

MAE 1107

Miguel Amaya, Ph.D.

<https://www.uta.edu/mentis/public/#profile/profile/view/id/3238/>

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Office hours: Tues, Thursday, 9 AM – 11:00 AM (RM 204D WH)

Teaching Assistant/Lab Instructor:

Name: TBD

Office hours:

Contact:

Course Description: This course introduces the student to some basic mechanical engineering concepts including fluid mechanics, 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.

Course Goals: To expose students to typical mechanical 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.

Textbook: None

Prerequisites: C or better in ENGR 1250 (or concurrent enrollment); or C or better in MAE 1104 (or concurrent enrollment).

Meeting Days, Times and Locations:

Laboratory sessions - **Rm 313 Woolf Hall**, at your section's scheduled day and time, such as

- 2 - 4:50 pm (sections 001, 002, 003, 005)
- 5 - 7:50 pm (sections 004 and 006).

Lecture sessions (i.e. SECOND MEETING DAY/TIME FRIDAY 9:00 - 9:50 AM ON SEPT 7, 14, 21, 28 and Oct 5) - **Rm 100 Nedderman Hall**

For detailed semester schedule for your section, see "Schedule" to be posted in Blackboard

Attendance Policy: Students are required to sign in at the beginning of every class. The attendance sign-in sheet will be removed 5 minutes after the start of a lab session and 2 minutes after the start of a lecture session. Any student that has not signed attendance in time will lose the attendance credit for that week's session - 2.86 pts out of 40 pts total credit for course attendance.

Excused Absences: To avoid a grade penalty for an excused absence:

- Missed homework: submit homework to the lab instructor, at an opportune time. Staple a copy of supporting document, such as a Doctor's note, employer's note, police report, etc. to the homework. Late homework will not be accepted without this document.
- Missed lab session: submit to the lab instructor, at an opportune time, the cover page of the lab work sheet pertaining to the missed lab. Write your name and team number on the page. Staple a copy of supporting document, such as a Doctor's note, employer's note, police report, etc to the page.
- There will be no make-up labs.

Policy on Late Homework: No late homework accepted, except for an excused absence, as explained above.

Assignment	Max Score
Attendance	40
Essay	20
Memorandum	20
To be determined	50
Thermal Engineering	50
Mechanics & Design	50
Automotive Lab	50
Robotic Design Report	50
Robotic Competition	50
Robotic Design Presentation	50
Peer evaluation	20
Max Score	450

Key Assignment: This course specifically assesses your ability to: 1. Design system, component or process to meet needs, 2. Function on multi-disciplinary teams, 3. Communicate effectively. The Robotic Design Project is designated as a key assignment to practice and assess these abilities. The key assignment consists of:

- I. Robotic Design Report
- II. Robotic Competition
- III. Robotic Design Presentation

Grading Scheme: By percentage of 450 pts: A: 90-100%; B: 80-89%; C: 70-79%; D: 60-69%; F: <60%

Academic Integrity: Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as “lecture,” “seminar,” or “laboratory” shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/aao/fao/>).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA), and Section 504 of the Rehabilitation Act. All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

Non-Discrimination Policy: The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.

Title IX Policy: The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.

Campus Carry: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located at the nearest end of the hallway, to the right, as one exits the classroom. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals. Any handicapped person not able to evacuate themselves shall go to the stairway and wait for rescue personnel to take them downstairs.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may contact the Maverick Resource Hotline by calling 817-272-6107, sending a message to resources@uta.edu, or visiting www.uta.edu/resources.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.