

CSE 5325-001 SFWR ENG II: MGMT, MAIN & QA

Summer 2022

Instructor Information

Instructor:	Giridhar Amaravadi	GTAs: Cherukuri, Sushmitha
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Office Hours:	6:30 pm to 7 pm by appointment	GTAs: Mengfei Ren
Section Info:	CSE2535, Section 001	Email: mengfei.ren@mavs.uta.edu
Meeting Times:	Tuesday and Thursday	Office Hours: Thu 3:00 – 3:30 PM
	7:00 – 8:50 PM	Location: Online (Teams)
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Description of Course Content:

Issues and principles for software management; advanced managerial and support aspects of software projects, including processes, estimation techniques, planning and scheduling, risk analysis, metrics, and quality assurance. **Other topics include but are not limited to** configuration management, verification and validation, and maintenance, team project. This class has an in-depth industry focus balanced with Academic aspects. Schedule changes based on Guest speaker availability.

Pre-requisite courses and skills:

- Basics of software engineering
- Analytical problem-solving abilities
- Knowledge about software problems
- Software system design

Student Learning Outcomes:

- Students will be able to outline certain Real-world projects and apply people management strategies.
- Students will be able to estimate, cost, plan, schedule, and execute software projects.
- Students can review quality management, testing, and maintenance of software projects.

Required Textbooks and Other Course Materials (**The PDF version is available online**):

[Hans van Vliet: Software Engineering: Principles and Practice. 3rd edition. John Wiley & Sons, 2008.](#)

Descriptions of major assignments and examinations

Detailed description of assignments and examinations are shown in the following sections. The concrete dates will be announced in class

Technology Requirements

Webcam & Microphone, MS Teams, Working Internet Connection

Grading Information

Course grades will be based on the following:

Activity	Count	Total Score
Assignment	3	150
Participation	10	50
Final Project presentation	1	100
Mid Term	1	150
Final Exam	1	150
Quizzes	2	100
Discussion Board/ Interactions	6	150
Activity	1	50
Final Project	1	100
Total		1000

Notes:

- Groups will be divided by the TA and sent before the semester begins, the same group continues for the rest of the semester. Please make sure you work with TA to get assigned to a group if you miss the first class.
- Quizzes, midterms, and finals: Syllabus and other details are all included in the syllabus. Any modifications or additional details will be announced one week before the due date.
- Final grading:
 - 90% and above - A
 - 80% and above – B
 - 65% and above - C
 - Anything below 65% will be awarded with a D grade.
- Late penalty: -20% penalty for any submissions after due date and time.

Final Project Presentation:

Class students are divided into 6 groups in alphabetical order. The following are the topics will be presented in the class. Each group will be assigned a topic by GTA.

1. Mobility – Understanding an overview of real-world projects enabling mobility
 1. Introduction
 2. Mobility in different systems
 3. Application mobility
 4. Middleware mobility
2. SDLC – Advanced methods for cost estimation, planning, scheduling, and executing the software projects
 1. Requirement engineering
 2. Cost estimation
 3. Project planning and control
 4. Requirement engineering
 5. Modeling

6. Software Design
3. Advanced research about project management from an industry perspective
 1. Modern software development processes
 2. Software quality management
4. In-depth testing methods for software projects
 1. General software testing introduction
 2. Static analysis & Dynamic analysis
 3. Black-box testing & White-box testing
 4. Popular open-source testing tools introduction
5. Elaborated maintenance process for software projects.
 1. Maintenance categories
 2. Major challenges & Issues
 3. Reverse engineering
 4. Software evolution
6. Advanced people management techniques.
 1. People management
 2. Team organization

Each Group consists of 8-10 members that will be working on a group presentation; that is going to be presented on a specific date mentioned in the syllabus. Each student is advised to prepare for the whole presentation as anyone or two students can be asked to explain the whole content.

Here are the notes for slides preparation:

1. Presentation should be started, by referring to the textbook/textbook slides.
2. Based on subtopics found in a textbook, research for new developments in that field.
3. Presentation should include real-world examples.
4. Prepare at least 10 to a maximum of 15 slides with content.
5. Each member should ask 2-3 questions to the class based on the topic they chose to explain.
Note: The questions should be added to the slides with hidden answers. Animate to show the "Answer" after clicking enter.
6. Content should be presented for at least 30 mins.
7. Submit the presentation to the TA for review at least 2-3 days before the presenting date.

Presentation Grading Rubrics:

Category	Points
Interactiveness	10
Content Delivery	5
Actual Content	20
Equal Team Contribution	5
Answering the queries	20
Involvement of class in presentation	10
Examples used for presentation	20
Body Language and Audibility	10
Total	100

Note: You are expected to make sure the presentation involves students from the class in a healthy discussion where you reason out various case studies from your respective topic/subtopic.

Final Project:

This is a group project. The goal of this project is to become more knowledgeable about finding and using varied research sources in your chosen Computer Science field; develop your critical thinking skills and back up your points with evidence; become more adept at synthesizing information and developing informed views; discipline yourself to follow a scholarly research format to document in-text sources and a reference page (bibliography); compose a well-organized, clear, concise, research paper to expand your knowledge on a subject in your major.

The final project is a written version of the topic presentation. Collect the information on the topic you presented and make a document with the following instructions:

- Title Page – Should have the Title of the topic, course code, section, and names of all the team members
- Content – Should have all the content with titled sections. Eg: Introduction, Discussion, Conclusion etc.
- References – Add references towards the end of the document
- Contributions – Add the contribution of each team member to the document
- One submission per group
- The document will be expected to be in good alignment, consistent font and layout.
- Check canvas for the due date

Grading Rubric:

Category	Points
Title page	10
References	5
Section titles	5
Font, alignment, and layout	5
Spelling and grammar	5
Content	60
Team Contribution	10
Total	100

Assignments:

All assignments are **individual** and will be based on the topics we discuss in the class. The goal of the assignment is to make you apply your critical thinking and evaluate topic concepts in practical situations. Each assignment is worth 50 points.

For each assignment you need to choose a topic which falls under the given theme. After sufficient research, pick three articles which discuss about the chosen topic. One of them should be an introductory article and the other two comprised of discussion regarding various aspects of the topic.

Assignment format should include:

1. Brief introduction to the chosen topic and explain one out of the three articles.
2. Explain the main point of discussion in one of the articles.
3. Explain the main point of discussion in the second article.
4. Conclusion and your viewpoint on the subject after the two discussions.

Grading Rubric:

Category	Points
Section titles	3
References	3
Introduction	10
Discussion	10
Conclusion	15
Topic selection	3
Font, alignment, and layout	3
Spelling and grammar	3
Total	50

Note: Make sure you title the sections, accordingly, add references and maintain consistent formatting. **Last but not the least, submit on time!**

Quizzes:

There will be two pop-up quizzes during the semester. The goals of these quizzes are to help students learn the material in the course and to evaluate how well students have learned that material.

They are objective and each quiz is worth 100 points.

Grading Rubric:

Questions	Points	Time
10 x 2 marks	20	
10 x 3 marks	30	
20 questions	50	30 minutes

Mid Term:

This is conducted during the mid of the semester. The goal of this exam is to test the percentage of understanding of the material by the students. Mid Term is worth 150 points, its objective, and is conducted in the lockdown browser.

The syllabus for the mid-term will include:

1. First three class presentations. i.e., Mobility, SDLC, and Project Management.
2. Textbook slides covering Mobility, SDLC, and Project Management.

Grading Rubric:

Questions	Points	Time
10 x 6 marks	60	
10 x 5 marks	50	
10 x 4 marks	40	
30 questions	150	40 minutes

Final Exam:

The goal of the final exam is to test the percentage of understanding of the topics covered after mid-term. The final exam is objective and will be conducted in a lockdown browser. This is not a cumulative exam; it consists of all the syllabus after mid-term.

The final exam will cover,

- Compulsory guest lectures after mid-term.
- Group presentations on Testing, Maintenance and People management.
- Textbook slides covering Testing, Maintenance and People management.

Grading Rubric:

Questions	Points	Time
10 x 6 marks	60	
10 x 5 marks	50	
10 x 4 marks	40	
30 questions	150	40 minutes

Discussions and Interactions:

This is a semester-long activity that teaches you leadership/mentoring/empathy/social skills/Interactions. For working instructions refer to the **Lend an ear** document.

Attendance:

You are expected to attend all the lectures with your video on unless you are asked to turn it off. You will be given full 50 points if you attend at least 10 lectures across the semester.

Grading Rubric:

Category	Points
10 lectures x 5 points	50
Total	50

Expectations for Out-of-Class Study:

Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 9 hours per week of their own time in course-

related activities, including work on team deliverables, reading required materials, and completing assignments, preparing for exams, etc.

Grade Grievances:

Any appeal for a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog.

Course Schedule

Class #	Class Date	Class Activities/Lecture	Submission/Quiz
1	6/07/2022(Tue)	Introduction & Topic presentation	
2	6/09/2022(Thur)	Syllabus & Lend an ear	
3	6/14/2022(Tue)	Group presentation – 1-A (Mobility)	LAE report submission
4	6/16/2022(Thur)	Group presentation – 1-B (Mobility)	
5	6/21/2022(Tue)	Group presentation – 2-A (SDLC)	Assignment 1
6	6/23/2022(Thur)	Group presentation – 2-B (SDLC)	
7	6/28/2022(Tue)	Group Presentation – 3-A (Project Management)	Discussion – week 1, Quiz 1
8	6/30/2022(Thur)	Group Presentation – 3-B (Project management)	
9	7/05/2022(Tue)	Group Presentation – 4-A (Testing)	Discussion – week 2
10	7/07/2022(Thur)	Group Presentation – 4-B (Testing)	Mid-term Exam
11	7/12/2022(Tue)	Guest Lecture	Discussion – week 3, Assignment 2
12	7/14/2022(Thur)	Group Presentation – 5-A (Maintenance)	
13	7/19/2022(Tue)	Group Presentation – 5-B (Maintenance)	Discussion – week 4
14	7/21/2022(Thur)	Group Presentation – 6-A (People Management)	Quiz 2
15	7/26/2022(Tue)	Group Presentation – 6-B (People Management)	Discussion – week 5, Assignment 3
16	7/28/2022(Thur)	People Management Activity	Final Project Submission
17	8/02/2022(Tue)	Concluding day	Final Exam

Note: As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.

- GTA will be available on teams during office hours for any grades or course-related queries. Please don't email the professor with such questions before consulting TA.
- Submit any assignments given to you on canvas. Documents submitted by email cannot be considered for grading.
- Double check before submitting the documents. Please don't come back with reasons to resubmit after the due date.
- Assignments will be available till one day after the due date. But assignments submitted late are subject to a late penalty.
- Not being able to submit the assignments on time due to unavoidable reasons should be emailed to the TA before the due date.
- Clarify grade-related queries for individual assignments. No questions related to the total grade or addition of marks will be answered.
- Once the query session for an assignment is completed. The grades will not be revisited at the end of the semester.
- All assignments and homework will be uploaded onto canvas at the beginning of the semester. Complete them at your own pace but before the due date.

Institutional Information

UTA students are encouraged to review the below institutional policies and informational sections and reach out to the specific office with any questions. To view this institutional information, please visit the [Institutional Information \(Links to an external site.\)](https://resources.uta.edu/provost/course-related-info/institutional-policies.php) page (<https://resources.uta.edu/provost/course-related-info/institutional-policies.php>) which includes the following policies among others:

- **Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/aao/fao/> ([Links to an external site.](http://www.uta.edu/aao/fao/))).
- **Disability Accommodations:** UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for**

Students with Disabilities (OSD). Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting: **The Office for Students with Disabilities, (OSD)**uta.edu/disability (Links to an external site.) or calling 817-272-3364. **Counseling and Psychological Services, (CAPS)**www.uta.edu/caps/ (Links to an external site.) or calling 817-272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability (Links to an external site.) or by calling the Office for Students with Disabilities at (817) 272-3364.

- **Title IX Policy:** *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit [edu/eos](http://uta.edu/eos) (Links to an external site.). For information regarding Title IX, visit www.uta.edu/titleIX (Links to an external site.).*
- **Academic Integrity:** Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code: *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

- **Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs> (Links to an external site.).
- **Final Exam Schedule:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research

problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit the content to topics that have been previously covered; they may introduce new concepts as appropriate.

Additional Information

Face Covering Policy

While the use of face coverings on campus is no longer mandatory, all students and instructional staff are strongly encouraged to wear face coverings while they are on campus. This is particularly true inside buildings and within classrooms and labs where social distancing is not possible due to limited space. If a student needs accommodations to ensure social distancing in the classroom due to being at high risk they are encouraged to work directly with the Student Access and Resource Center to assist in these accommodations. If students need masks, they may obtain them at the Central Library, the E.H. Hereford University Center's front desk, or in their department.

Attendance: It's key to attend the class as there may be surprise assignments or Bonus points. At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I have decided that attendance at class meetings is not required but strongly encouraged.

Emergency Phone Numbers:

In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. Non-emergency number 817-272-3381

Library Information

Library Home Page.....	http://www.uta.edu/library (Links to an external site.)
Subject Guides.....	http://libguides.uta.edu (Links to an external site.)
Subject Librarians	http://www.uta.edu/library/help/subject-librarians.php (Links to an external site.)
Course Reserves	http://pulse.uta.edu/vwebv/enterCourseReserve.do (Links to an external site.)
Library Tutorials	http://www.uta.edu/library/help/tutorials.php (Links to an external site.)
Connecting from Off-Campus	http://libguides.uta.edu/offcampus (Links to an external site.)
Ask A Librarian.....	http://ask.uta.edu (Links to an external site.)

The subject librarian for your area can work with you to build a customized course page to support your class if you wish. For example, visit <http://libguides.uta.edu/os> (Links to an external site.) and <http://libguides.uta.edu/pols2311fm> (Links to an external site.) .

Research or General Library Help

Ask for Help

- [Academic Plaza Consultation Services](#) (Links to an external site.)(uta.edu/academic-plaza)
- [Ask Us](#) (Links to an external site.)(uta.edu/ (Links to an external site.))
- [Research Coaches](#) (Links to an external site.) (<http://libguides.uta.edu/researchcoach>)

Resources

- [Library Tutorials](#) (Links to an external site.)(uta.edu/how-to (Links to an external site.))
- [Subject and Course Research Guides](#) (Links to an external site.)(uta.edu (Links to an external site.))
- [Librarians by Subject](#) (Links to an external site.) (library.uta.edu/subject-librarians)
- [A to Z List of Library Databases](#) (Links to an external site.)(uta.edu/az.php)
- [Course Reserves](#) (Links to an external site.)(https://uta.summon.serialssolutions.com/#!/course_reserves)
- [Study Room Reservations](#) (Links to an external site.)(uta.edu/)