

SIE-410A Human Factors & Ergonomics in Systems Design Fall 2017

Class Hours and Location

MW 4:30 to 5:45 pm, AME S212

Description of Course

Consideration of human characteristics in the requirements for design of systems, organizations, facilities and products to enable human-centered design, which considers human abilities, limitations and acceptance.

Course Prerequisites or Co-requisites

Prerequisites: Advanced Standing in the College of Engineering

Co-requisite: SIE 305 – Intro to Engineering Probability and Statistics

Instructor and Contact Information

Instructor: Dr. David Gross

Office: ENG 129

Phone: 404-775-7522 (personal cell, text encouraged)

Email Address: davidcgross@email.arizona.edu

Home Page: <http://www.sie.arizona.edu/david-gross>.

Office Hours: 9 am to 11 am MTWHF and by arrangement. Also, I maintain an open door policy, such that if my office door is open you are welcome to come in and talk about anything you need.

Course Text

Designing for People: An Introduction to Human Factors Engineering – August 31, 2017 by John D Lee , Christopher D. Wickens , Yili Liu , Linda Ng Boyle

Course Format and Teaching Methods

All course information is located on the course homepage which is in Desire2Learn at <https://d2l.arizona.edu/>.

Detailed information on using the Desire2Learn course website is available at <https://d2l.arizona.edu/>.

The course will utilize lecture, in-class discussion, individual homework assignments, a midterm, and a semester project with presentation and paper.

This course is organized around modules linked into the Desire2Learn course website. Each module contains archives of classroom lectures & discussions, presentations, notes and other instructional materials on each session's topic, and assignments. Each module included one or two class meetings.

Module 1 includes a course calendar showing topics by session along with other

dates of interest.

During the scheduled class meetings, the instructor will deliver lectures via live video-audio connection in a "Live Classroom" environment. The lectures will emphasize the important concepts and selected techniques from the textbooks and the instructor's point of view. Students will have an opportunity to ask questions during these class meetings.

These class meetings will be recorded and archived on the Desire2Learn course website.

Online & Distance Learning students are encouraged to attend the scheduled class meetings and use the archives to review lectures.

Between class meetings, students study the appropriate textbook chapters, references, and complete assignments.

The instructor may record and post additional lectures beyond the scheduled class meetings as needed to assist the class in understand the material.

Students should visit the course's D2L website often (not just during scheduled class meetings) for announcements, other important instructions, and to participate in online discussions.

Students should submit work for the assignments the related D2L assignment drop folder named as: course-assignment-yourname.filetype

Where:

“course” is SIE-410A-FA17

“assignment” is the name of the assignment, e.g., HW-1, Midterm

“yourname” is your name (for individual assignments) or your group's name (e.g., “group-1”)

And “filetype” is the usual extension for the file (e.g., “docx” for MS Word).

Work not using this naming convention will be penalized one letter grade.

Course Schedule:

See separate SIE-410-Calendar-FA17.

Grading:

Your grade is a function of:

20%: Mid-term: Open book, notes: probably short answer

20%: Final: Open book, notes: probably short answer

20%: Pop quizzes: Short Answer

- 40%: Project Reports
- 5%: Report One
- 10%: Report Two
- 10%: Report Three
- 15% Report Four

The Project Report grades will consist of a group grade.

Percentages are approximate. Grading criteria and percentages may change with the progress of the class.

A project presentation (if time permits; grade percent probably 10%; other percentages reduced accordingly) Content: persuasive, project quality, validity.

Please refer to “File Names for Documents” file on d2l, for required file name format when submitting any documents.

Grading Scale:

- A: 90 – 100
- B: 82 – 89
- C: 72 – 81
- D: 64 – 71
- E: 0 – 63

Attendance:

Participation in class discussions will be particularly important if your final grade is borderline. If your participation is satisfactory the grade may be adjusted upward. If your participation is unsatisfactory, your grade may remain as is or adjusted downward. Participation is determined on the association of your name with class attendance, participation in discussions, offering insight to class topics, answering questions, etc.

The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at: <http://catalog.arizona.edu/2015-16/policies/classatten.htm>

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, see: <http://policy.arizona.edu/human-resources/religious-accommodation-policy>

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: <https://deanofstudents.arizona.edu/absences>

Students with Special Needs:

Please contact me immediately if you have any special needs which you would like to address and will require accommodation, so that we can discuss different options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on Disability Resources, please visit: <http://drc.arizona.edu/>

Code of Academic Integrity:

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.

Classroom Behavior Policy:

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (i.e. texting, chatting, reading a newspaper, making phone calls, web surfing, etc).

Threatening Behavior Policy:

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See: <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

UA Nondiscrimination and Anti-Harassment Policy:

The University is committed to creating and maintaining an environment free of discrimination, see: <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

Inclusive Excellence:

Inclusive Excellence is a fundamental part of the University of Arizona's strategic plan and culture. As part of this initiative, the institution embraces and practices diversity and inclusiveness. These values are expected, respected and welcomed in this course.

This course supports elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request. As the course includes group work and in-class

discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect.

Additional Resources for Students Statement

Office of Diversity (<http://diversity.arizona.edu/>)

<http://www.health.arizona.edu/counseling-and-psych-services>

http://oasis.health.arizona.edu/hpps_oasis_program.htm

Subject to Change Statement:

The information contained in the course syllabus, may be subject to change, as deemed appropriate by the instructor.