CSCI 359 01B System Analysis and Design

Fall 2026

INSTRUCTOR INFORMATION

Instructor: Afsana Rahman Mou
Office Location: N/A
Office Hours: Monday & Wednesday 10:00 am to 11:30 am
Office Phone: N/A
Office Fax: N/A
University Email Address: afsana.mou@tamuc.edu
Preferred Form of Communication**:** Email with the course name as prefix
Communication Response Time: within 1-2 business day

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required
Textbook: Systems Analysis and Design in a Changing World (7th Edition), 2016
Authors: John W. Satzinger, Robert B. Jackson, Stephen D. Burd
ISBN: 978-1-305-11720-4

Course contents will be shared on the course web page. A textbook is beneficial but not mandatory.

Software Required

It will be communicated on the course web page.

Optional Texts or Materials
Course materials should suffice in achieving the educational goals of this course.

Course Description

This course serves as the initial phase of a comprehensive capstone design project experience, integrating contemporary software engineering practices to equip students with the skills and knowledge necessary for modern software development. In this course, students will delve into traditional and object-oriented methodologies, gaining expertise in the analysis, design, and implementation of computer-based information systems. Furthermore, the curriculum will introduce students to crucial aspects of DevOps, microservices architecture, and containerization technologies to ensure they are well-versed in cutting-edge software development practices. Additionally, students will explore project management techniques tailored to software engineering projects, fostering a holistic understanding of the development lifecycle.

Student Learning Outcomes

1. Explain the phases and activities in the SDLC.
2. Conduct a feasibility analysis and create a project plan.
3. Gather, document, and model system requirements using use cases and process diagrams.
4. Design user interfaces, system inputs/outputs, and data structures.
5. Apply object-oriented analysis and design principles using UML.
6. Compare traditional, agile, and iterative development methodologies.
7. Collaborate on real-world system development projects through group work and presentation.

Minimal Technical Skills Needed

No prerequisites needed

Instructional Methods

- In-Person [every Monday and Wednesday]

Student Responsibilities or Tips for Success in the Course

Build a weekly habit of completing the lessons from the course materials on time every week. Foundational knowledge is essential. If any questions or problems in understanding, never wait for the next week as the instructor would explain some concepts based on the previous weeks. If the materials are hard to understand for some students, the instructor will create study groups to revise the concepts. Work proactively on the instructor's research direction to score the maximum grade in the team research project. The instructor will be able to help with the programming problems and research questions for the students.

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The *syllabus/schedule are subject to change.*

GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% or Below

Weights of the assessments in the calculation of the final letter grade:

Participation	10%
Assignment	15%
Two Midterm Exams	30%
Final Exam	25%
Project Presentation	20%
TOTAL	100%

Assessments

Assessments will be conducted online, including the two midterm exams, the final exam, and the team research project. .

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are the technical requirements

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:
https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

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ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu**.**

Note: Personal computer and internet connection problems do not excuse the requirement to complete all coursework in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's house, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please get in touch with your instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, don't hesitate to get in touch with Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

https://community.brightspace.com/support/s/contactsupport

Interaction with Instructor Statement

1. Students can meet after class hours
2. Discuss if anything is needed in the designated office hours
3. Email with the class name as prefix
4. Any additional needs for the students can be accommodated based on the request [if it is outside of office hours or outside of the class hours]

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

MAKEUP POLICY

There will be NO makeup exams/assignments in general. However, with prior notification and valid documents, makeup chances may be given to students under extreme circumstances, such as hospitalization, serious injury, death in the family, etc. No makeup allowed for other than exams and assignments.

COLLABORATION POLICY

Students are encouraged to discuss any of the assignments with each other, to the instructor, or to anyone else. However, any assistance must be limited to discussion of the problem and sketching general approaches to a solution. Each student must write out his or her solutions to the homework. Consulting another student's or group's solution is allowed for team research project but prohibited for exams and quizzes. These and any other form of collaboration on assignments constitute cheating. If you have any question about whether some activity would constitute cheating, please feel free to ask.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may require the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.
http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:
https://www.britannica.com/topic/netiquette

TAMUC Attendance

For more information about the attendance policy, please visit the Attendance webpage and Procedure 13.99.99.R0.01.
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholarly work. For more details and the definition of academic dishonesty, see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

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Undergraduate Student Academic Dishonesty Form

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf

Graduate Student Academic Dishonesty Form

http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Velma K. Waters Library Rm 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: Office of Student Disability Resources and Services
http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

The *syllabus/schedule are subject to change.*

Texas Senate Bill - 11 (Government Code 411.2031 et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web URL: http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses—report violations to the University Police Department at 903-886-5868 or 9-1-1.

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit **www.tamuc.edu/counsel**

Department or Accrediting Agency Required Content

COURSE OUTLINE / CALENDAR (Tentative)

Aug 24, 26	Week 1	Overview and introduction to the course
Aug 31, Sep 3	Week 2	Investigating System Requirements
Sep 7(labor day), Sep 9	Week 3	Identifying User Stories and Use Cases

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Sep 14, Sep 16	Week 4	Domain Modeling
Sep 21, Sep 23	Week 5	Use Case Modeling
Sep 23, Sep 30	Week 6	Midterm Test 1
Oct 5, Oct 7	Week 7	Foundation for System Design
Oct 12, Oct 14	Week 8	Defining the System Architecture
Oct 19, Oct 21	Week 9	Designing the User Interface
Oct 26, Oct 28	Week 10	Designing the Database
Nov 2, Nov 4	Week 11	Midterm Test 2
Nov 9, Nov 11	Week 12	Approaches to System Development
Nov 16, Nov 18	Week 13	Project Planning and Management
Nov 23, Nov 25(Thanksgiving)	Week 14	Project Presentation
Nov 30 , Dec 2	Week 15	Presentation & review

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