



## **IE 495-001 Industrial System design SYLLABUS: Spring 2024**

### **INSTRUCTOR INFORMATION**

Instructor:	Sasan Khorasani
Office Location:	AG/ET 219
Office Hours:	Monday-10am-2:30pm
Office Phone:	9034688115
Office Fax:	9038865960
University Email Address:	sasan.khorasani@tamuc.edu
Preferred Form of Communication:	Email
Communication Response Time:	48 hours
Course Times:	TR112:40pm-1:55pm

### **COURSE INFORMATION**

IE 471 Plan course was the pre cursor for the IE 495 Industrial Systems Design. Each student enrolled in the spring IE 495 and is a member of a student design team. The objective of the course is for each team to execute the project plan as developed in a proposal (technical and management sections) for IE 471. The proposed improvement activity will be the systems design project planned for the IE 495 Industrial Systems Design course. The IE 471 proposal prepared is intended to present: the background for the problem, statement and description of the problem, the approach, the methodology and analytical support of the team's plans for the execution of the project. The proposal will include a project network schedule with the project work breakdown structure (WBS) and program plan including a quantitative labor cost estimate per team members per WBS task. The proposal includes all project deliverables with due dates. The proposal will outline the project organization with roles and responsibilities of each team member. These roles and responsibilities will be designated as tasks within the overall team project. These Project plans will be reviewed and revised, if necessary, during the first stage of this IE 495 System Design course. There will be four course deliverables for each team. These deliverables are 1. Development of System Requirements 2. Design Review of the Team's Design alternatives 3. Team Final Design Report and Presentation 4. Reporting the weekly status of the overall project with individual team members weekly status reports included. Using the project management tools available. These deliverables will be the components used for evaluation of the project execution and the student grades. The project subject is typical of the problems an industrial engineer would encounter during their career. The project team approach is very similar to the

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approach problems are addressed industry. That is, each team member brings to the team their individual expertise or knowledge that is needed. Their individual contributions may include tasks areas outside their specialty, but these tasks are required to be completed by the team. In this course, the course professor/industrial sponsors will act in advisory roles. In this course, the professor does not have the answers, but he is available for advice and assistance.

### **COURSE REFERENCE TEXT/MATERIALS**

FACILITIES PLANNING 3RD Edition, Tompkins et al, John Wiley, ISBN 0-471-41389-5

## **Student Learning Outcomes**

After completing this course:

Upon satisfactory completion of the course, the student as an industrial system designer will:

1. Recognize the need for and ability to engage in lifelong learning.
2. Demonstrate the role of teaming in an engineering environment.
3. Apply the engineering design process and application of quantitative tools as a foundation for demonstrating the proposed approach is a valid approach for the team's industrial design project.
4. Be able to define the physical requirements for the proposed design project.
5. Be able to relate system design requirements to specific work structure activity and prepare a schedule of the proposed personnel requirements in the approach.
6. Develop an overview of principles of system operations.
7. Be able to propose a model system design requirements for project process.
8. Be able to relate the proposed model components to implemental system level components.
9. Be able to layout, prepare and present the proposed system operations in a presentation with visual aids describing the system, final project proposal, highlighting the proposed system solution implementation.

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

1. Microsoft Word, Excel, PowerPoint.

### **Student Responsibilities or Tips for Success in the Course**

Students should attend the meeting and deliver the project reports in a timely manner.

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## GRADING

The final course grade will be based on the following factors. Class Design Project: Students are expected to participate in the analysis, concept, planning and the preparation efforts (including conceptualize, analysis to support the approach, planning, defining the resources for the project for the class project. Each student will be assigned to a team for the project. Each team will be assigned an engineering problem. The team will be expected to submit a project plan for the team designated project. Evaluation Factors: Values 1. Analysis to support the project plan approach to meeting the objectives 10% 2. Conceptual approach to the project 25% 3. Final Design and Report with Presentations to sponsor management 35% 4. Project status reporting (weekly, see deliverable #4) 10% 5. Individual student contribution (Professor, Industry Sponsors, Team members inputs) 20% Total 100%.

## 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 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](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>

## 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](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work 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 home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

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## **COMMUNICATION AND SUPPORT**

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

### **Technical Support**

If you are having technical difficulty with any part of Brightspace, please contact 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**

The instructor will response to your questions on D2L tools within 24 hours. For urgent questions, and for questions that are not answered within 24 hours, please prefer e-mail correspondence.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

One day late assignment is accepted with a 15% grade deduction; after this, no assignment will be accepted.

Assignments and labs will be given to support the instructional material (homework assignment). Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice. Students will have an ability to communicate effectively.

There will be three exams. Students will apply statistics to solve applied engineering problems. Exams will be used to assess a student's knowledge and skills related to applied statistics concepts.

The student project is devised to make students utilize their knowledge to solve real world problems. The types of projects will be left up to the student teams. The final report should be comprehensive, should describe methods used, and should show and illustrate the improvements and the final solution. A detail written procedure will be provided at the time of team member formation.

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## **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for 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 scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)  
[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>

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<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](mailto: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**

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.

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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.

## **Department or Accrediting Agency Required Content**

### **COURSE OUTLINE / CALENDAR**

#### **COURSE MILESTONES SCHEDULE:**

**JAN 11 First In-class meeting**

**JAN 31 As-Is Model results submission.**

**MAR 30 To-Be Model presentation.**

**APR 20 Final draft Submission**

**APR 27 Revised draft Submission**

**MAY4-7 Project Presentation**

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