IE 403.001 – Human Factors Engineering

COURSE SYLLABUS: Fall 2024

INSTRUCTOR INFORMATION

Instructor: Dr. Anika Jannat Rimu, Assistant Professor
Office Hours: MW 10:00-12:00
Office Phone: 903-886-5462
University Email Address: Anika.Rimu@tamuc.edu
Preferred Communications: Email
Usual Response Time: 24 Hours

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook Required
Lehto, M. R. and Landry, S. J. (2012) Introduction to Human Factors and Ergonomics for Engineers, 2nd edition, CRC Press (ISBN- 978-1439853948).

Software Required
- Microsoft Word, Excel, and PowerPoint.

Course Description

The emphasis of this course is the design of the human-system interface. The principles of the life sciences, engineering, and mathematics are applied to the investigation of existing and proposed socio-technical systems. Methods for the reduction of fatigue and human error are taught.

Prerequisites: IE 211 (or equivalent) with a minimum grade of C.

Student Learning Outcomes

1. Describe the basic human sensory, cognitive, and physical capabilities and limitations with respect to human-machine system performance.
2. Describe the impact of workplace design and environment on productivity.
3. Design a human-machine system that avoid occupation related injuries.

COURSE REQUIREMENTS

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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

Grading rubric

Exam 1:	25%
Exam 2:	25%
Assignments:	32%
Term project:	18%

Assessments

This course utilizes lectures and assignments to assist students in achieving the course learning outcomes. The assessment criteria for the stated student learning outcomes will include a term project, assignments, and exams.

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

The *syllabus/schedule are subject to change.*

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**.**

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.

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

No late 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 two 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.

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

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

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.

Department or Accrediting Agency Required Content

COURSE OUTLINE / CALENDAR

Week	Date	Topics	Reading
1	8/26	Introduction to Human Factors Engineering	Ch. 1
	8/28	Human System: Skeletal Subsystem	Ch. 2
2	9/2	No Class- Labor Day	
	9/4	Human System: Skeletal Subsystem	Ch. 2- HW 1 assigned
3	9/9	Human System: Skeletal Subsystem	Ch. 2
	9/11	Human System: Skeletal Subsystem	Ch. 2- HW 1 due
	9/16	Human System: Skeletal Subsystem	Ch. 2- HW 2 assigned
	9/18	Human System: Skeletal Subsystem	Ch. 2
4	9/23	Design of Work Areas, Tools, and Equipment	Ch. 3- HW 2 due
	9/25	Design of Work Areas, Tools, and Equipment	Ch. 3
5	9/30	Exam 1	
	10/2	Design of Work Areas, Tools, and Equipment	Ch. 3
6	10/7	Design of Work Areas, Tools, and Equipment	Ch. 3
	10/9	Design of Work Areas, Tools, and Equipment	Ch. 3- HW 3 assigned
7	10/14	Design of Work Areas, Tools, and Equipment	Ch. 3
	10/16	Assessment and Design of the Physical Environment	Ch. 4- HW 3 due
8	10/21	Assessment and Design of the Physical Environment	Ch. 4
	10/23	Work Measurement and Analysis	Ch. 5- HW 4 assigned

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9	10/28	Work Measurement and Analysis	Ch. 5
	10/30	Work Measurement and Analysis	Ch. 5- HW 4 due
10	11/4	Exam-2	
	11/6	Term Project	
11	11/11	Term Project	
	11/13	Term Project	
12	11/18	Term Project	
	11/20	Term Project	
13	11/25	Term Project	
	11/27	Thanksgiving break (University closed)	
14	12/02	Term Project	
	12/04	Term Project	
15	12/09	Final Presentation	
	12/11	Final Presentation	

Texas A&M University-Commerce 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.