many instructors have preceptors sit throughout the lecture hall to model good classroom behavior and obtain feedback on what students do and do not understand. With guidance from their supervising instructor, preceptors are also able to lead small group discussions and laboratory experiments within the courses. Some instructors find that preceptors offer an efficient means for administering these activities. Preceptors are encouraged to work with their instructors in delivering presentations or in-class activities on either course material or specific skills necessary for success in the class (i.e., writing, math, time management).

Out-of-Class Assistance: Preceptors can increase the outlets for help with course material. They may hold office hours or one-on-one tutoring sessions with students to help them with course concepts or assignments. Since they are not the providers of knowledge, but merely guides, they can offer a type of assistance different from what the instructors offer. Preceptors do not necessarily know the answers, but their expertise as students allows them to offer personal strategies for learning the material and their own process for reaching the answer. In this respect, they also serve as mentors and help other students with skills applicable to future courses.

Finally, preceptors can also hold workshops to help students who may be deficient in certain skills (math, reading, writing, time management, etc.), which in turn helps even out the skill levels in many first and second-year courses.

Course Communications:

Announcements and important reminders will be regularly posted on D2L. Log in frequently to check for new announcements, reminders, and information related to the course.

Students are encouraged to reach out to the host instructor and preceptor coordinator frequently throughout the semester via email, phone call, text, or schedule an in-person or Zoom meeting. Every attempt will be made to respond to any questions or concerns within 24 hours, if possible (often sooner).

Textbooks:

There are no specific textbooks for this course.

Note: Students may require access to textbooks used in the courses they are a preceptor for. The preceptor should check with the host course instructor to acquire any required textbook(s).

Other Supplemental Readings / References:

Additional supplemental materials may be referenced and provided to students via D2L.

Course Schedule:

Because this course relies heavily on interactions and engagements with other engineering courses that the student is a preceptor for, there is not a specific schedule of predetermined topics that will be followed. However, the students will be required to participate in bi-weekly sharing with other preceptors and the SFWE 491 coordinator. The topics covered in each one of those bi-weekly discussions will be timely and vary to adapt to facilitate real time needs that preceptors have with different situations/scenarios/issues they are experiencing in the courses they are a preceptor for.

D2L Course Management System:

This course uses the University of Arizona's D2L course management system. Students are **required** to use D2L with this class and are encouraged to check our D2L class course space daily.

Preceptors are also encouraged to have D2L email forwarded to their primary University of Arizona email account. We will use D2L for course assignments, exams, content distribution, and important announcements. The University of Arizona's D2L system is available at: <http://D2L.arizona.edu>.

Course Assignments and Exams:

➤ **Undergraduate Preceptor Contract:**

In the first week of this course, the preceptor is **required** to complete the Undergraduate Preceptor Contract. This contract can be found at the following link: [Undergraduate Preceptor Contract](#).

(Note: In many cases the preceptor course assignments will be made prior to the course starting, but no later than the end of the first week of class). Failure to complete this contract will result in the Preceptor not being allowed to continue with preceptorship duties and result in a failing grade in the course.

➤ **Preceptor Training / Orientation:**

In the first week of this course, the preceptor is **required** to attend and complete the Preceptor training / orientation which will help the preceptor establish an effective basis to mentor and guide students in their assigned host course. Failure to complete this training will result in the

preceptor not being allowed to continue with preceptorship duties and result in a failing grade in the course.

➤ **FERPA Training:**

In the first week of this course, the preceptor is **required** to attend and complete the FERPA training. Failure to complete this training will result in the Preceptor not being allowed to continue with preceptorship duties and result in a failing grade in the course.

➤ **Student Reflection:**

The preceptor is required to submit a *Student Reflection Report* summarizing interactions he/she had with students in the host course that they are a preceptor for bi-weekly. At a minimum, the *Student Reflection* should include:

- 1) A summary of the projects/lab the preceptor helped with during that time period
- 2) Challenges the students enrolled in the host course had with the project / lab
- 3) How the preceptor helped students resolve any issues they were having with the project /lab
- 4) Lessons learned that can be shared with other preceptors and/or the preceptor coordinator

It is expected that students will submit the Student Reflection Report by the due dates posted on D2L each week.

➤ **Final Report:**

A final report is required and must include a summary of the major activities the student participate in, lessons learned, and key takeaways they had from their experience as a preceptor. A rubric will be provided on D2L and students should pay particular attention to the specific grading criteria contained in the rubric. ***The Final Report will be due on the last official day of class, per the semester / session schedule that the course is taken in.***

➤ **Preceptor Self-Assessment**

The preceptor is required to submit a *Preceptor Self-Assessment* summarizing individual learning outcomes of the preceptor's experience. ***The Preceptor Self-Assessment will be due on the last official day of class, per the semester / session schedule that the course is taken in.***

➤ **Undergraduate Preceptor Evaluation Form:**

The preceptor will complete the top portion of the Undergraduate Preceptor Evaluation Form [Undergraduate Preceptor Evaluation](#) and submit it to the host course instructor for completion.

- **Due to the nature of this course, there are no exams.**

Grading Scale and Policies:

Per University of Arizona policy, grades available for preceptorship courses are limited to S (superior), P (passing), F (failure), I (incomplete), W (withdraw). While it is possible for a preceptor to receive a failing grade for the course, S, P, F grades do not calculate into a student's grade-point-average.

The determination of a S, P, or F grade will be based on the following weighting of course assignments:

Required Training MUST be completed to receive a passing grade for this course

<i>Student Reflections:</i>	<i>30%</i>
<i>Class Participation (with other preceptors):</i>	<i>10%</i>
<i>Preceptor Evaluation (completed by Host Course Instructor):</i>	<i>30%</i>
<i>Preceptor Self-Assessment</i>	<i>10%</i>
<i>Final Report:</i>	<i>20%</i>
Total	100%

Rubrics will be posted on D2L for all written assignments.

The following scale will be used to award the final grades (*using standard math rounding rules*):

Percentage	Letter Grade
90% – 100%	S
70% – 89%	P
<70%	F

Course Time Zone:

All dates and times mentioned in this course represent Mountain Standard Time (Arizona), which is UTC-7 hours. Arizona does not observe Daylight Savings Time. You can use the following link to get the current local time in Tucson, Arizona: <http://www.timeanddate.com/worldclock/city.html?n=393>

Academic Policies and Institutional Resources

As a University of Arizona student, you are expected to become familiar with and abide by the university-wide policies and procedures. You can find complete, up-to-date information at: <https://academicaffairs.arizona.edu/syllabus-policies>.

Course Policies

Dispute of Grade Policy:

You can dispute any grade that you receive within two weeks that the grade has been awarded.

Incomplete (I) or Withdrawal (W):

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies, which are available at <http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete> and <http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal> respectively.

Classroom Behavior Policy:

To foster a positive learning environment, students and the instructor have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Online Collaboration/Netiquette:

In this course, you may communicate with the instructor and peers through a variety of tools such as discussion forums, email, and other forms of web conferencing. The following guidelines will enable everyone in the course to participate and collaborate in a productive, safe environment.

- Be professional, courteous, and respectful as you would in a physical classroom.
- Online communication lacks the nonverbal cues that provide much of the meaning and nuances in face- to-face conversations. Choose your words carefully, phrase your sentences clearly, and stay on topic.
- It is expected that students may disagree with the research presented or the opinions of their fellow classmates. To disagree is fine but to disparage others' views is unacceptable. All comments should be kept civil and thoughtful. Remember that this course abides by university policies regarding disruptive behavior: <http://policy.arizona.edu/education-and-student-affairs/disruptive-behavior-instructional-setting>
- Compose your messages and posts in a word processing tool and check your spelling and grammar before submitting your post / email.

Student Support:

The coordinator is available to assist with **any** issues that may arise during the preceptorship. Students may, at any time, email the instructor. This course also provides an ***Ask the Instructor***

discussion forum within the D2L environment. Preceptors are encouraged to post content-related questions to this forum at any time, especially for things that will benefit other preceptors. *(It is not recommended that you use this forum for individual questions that are specific to your work or performance in the class.)* This forum will be monitored on a regular basis and the instructor will respond in a timely fashion.

It is common for other students to participate in answering questions/disussions posted in the **Ask the Instructor** forum. You should feel free to contribute to the solution if you can provide knowledge or guidance related to the question.

The following are guidelines for requesting support:

- **General Course Questions:** Use the **Ask the Instructor** discussion forum for questions regarding course materials or policy.
- **Personal Course Questions:** Email the instructor to discuss grades or personal concern.
- **D2L Support Questions:** Email <mailto:d2l@arizona.edu>

Accommodations for Students with Disabilities:

At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, <https://drc.arizona.edu/>) to establish reasonable accommodations.

See <http://drc.arizona.edu/instructors/syllabus-statement>.

Library Support:

The University of Arizona Libraries provides the research tools you need at any time. For an abbreviated list of resources directly related to a specific course, select the **Library Tools** link (located in the Tools drop down on the left of the screen within the Course Navigation bar).

Course Grievance Policy:

In case of grievances with a course component or grading, students are encouraged to first try and resolve the issue with the instructors. If you feel the issue is not resolved satisfactorily, please send an email to <https://registrar.arizona.edu/faculty-staff-resources/grading/grading-policies/grade-appeal>.

Course Surveys and Evaluations:

Near the end of each semester / session, students will receive an invitation via email to complete an online course survey associated with this course administered by the Office of Instruction and Assessment thru the UA Student Course Survey (SCS) tool. Refer to the Student Support website associated with the Student Course Surveys (<https://scs.arizona.edu/content/5>).

Your feedback is extremely valuable and will be used to make changes and enhancements to the course to better meet student needs in the future.

Additional Resources for Students (recommended links):

- Student Assistance and Advocacy information is available at:
<http://deanofstudents.arizona.edu/student-assistance/students/student-assistance>
- **Confidentiality of Student Records:** <http://www.registrar.arizona.edu/ferpa/default.htm>