

Syllabus

Instructor Information

Name: Professor S. M. You
Email: you@uta.edu
Office location: Rm 202 WH
Office hours: M W F 9:00-10:00 am
Phone: 817-272-5635

Course Information

Course title: Introduction to Mechanical and Aerospace Engineering
Course number: MAE 1105
Discipline: Mechanical & Aerospace Engineering
Description: This is the MAE laboratory course accompanying MAE 1104 Introduction to Engineering. It introduces the student to some basic mechanical and aerospace engineering concepts including fluid mechanics, aerodynamics and propulsion, thermal science and energy, mechanics & design, and automotive engineering. Students will also be given a group project to design and program a mobile robot using the Lego Mindstorm Kit. Opportunities are provided to develop skills in oral and written communication as well as department-specific material.
Location: Room 313 Woolf Hall
Meeting days: See schedule
Meeting times: See schedule
Prerequisites: None

Course Goals

Course goals: To expose students to: Typical aerospace engineering experiments, Practical aspects of building structures and mechanisms, Programming concepts for control and automation, Practical aspects of automotive engineering, and Introduction to heat transfer and Data analysis, report writing, teamwork and public speaking.

Academic Dishonesty Policy

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspensions or expulsion from the University. "Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22).

Attendance and Drop Policy

Standard University Policy

Student Evaluation of Teaching

Standard University Policy

Americans with Disabilities Act

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law

93112-The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act – (ADA), pursuant to section 504 of The Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. As a faculty member, I am required by law to provide “reasonable accommodation” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels. If you require an accommodation based on disability, I would like to meet with you in the privacy of my office during the first week of the semester to make sure that you are properly accommodated.

Policy on Late Homework

No late homework accepted.

The University of Texas at Arlington
 Department of Mechanical and Aerospace Engineering
 MAE 1105: Introduction to Mechanical and Aerospace Engineering

TENTATIVE SCHEDULE FOR SECTION 001

Monday each week, 1:00 pm

Day		Assignment	Due date
Aug 24	Schedule and WebCT Intro		
Aug 31	Sample Report, Word, Excel, Refworks	Email	Sept 14
Sept 7	Labor Day (<i>No Class</i>)		
Sept 14	Fluid Mechanics, Aerodynamics		
Sept 21	Fluid Lab – FoilSim Wind Tunnel Simulation	(In-Class) FoilSim Assignment	Sept 21
Sept 28	MAE Advising and UTA Resources	Memo	Oct 5
Oct 5	Thermal Science and Energy (Lecture and Video)		
Oct 12	Thermal Science and Energy Lab	(In-Class) Assignment	Oct 12
Oct 19	Mechanics & Design	Assignment	Oct 26
Oct 26	Automotive Engineering	Assignment	Nov 19
Nov 2	Robotic Design Lessons:	(In-Class) Tutorials	Nov 2
Nov 19	Design & Delivery of Presentations (Dr.Goolsby) Robotic Design Project (Intro) & Programming tips	Robotic Design Report Robotic Competition Robotic Design Presentation	Nov 30
Nov 16	Robotic Design Project		
Nov 23	Robotic Design Project		
Nov 30	Team Presentations/Competition -LEGO Kit Inventory		

Notes:

1) - (ABET REQUIREMENT) KEY ASSIGNMENTS:

- **Robotic Design Project** is designated as a key assignment. In order to pass this class, students must submit and pass ($\geq 70\%$) all key assignments. If any key assignment is not submitted and passed, the student will not pass the class even if he/she scores perfectly on all exams and other assignments.

Robotics Design Projects (Key Assignments) include:

- Robotic Design Report
- Robotic Competition
- Robotic Design Presentation

2) - All Labs:

- Class will meet in Room 313, Woolf Hall, unless specified otherwise.

3) - No late Lab Report will be accepted.

Scores:

Assignment	Max Score
Attendance	20
Email (Sample Graph)	20
FoilSim Assignment	20
Memo (advising)	20
Thermal & Energy Assignment	40
Mechanics Assignment	20
Automotive Engineering Lab	40
Robotic Design Report	80
Robotic Competition	80
Robotic Design Presentation	60
Max Score	400

Grading Scheme: A: 90-100%; B: 80-89%; C: 70-79%; D: 60-69%; F: <60%