SFWE 201: Software Engineering Sophomore Colloquium Course Syllabus

Course Description

Units: 1

This course is a colloquium designed to help you explore different career opportunities for Software Engineering professionals. You will interact and learn from professional software engineers while exploring various roles that software engineers play in solving real engineering problems. The course helps you determine focus areas within the SFWE degree program related to specific application areas of interest. Additionally, you will prepare a professional technical resume highlighting your skills and experience. You will explore strategies on how to secure an internship position in diverse industries prior to completing your BS degree.

Instructor and Contact Information

Instructor Name: Sharon ONeal Email: sharononeal@arizona.edu Cell Phone: (520)822-4040 Office: Engineering Room 255

Office Hours:

Online via Zoom: By Request (AZ time zone)

• In-Office: Friday 10am – 12pm (AZ time zone) or by appointment

You are encouraged to reach out to your instructor frequently throughout the semester via email, phone, text, office hours, or a scheduled synchronous meeting (in-person or Zoom). Every attempt will be made to respond to questions and concerns that you may have within 24 hours.

Course Pre-/Co-requisites

Prior to enrolling in the course, you should have completed SFWE 101: Introduction to Software Engineering.

Course Format and Teaching Methods

This course is structured around weekly progress. It will include a combination of presentations, activities focused on experiential learning, discussions, and written assignments. The expected weekly progress is outlined in the course schedule. At a minimum, it is recommended that you keep up with coursework by following the outlined course schedule on D2L.

Course Objectives

During this course, you will:

- 1. Gain exposure to diverse software engineering applications areas and products.
- 2. Explore and explain relationships between Software Engineering and other engineering disciplines (i.e. Systems Engineering, Computer Engineering, and Computer Science).
- 3. Build professional networks, write resumes, and practice interviewing for future career opportunities, including internships, study abroad, etc.

4. Explore technical elective options available in the SFWE program and develop a preliminary roadmap and plan for the remainder of your undergraduate education and summer internship goals.

Expected Learning Outcomes

Upon completion of this course, you should be able to:

- 1. Summarize the diversity of careers in software engineering, outlining the potential career progression paths for different roles and the skills necessary for advancement. [ABET Student Outcome 1 of the Software Engineering Addendum]
- 2. Develop and refine a professional resume and LinkedIn profile to be used for future intern and career pursuits in software engineering.

[ABET Student Outcome 3]

3. Craft persuasive statements that succinctly communicate your value, skills, and experiences to potential employers.

[ABET Student Outcome 3]

 Analyze the relevance of various software engineers' educational background, success stories, and challenges in the context of your own career and life ambitions.

[ABET Student Outcome 1 of the Software Engineering Addendum]

5. Describe how diverse software applications produce solutions to meet specific objectives/needs in a variety of fields.

[ABET Student Outcome 2]

- 6. Discover ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts. [ABET Student Outcome 4]
- 7. Develop an ePortfolio showcasing projects and other artifacts related to projects worked on. [ABET Student Outcome 3]
- 8. Develop a plan of study that you can use to map out and select technical elective courses to better prepare you to achieve your short and long-term career goals/objectives.

 [ABET Student Outcome 7]

Textbooks & Software

Required Textbooks

None

Required Software

None

Assignments and Examinations

Class Participation and Engagement

Participating in this course is vital to the learning process. As such, timely participation in all activities and discussions is required.

If you are an online or Yuma student, your participation and engagement will be assessed via the discussions taking place around our guest lectures. These participation and engagement discussions will take place via Perusall.

If you are a Main Campus student, your participation and engagement will be noted during class. This includes attendance and contributions made in small-group and whole-class discussions.

Reflections

A student reflection report is due after each guest speaker providing:

- An overview of the speaker's education, professional experience, and current profession/job description *or* a summary of the key takeaways from other professional development discussions/topics covered in the course.
- A summary of the speaker's topic and key points covered.
- Identification of any specific information that is relevant to your career decisions.
- Any other observations of interest correlated to that module's materials and topics.

Additionally, you will complete and reflect on *one* of the following activities:

- Attend a career fair that is held either on campus or at an event outside of the college-sponsored career fairs.
- **Participate in a mock-interview** with the instructor or through <u>UArizona's Student Engagement & Career</u> Development center.
- Participate in a *real* engineering-based interview with an external company/organization to which you have applied for an internship, job, etc.

Each reflection should be at minimum one page in length, single spaced, font size 12. Rubrics will be used to evaluate the quality and comprehensiveness of your reflection. Submit your completed reflection to the D2L Assignment tool by the indicated due date.

Resume & LinkedIn Profile

You will develop and submit a professional resume that can be used to search for a summer internship or other professional position. Additionally, you will create a LinkedIn profile, including a professional appearing photo, and a list of your experience, education, and skills. You will have an opportunity to receive feedback from the instructor by submitting a draft resume prior to finalizing your resume. All components of this assignment will be submitted to the D2L Assignment tool (provide a link to your LinkedIn profile in the appropriate D2L assignment folder), and will be divided into three components:

- Draft Resume (20% of category)
- Final Resume (50% of category)
- LinkedIn Profile (30% of category)

ePortfolio

You will create an ePortfolio using a commercially available tool that showcases works and projects that you have completed to date, both in your formal education and in clubs or other activities. The ePortfolio is intended to be extensible to future works as well. A link to your ePortfolio will be submitted via the D2L Assignment tool. Rubrics will be used to evaluate the quality and comprehensiveness of your ePortfolio.

Plan of Study

A plan of study will be developed that details the courses you will take and the semester the courses are planned to be taken. This plan should include candidate SFWE technical electives (specific course should be listed). The

plan can be revised in future semesters but is intended to be a good initial roadmap. This plan will be submitted via the D2L Assignment tool. A rubric will be used to evaluate the quality and comprehensiveness of your Plan of Study.

Final Report

A final report is required and must include a summary statement of your career plan (at this point in time), planned technical electives and a summer internship strategy, and a summary of the speakers and topics that you found useful during the semester. Final reports are graded on a 100-point scale. A rubric will be provided on D2L and you should pay particular attention to the specific grading criteria contained in the rubric. The Final Report will be due to the D2L Assignment tool on the last official day of class per the semester or session schedule that the course is taken in.

Grade Distribution, Scale & Policies

The grading distribution for course assignments is as follows:

Class Participation and Engagement	20%
Reflections (Including Career Fair Report)	35%
Resume & LinkedIn Profile	10%
Draft = 2%	
Final resume = 5%	
LinkedIn Profile = 3%	
Engineering Ethics (Pre and Post Assessments)	5%
ePortfolio	20%
Plan of Study	5%
Final Report	5%
Total	100%

Late Work Policy

All assignments are due at the time that is specified in the course schedule and/or D2L content pages. Late assignments *will not* be accepted without prior approval by the instructor and will receive zero points.

Instructor Grading & Student Appeals Policy

All assignments will be graded by the instructor within one week of the submission deadline. Feedback will be posted to D2L in the form of (1) detailed rubrics and (2) individualized written remarks. This feedback is designed to help you improve your craft; questions regarding your assignment feedback is welcomed during Office Hours or via email.

To appeal a grade on any assignment, submit an email identifying the assignment, question, and justification for the appeal within two weeks of the grade being posted to D2L.

Grading Scale

The following scale will be used to award final grades:

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A 90-100%
B 80-89%
C 70-79%
D 60-69%
E less than 60%
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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#Withdrawal respectively.

Course Behavior Policy

To foster a positive learning environment, students and instructors 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.).

Safety on Campus and in the Classroom

For a list of emergency procedures for all types of incidents, please visit the website of the Critical Incident Response Team (CIRT): https://cirt.arizona.edu/case-emergency/overview.

Also watch the video available at

University Policies

Links to the following UA policies are available at, https://academicaffairs.arizona.edu/syllabus-policies:

- Absence and Class Participation Policies
- Threatening Behavior Policy
- Accessibility and Accommodations Policy
- Code of Academic Integrity
- Nondiscrimination and Anti-Harassment Policy
- Subject to Change Statement