IE 471.001 Planning for Industrial System Design

COURSE SYLLABUS: Fall 2025

INSTRUCTOR INFORMATION

Instructor: Paul R. McCright, PhD – Instructor
Office Location: Charles Austin Engineering Technology Bldg. (Ag/IT), 213B
Office Hours: Mon/Wed/Thurs: 1:30-3:30 or by appointment
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Preferred Communications: Email
Usual Response Time: 4-6 Hours

COURSE INFORMATION

Textbook Required: The Team Handbook, 3rd Peter R. Scholtes, Brian L. Joiner, Barbara Streibel, Oriel Incorporated ISBN 1-884731-266-0 February 2003
Software Required:
Microsoft word, Excel, and PowerPoint

Course Description

This course is a precursor for **IE 495**. Each student will enroll the following spring in **IE 495** and as member of a student team. The objective of the course is for each team to prepare a proposal (technical and management sections) to outline the approach and methodology that the team plans to follow in working with industry sponsors on real-world industrial engineering process improvement activities. The proposed improvement activity will be the systems design project planned for the following spring semester in **IE 495** Industrial Systems Design. The proposal prepared during this class 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. Prerequisites: **IE 313** with a minimum grade of C, Senior Classification, IE Majors only, Course must be scheduled in the fall semester prior to the student's **IE 495** enrollment in the final spring semester and Instructor's consent.

Student Learning Outcomes

Upon completion of this course:

1. The student will have an understanding of professional and ethical responsibility.
2. The student will be able to perform motion study, time study, work sampling, and performance rating.
3. The student will have an understanding of manufacturing systems, its components, and the impact of engineering solutions.
4. The student will have ability to design a system, component, or process to meet desired needs.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

1. A scientific calculator for exams.
2. Microsoft Word, Excel, PowerPoint.

Instructional Methods

This course utilizes readings, lectures, discussions, and assignments to assist students in achieving the course learning outcomes. A term project is required and is the primary basis for judging student success.

Student Responsibilities or Tips for Success in the Course

1. Students are responsible to know the contents of the syllabus, including amendments that may be made during the semester.
2. Students are responsible for knowing all deadlines and meeting them throughout the semester.
3. Nothing contributes to success like good attendance and personal involvement in the course throughout the semester. I have seen it over and over again. Students with poor attendance do not learn as much and make lower grades than those who attend class regularly.

The *syllabus/schedule are subject to change.*

4. Whenever you have difficulty understanding concepts, techniques, or assignments, do not be shy about asking the instructor for help. (That's one of the instructor's key responsibilities.)
5. Maintain a professional attitude whenever interacting with the instructor, classmates, or visitors to the course.
6. Pay particular attention to any written work submitted on assignments as spelling, punctuation, and grammar are always considered in assigning grades.

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.

Assignments	10%
Weekly Effort	20%
Interim Project Reports	20%
Final Written Project Report	25%
Final Project Presentation	25%
TOTAL	100%

Assessments

The assessment criteria for the stated student learning outcomes will include certain assignments, a weekly effort report, several interim project reports, a final written project report, and a final project presentation. **Note that a majority of the course grade is determined from group efforts. Adjustments to the group grade will be made when participation, effort, communication with other group members, or professionalism is judged to be inadequate and detrimental to the group effort.**

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

Zoom Video Conferencing Tool
https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

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 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 ETAMU campus open computer lab, etc.

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 respond to your questions on D2L tools within 24 hours if possible. For urgent questions, and for questions that are not answered within 24 hours, please use e-mail correspondence.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

1. Late assignments will be accepted up to 24-hours after due date with a 15% grade deduction; after this, no assignment will be accepted.
2. You will be expected to do all the readings throughout the semester.
3. Individual weekly reports will be required giving your activity and effort for the preceding week. A required format will be provided.
4. There will be one design assignment and it will be a group project constituting the majority of your course grade.
5. Individuals may be fired from the group effort for lack of participation. This will likely result in a failure in the course. Procedures will be provided for how a firing can be documented.

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

ETAMU 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 East Texas A&M University 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

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
East Texas A&M University
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

East Texas A&M University 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.

The *syllabus/schedule are subject to change.*

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University 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 East Texas A&M University 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.

East Texas A&M University Supports Students' Mental Health

The Counseling Center at East Texas A&M, 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**

AI Use in Courses

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements

and follow their instructors 'guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

In this course, AI is allowed with the following guidelines:

1. AI may be used to generate an outline for a paper or to generate ideas for inclusion. For example, to determine the full range of fuel sources for the generation of electricity or to obtain a list of the countries in Africa.
2. If used, the AI application must be listed in the Reference list as a source.
3. If used, include an Appendix after your Reference page showing the exact prompt given to the AI app and its full response.
4. Remember, AI has a tendency to invent references, so you need to check all references carefully to be sure they are legitimate. During the grading process, references are routinely checked, so you need to check them first.
5. Generally, it is not okay to use the paragraphs generated by AI, although like any source, you may paraphrase a particularly important point or actually quote the source. Be careful with this. A quote of more than about 40-50 words can indicate laziness on the part of the author.

Department or Accrediting Agency Required Content

This course addresses ABET Student Learning Outcome 6: An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

COURSE OUTLINE / CALENDAR

Week	Begins	Topics
1	8/26/2025	Course Orientation, Team Assignment
2	9/3/2025	Company Visit, Rough Project Scope
3	9/8/2025	Project Description and Project Scope
4	9/15/2025	Team Professionalism

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5	9/22/2025	Writing Resources Including AI
6	9/29/2025	Project Methodology
7	10/6/2025	Interim Report: Description, Scope, Methods
8	10/13/2025	Plan for Completion of Project
9	10/20/2025	Project Management Items
10	10/27/2025	Presentation of Project Organizational Plans
11	11/3/2025	Notes on Public Speaking for Engineers
12	11/10/2025	Extemporaneous Speaking Practice
13	11/17/2025	Teamwork
14	11/24/2025	Proposal Q&A
15	12/1/2025	Submission of Final Project Proposal
16	12/8/2025	Presentation of Final Project Proposal