COSC 4375 / BCIS 4375 / CSCI 4385 / COSC 4395 - CAPSTONE

Syllabus

Catalog Description:

BCIS / COSC 4375 – Information Systems Design Project: An integrated perspective of the problems in today's information systems environment, concentration on contemporary design, methodologies, and considerations unique to users of computers and information systems. Prerequisites: GENB 3301 or COSC 3315, COSC 1337/1137 and COSC 3385.

CSCI 4385 – Information Technology Capstone: An integrated perspective of the problems in today's information systems environment, concentration on contemporary design, methodologies, and considerations unique to users of computers and information systems. Prerequisites: COSC 3315, COSC 3375 and COSC 3385.

COSC 4395 – Capstone Project: This course offers students the opportunity to integrate their knowledge of the undergraduate computer science curriculum by implementing a significant software system as part of a programming team. Prerequisites: COSC 3315, COSC 3325, COSC 4315, COSC 4336, COSC 4360 and COSC 4385

Text Books:
NONE

Class Times:
COSC4375 / CSCI4385 / COSC4395 Lecture: MW 4:05pm-5:20pm COB207

Grading Policy:

Project Proposal: 5%
Project Development (Presentations, Preliminary documents, Assignments): 35%,
Final Presentation + Documentation: 30%.
Ranking by Team/Instructor feedback: 10%
Ratliff Relay Participation/Instructor Feedback:20%

No late submissions will be accepted.

Late Submissions and Tests:
Assignments/Labs/Projects/Presentations will not be accepted after the due date.

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Homework Policy:
Group projects will be submitted by the appointed team lead to their Canvas portal. Files should all be submitted individually and not in a zip file, as the grading system cannot properly display zip file contents. This project can use AI to meet project requirements. All AI generated code must meet the “Use of Artificial Intelligence” policy stated below.

Academic Dishonesty: You are expected to do your own work. You may assist each other with general concepts, but direct assistance with a particular assignment or any attempts to gain an unfair academic advantage will not be tolerated. Cheating is considered a serious academic offense both by the department and the University. It may result in a failing grade from this course for all parties involved. The instructor reserves the right to ask you to explain any assignment that you turn in to judge if the work is actually yours.

Use of Artificial Intelligence (AI)

You can use AI such as Grok, ChatGPT, etc and websites such as Reddit, W3 Schools, etc. to find code examples for solutions that you "hit a brick wall" when trying to solve. When doing so, you MUST do the following for credit:

1. Comment above methods that you import (copy) from outside sources with the issue you were having, a description of this solution, and the source of the solution. If AI generated, include the prompt in the comments

2. Comment on each line of code in the imported method so I can see you understand what is happening (do not just have AI generate the comments. I may have you appear personally to explain how a method works and what individual lines do)

3. Try to rewrite the code into your own style with level-appropriate coding (code that another person at your programming level can easily interpret)

4. AI may not be used for tests or discussion questions.

Failure to follow the above rules will result in your work considered as "plagiarism" and receive a '0'. Repeated plagiarism may result in University disciplinary action.

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Contact Information:

Danny Morris
Office: COB315.08
Phone: 903-566-7403
E-mail: danielmorris@uttyler.edu
Office Hours: MW 9:00am – 12:00noon, 1:00pm - 3:45pm
TTH, 1:00pm-3:15pm
And by Appointment

Course Objectives:

● Work in a simulated business environment
● Enable students to synthesize and apply knowledge acquired throughout their coursework to a comprehensive project, demonstrating their understanding and skills in their chosen field.
● Develop students' abilities to identify, analyze, and address a specific problem or research question, using appropriate methodologies and tools.
● Teach students to plan, organize, and manage a significant project, including setting objectives, timelines, and resource management, ensuring successful completion within given constraints.
● Enhance students' abilities to communicate their ideas, findings, and solutions effectively through written reports, presentations, and other media, demonstrating professional-level skills in their discipline.
● Promote teamwork and collaboration, where applicable, and prepare students for professional practice by encouraging self-directed learning, ethical considerations, and the integration of feedback into their work.

Projects:

There will be one main, semester-long project, to be completed in teams.
● Each team will give presentations demonstrating the project progress.
● Teams will choose their own members (4-6) from among other class members.
● Teams will choose their own project.
Project should be:
1. Useful (Would others use it?)
2. Feasible (Can it be completed in time allotted?)
3. Marketable (Would others pay for it?))
● All code and files required for the projects must be submitted to Github.
● Peer evaluation will be conducted to track each team member's performance.
● Be ready for project status updates at any time.
● Team members who do not contribute appropriately to an assignment will receive a significantly lower grade for that assignment than the rest of that team, possibly "zero", at the discretion of the instructor.
● On Project workdays, I will rotate with each group to answer your questions and provide guidance on your project.

There will also be one group project for the Department of Engineering's Ratliff Relays.
- You will be assigned a team that spans different classes (Capstone, COSC4336, COSC1337) with members of varying levels of experience.
- This project accounts for 20% of your overall grade.

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Assignments:

- Each Phase will have group presentations.
- Each member is expected to present.
- Presentations are 5-10 minutes including time for QA.
- Further details will be provided along with the assignments.

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Course Timeline: Tentative (may change)

Course Time Room	COSC4375 / CSCI4385 / COSC4395 Section 001: MW 4:05pm-5:20pm COB207
8/24/2026	Intro, Team Assignment, Elevator Pitch (90 second), Intro to Ratliff Relays
8/31/2026	Project Selection, 5-minute Pitch Presentation
9/7/2026	**(No Class Monday – Labor Day)** SDLC Design, Project Tracking,
9/14/2026	Feasibility and Requirements Test Plans
9/21/2026	Presentation 1- Requirements, Requirements Doc
9/28/2026	User Interviews, Intellectual Property Rights
10/5/2026	Work Week, Updated Requirements Doc
10/12/2026	Full Project Status Update Presentation, Ratliff Relays
10/19/2026	Presentation 2 – Design (UI, modules, hardware, Etc)
10/26/2026	Design Considerations
11/2/2026	Maintenance and Delivery
11/9/026	Testing
11/16/2026	Presentation 3 – Testing, Maintenance
11/23/2026	**Thanksgiving Break**
11/30/2026	Project Fair (All Documentation Due)
12/7/2026	**Finals**

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Course Objectives:

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1. Choose the appropriate data structure for modeling a given problem.
2. Design, code, test, and debug simple event-driven programs that respond to user events.
3. Explore data input/output with files
4. Explain exception conditions raised during execution.
5. Demonstrate different forms of binding, visibility, scoping, and lifetime management.
6. Defend the importance of abstractions, especially with respect to programming-in the-large.
7. Design, implement, test, and debug simple programs in an object-oriented programming language.
8. Design, implement, and test the implementation of “is-a” relationships among objects using a class hierarchy and inheritance.
9. Explain the relationship between the static structure of the class and the dynamic structure of the instances of the class.
10. Describe how the class mechanism supports encapsulation and information hiding.
11. Explore computer graphics and graphical user interfaces

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Additional Policies:

Students Rights and Responsibilities
To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html

Grade Replacement/Forgiveness
If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to do so will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates will receive grade forgiveness (grade replacement) for only three course repeats; graduates, for two course repeats during his/her career at UT Tyler.

State-Mandated Course Drop Policy
Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the 12th day of class (See Schedule of Classes for the specific date).
Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance. Please contact the Registrar's Office if you have any questions.

Disability Services
If you have a disability, including a learning disability, for which you request disability support services/accommodation(s), please contact Ida MacDonald in the Disability Services office so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability services/accommodation(s) must provide appropriate documentation of his/her disability to the Disability Services counselor. In order to assure approved services the first week of class, diagnostic, prognostic, and prescriptive information should be received 30 days prior to the beginning of the semester services are requested. For more information, call or visit Disability Services located in the University Center, Room 3150. The telephone number is (903) 566-7079. Additional information may also be obtained at the following UT Tyler Web address: http://www.uttyler.edu/disabilityservices.

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities
If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement:
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do Not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.