

**MAE 400 Engineering Profession
SUMMER 2017
SYLLABUS**

INSTRUCTORS

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ERC 383

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OFFICE HOURS

Open door policy at the Dorms at Winchester, UK

COURSE DESCRIPTION

Impact of mechanical and aerospace engineering in a global and societal context; effects of and on globalization, environment, sustainability, economy, politics; engineering ethics and business practices.

PREREQUISITES

Aerospace Engineering or Mechanical Engineering BSE majors; MAE 322 (or MAE 325 or MAE 394 Aerospace Structures and Materials) will be waived for students on the Aero-mechanics in England program.

COURSE SUMMARY

Engineering Professional Responsibility Course. Required for all MAE and AEE majors.

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- Students will discuss expected ethical and professional standards of behavior and the consequences of deviations from these standards.
- Students will demonstrate an ability to plan and develop a technical program (with its business case) through clear and concise written and oral communication.
- Students will demonstrate teamwork skills in resolving technical and business issues.
- Students will be able to describe Engineering's critical contributions to, and interactions with, other key groups in an industrial enterprise and a global society.
- Students will discuss some significant potential societal challenges in the next 25 years and their impact on the practice of engineering.

COURSE MATERIALS

- No textbook is required for this course.
- Instructor will prepare and supply a course reader

COURSE FORMAT

This course will comprise a mix of formal lectures and group discussions lead by Professor Takahashi. The course expects significant student participation and group discussions.

COURSEWORK

The MAE grading policy for required courses states that course instructors may utilize any scheme for assessing students and assigning grades subject to:

1. the restrictions of the Academic policies and procedures manual, and
2. a grade of C or better can only be given to students demonstrating mastery of all the course core outcomes.

Because academic success depends heavily on active student participation in the learning process: attending class, taking part in class activities, and completing homework assignments. Since this course is designed to help you be successful, your grade is based on your involvement in the learning process.

Grade Basis:

Scored Writing	50%
Resume	10%
Lifelong Learning Essay	10%
Role of Engineer in Global Challenges Essay	10%
Industrial Design Trademark Essay	10%
Ethics Case Study Essay	10%
Team Presentation	15%
Team Project Report	15%
Exam (M/C and Short Answer closed book)	20%
Total	100%

Your nominal grade is based on objective score

Subjective: one step bump up for very strong in class participation (i.e. B+→A-)

Attendance problems result in grade loss

- 1 missing class allowed w/o penalty
- 2 missing classes one step demerit (i.e. A → A-)
- 3 missing classes whole letter demerit (i.e. A → B)
- 4 missing classes two letter demerit (i.e. A → C)
- 5 missing classes do not pass, no matter how good the academic work is

SCHEDULE OF READINGS AND ASSIGNMENTS

Example from Summer 2016

Monday, July 18, 2016	1	Intro / Resume / Writing Styles / Team Leadership
Tuesday, July 19, 2016	2	History / Life Long Learning
Wed, July 20, 2016	3	Argument & Expression / Global Challenges (resume due)
Thursday, July 21, 2016	4	Intro to Law / Intro to IP Law
Friday, July 22, 2016	5	Copyright / Trade Secrets (LLL paper due)
Monday, July 25, 2016	6	Patents / Corporations
Tuesday, July 26, 2016	7	Product Liability / Tech Licensing
Wed, July 27, 2016	8	Warranties / Workers Comp / Anti-Trust
Thu, July 28, 2016	9	Team Leadership/Project Management (Global Challenges paper due)
Friday, July 29, 2016	10	WRITTEN EXAM (MC/Short Answer)
Mon, August 01, 2016	11	Requirements / Voice of Customer / Systems Egr
Tue, August 02, 2016	12	Quality / Failure Mode Analysis

Wed, August 03, 2016	13	Business Plans / Financial Statements / Time-Value-of-Money
Thu, August 04, 2016	14	Risk Management (Tech Law Paper Due)
Friday, August 05, 2016	15	ETHICS INTRO / ETHICS VIDEO
Wed, August 10, 2016	16	(Ethics paper due)
Fri, August 12, 2016	17	PROJECT BRIEFINGS (morning) TEAM PROJECT REPORT (5pm)

FINAL GRADES

Course grades will be given on the A+/A/A-/B+/B/B-/C+/C/D/E scale

STUDENT RESPONSIBILITIES

- Attendance is required and will be recorded for all classroom and field trip sessions.
- Assignments must be turned in by the deadline. No late assignments will be accepted.

ASSIGNMENTS

All assignments are due IN CLASS on the due date

Academic Integrity

Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see <http://provost.asu.edu/academicintegrity>.

If you fail to meet the standards of academic integrity in any of the criteria listed on the university policy website, sanctions will be imposed by the instructor, school, and/or dean. Academic dishonesty includes borrowing ideas without proper citation, copying others' work (including information posted on the internet), and failing to turn in your own work for group projects. Please be aware that if you follow an argument closely, even if it is not directly quoted, you must provide a citation to the publication, including the author, date and page number. If you directly quote a source, you must use quotation marks and provide the same sort of citation for each quoted sentence or phrase. You may work with other students on assignments, however, all writing that you turn in must be done independently. If you have any doubt about whether the form of cooperation you contemplate is acceptable, ask the TA or the instructor in advance of turning in an assignment. Please be aware that the work of all students submitted electronically can be scanned using SafeAssignment, which compares them against everything posted on the internet, online article/paper databases, newspapers and magazines, and papers submitted by other students (including yourself if submitted for a previous class).

Note: Turning in an assignment (all or in part) that you completed for a previous class is considered self-plagiarism and falls under these guidelines. Any infractions of self-plagiarism are subject to the same penalties as copying someone else's work without proper citations. Students who have taken this class previously and would like to use the work from previous assignments should contact the instructor for permission to do so.

Prohibition of Commercial Note Taking Services

In accordance with **ACD 304-06 Commercial Note Taking Services**, written permission must be secured from the official instructor of the class in order to sell the instructor's oral communication in the form of

notes. Notes must have the notetaker's name as well as the instructor's name, the course number, and the date.

Student Support and Disability Accommodations

In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990, professional disability specialists and support staff at the Disability Resource Center (DRC) facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities.

Qualified students with disabilities may be eligible to receive academic support services and accommodations. Eligibility is based on qualifying disability documentation and assessment of individual need. Students who believe they have a current and essential need for disability accommodations are **responsible for requesting accommodations and providing qualifying documentation** to the DRC. Every effort is made to provide reasonable accommodations for qualified students with disabilities. Qualified students who wish to request an accommodation for a disability should contact their campus DRC at: <http://www.asu.edu/studentaffairs/ed/drc/>

If you are a student in need of special arrangements, we will do all we can to help, based on the recommendations of these services. For the sake of equity for all students, we cannot make any accommodations without formal guidance from these services. Typically, once a student discloses the need for an accommodation through their study abroad application, the Study Abroad Office, the academic unit, the student and DRC will develop a plan on how to best accommodate the student within the parameters available within the onsite locations.

Drop and Add Dates/Withdrawals

Please refer to the **academic calendar** on the deadlines to drop/withdraw from this course. Consult with your advisor and notify your instructor if you are going to drop/withdraw this course. If you are considering a withdrawal, review the following ASU policies: **Withdrawal from Classes, Medical/Compassionate Withdrawal.**

Please note that the ASU Academic Calendar only refers to withdrawal for the academic portion of your study abroad program. Please refer to the **Study Abroad Withdrawal Policies** for important dates regarding withdrawing from your Faculty Directed program.

Email Communications

All email communication for this class will be done through your ASU email account. You should be in the habit of checking your ASU email regularly as you will not only receive important information about your class(es), but other important university updates and information. You are solely responsible for reading and responding if necessary to any information communicated via email. For help with your email go to: http://help.asu.edu/sims/selfhelp/SelfHelpHome.seam?dept_pk=822 and file a help desk ticket by clicking on "My Help Center."

Campus Resources

As an ASU student you have access to many resources on campus. This includes tutoring, academic success coaching, counseling services, financial aid, disability resources, career and internship help and many opportunities to get involved in student clubs and organizations.

- Tutoring: <http://studentsuccess.asu.edu/frontpage>
- Counseling Services: <http://students.asu.edu/counseling>

- Financial Aid: <http://students.asu.edu/financialaid>
- Disability Resource Center: <http://www.asu.edu/studentaffairs/ed/drc/>
- Major/Career Exploration: <http://uc.asu.edu/majorexploration/assessment>
- Career Services: <http://students.asu.edu/career>
- Student Organizations: <http://www.asu.edu/studentaffairs/mu/clubs/>

Harassment Prohibited:

ASU policy prohibits harassment on the basis of race, sex, gender identity, age, religion, national origin, disability, sexual orientation, Vietnam era veteran status, and other protected veteran status. Violations of this policy may result in disciplinary action, including termination of employees or expulsion of students. Contact Student Life (UCB 221) if you feel another student is harassing you based on any of the factors above; contact EO/AA (480-965-5057) if you feel an ASU employee is harassing you based on any of the factors above.

Establishing a Safe Environment:

Learning takes place best when a safe environment is established in the classroom. Students enrolled in this course have a responsibility to support an environment that nurtures individual and group differences and encourages engaged, honest discussions. The success of the course rests on your ability to create a safe environment where everyone feels comfortable to share and explore ideas. We must also be willing to take risks and ask critical questions. Doing so will effectively contribute to our own and others intellectual and personal growth and development. We welcome disagreements in the spirit of critical academic exchange, but please remember to be respectful of others' view points, whether you agree with them or not.

Syllabus Disclaimer:

The course syllabus is an educational contract between the instructor and students. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. The instructor reserves the right to make changes to the syllabus as deemed necessary. Students will be notified in a timely manner of any syllabus changes via email, or in the *Announcements* section on Blackboard.

Student Conduct Statement:

Students are required to adhere to the behavior standards listed below:

- Arizona Board of Regents Policy Manual Chapter V – Campus and Student Affairs: Code of Conduct <http://www.azregents.edu/policymanual/default.aspx>,
- ACD 125: Computer, Internet, and Electronic Communications <http://www.asu.edu/aad/manuals/acd/acd125.htm>, and
- the ASU Student Academic Integrity Policy <http://www.asu.edu/studentaffairs/studentlife/srr/index.htm>.

Students are entitled to receive instruction free from interference by other members of the class. If a student is disruptive, an instructor may ask the student to stop the disruptive behavior and warn the student that such disruptive behavior can result in withdrawal from the course. An instructor may withdraw a student from a course when the student's behavior disrupts the educational process under USI 201-10 (<http://www.asu.edu/aad/manuals/usi/usi201-10.html>).

Course discussion messages should remain focused on the assigned discussion topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion.

Inappropriate discussion board messages may be deleted if an instructor feels it is necessary. Students will be notified privately that their posting was inappropriate. Student access to the course Send Email feature may be limited or removed if an instructor feels that students are sending inappropriate electronic messages to other students in the course.

Religious Accommodations for Students:

Students who need to be absent from class due to the observance of a religious holiday or participate in required religious functions must notify the faculty member in writing as far in advance of the holiday/obligation as possible. Students will need to identify the specific holiday or obligatory function to the faculty member. Students will not be penalized for missing class due to religious obligations/holiday observance. The student should contact the class instructor to make arrangements for making up tests/assignments within a reasonable time.