

GEORGIA INSTITUTE OF TECHNOLOGY
George W. Woodruff School of Mechanical Engineering
ME 2110 - Creative Decisions and Design, Spring 2020

Lecture: M & W, 3:00 – 3:50 PM, Instructional Center 103 (see assigned seating zones)
Studio: Various Times (see below), IDEA Laboratory, MRDC 2101
Lecturers: Dr. Christopher Saldana, GTMI 259, christopher.saldana@me.gatech.edu
Office Hours M 11AM-12PM, IDEA Laboratory, or by appointment
Dr. Jeffrey Donnell, MRDC 3104, Jeffrey.Donnell@me.gatech.edu
Lead TAs: Ms. Zoe Klesmith, zklesmith3@gatech.edu
Ms. Anastasia (Ana) Schauer, aschauer7@gatech.edu

Studio Professors:

Sec.	Day/Time	Professor	E-mail
B	T - 8:00 am - 10:45 am	Ms. Kristi Mehaffey	kristi.mehaffey@me.gatech.edu
D	T - 12:00 pm - 2:45 pm	Dr. Levent Degertekin	levent.degertekin@me.gatech.edu
E	T - 3:00 pm - 5:45 pm	Dr. Levent Degertekin	levent.degertekin@me.gatech.edu
F	T - 6:00 pm - 8:45 pm	Dr. Richard Simmons	richard.simmons@me.gatech.edu
G	W - 8:00 am - 10:45 am	Dr. Richard Neu	rick.neu@gatech.edu
I	W - 4:05 am - 6:50 pm	Dr. Jeffrey Streator	jeffrey.streator@me.gatech.edu
J	R - 12:00 pm - 2:45 pm	Dr. Roxanne Moore	roxanne.moore@gatech.edu
K	R - 3:00 pm - 5:45 pm	Dr. Christopher Adams	cjadams@gatech.edu
N	F - 8:00 am - 10:45 am	Dr. Richard Cowan	rick.cowan@me.gatech.edu

Course Communication:

All course material will be posted on the main ME2110 web site: <http://2110.me.gatech.edu/>
All studio-level communications, submissions and assessments: *See Canvas Website for Section*

Course Objectives: To learn the fundamental procedures for solving engineering design problems; the essential details of analyzing, synthesizing, and implementing design solutions with flexibility, adaptability, and creativity; the techniques which allow an engineer to tackle new, unsolved, open-ended problems. To learn by doing through team and individual projects and assignments.

Course Assessment (100%):

- | | |
|--|-------|
| 1) Class Participation | 10% |
| 2) Studio Preparedness | 5% |
| 3) Lab Stewardship | 5% |
| 4) Canvas Assessments | 5% |
| 5) Homework | 10% |
| 6) First Studio Report | 5% |
| 7) Introductory Project and Presentation | 10% |
| 8) Major Project | 50% |
| Design Report and Presentation | (10%) |
| Interim Report and Presentation | (5%) |
| Machine Performance | (15%) |
| Design Review | (5%) |
| Final Report and Presentation | (15%) |
| 9) Safety Training and IDEA Lab User Agreement | P/F* |
| 10) Give at Least 1 Oral Presentation | P/F* |
| 11) Mechatronics Task Completion | P/F* |
| 12) Machining Task Completion | P/F* |

***Note:** Receiving an F for a P/F item will result in 1 letter grade reduction in your final grade for every F received.

Reports and Presentations:

All assignments must have a cover page and be labeled with your name, section instructor, section TA, and section time. When doing group work, all names must be on the assignment and each group member will receive the same grade. Late work is NOT accepted.

Canvas Assessments:

Canvas-based assessments are based on the lecture information and are due on the set deadlines.

Class Participation and Studio Preparedness:

Class participation grades will be based on your relative performance on your teams, this measured using structured peer evaluations as well as instructor evaluations of your participation in studio. Studio preparedness will be evaluated as determined by section instructor and through quizzes given in the studio section.

Lab Stewardship:

Safe lab practices and respect for the open studio space is of critical importance to maintaining a safe working environment for all students and employees. It is also the hallmark of operational excellence in a professional shop environment. Violations of safe lab practices as explained during IDEA lab training including, but not limited to, tool misuse and lack of shop cleanliness, will be noted. Each violation will count as 1% demerit on the final grade. Students may earn back credit lost for IDEA lab violations by participating in positive lab stewardship activities (e.g., shop cleaning tasks, shop improvement activities). Students can consult the head TAs or TA on duty for these positive lab stewardship activities. The number of demerits that may be earned back through these activities are limited to 2 total.

Required Materials:

1. W. Singhose, J. Donnell, Introductory Mechanical Design Tools, www.lulu.com/content/3365814

Attendance Policy:

You will be working on teams on projects for this course. Therefore, you are required to attend **all studio sessions**. You are required to attend lecture. Missing lectures/studios will result in a final grade penalty:

2-3 missed lectures or 1 missed studio = 1 letter grade reduction
4-5 missed lectures or 2 missed studios = 2 letter grade reduction
6-7 missed lectures or 3 missed studios = 3 letter grade reduction
8-9 missed lectures or 4 missed studios = 4 letter grade reduction

Information required to complete your projects will be disseminated during lecture. Due to the size of this class, as well as the critical nature of the material (including safety issues), it is important that you are present to stay up to date with the course. Furthermore, this is a common time to touch base with your teams. Therefore, if you miss lectures your teammates may be inclined to give you poor reviews that will adversely affect your grade. As a result, missing lectures will have a significant negative impact on your grade. In particular, if you arrive to lecture late, you will be marked as tardy. Late is defined as the time between the start of lecture (3:00 PM) and 3:15 PM. After 3:15 PM, you are considered absent. Two tardy marks are equivalent to one missed lecture. We will round down to the lowest integer when determining if your combination of tardy and absent marks will affect your grade. So if you have 1.5 missing lectures (one tardy and one missing lecture) your grade will not be affected. If you are late twice and miss class once, then your grade will be reduced by one letter. Attendance will be taken by your studio TA. All studio sections will sit together in lecture to facilitate team building and attendance recording. Make sure to check in with your TA when you arrive in lecture. Finally, you must participate in all competition events. Failure to participate in any of these events will result in the automatic reduction of your final grade by one level per event missed.

In the case of a personal emergency or Institute-approved absence, please consult the information on the Division of Student Life website (<http://studentlife.gatech.edu/content/class-attendance>) and follow the

appropriate steps. The Dean of Students Office will make the decision and contact your professor stating what (if any) accommodations will be provided.

Mental Health & Wellness:

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, depression, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. GT offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know is experiencing any of the issues noted above, consider utilizing the confidential mental health services available on campus. I encourage you to reach out to GT CARE (www.care.gatech.edu, 404-894-3498) or the Counseling Center (www.counseling.gatech.edu, 404-894-2575) for support. An on-campus counselor or after-hours services are available to assist you.

Problem Escalation: I (Dr. Saldana) am available by e-mail or office hours or if you need assistance, and can schedule appointments outside of office hours. My door is always open as well, as long as I am not in another meeting at the time. If you need help and/or have a problem, the best course of action is to first address the issue within your studio section with your TA and/or your Studio Professor. This is especially true for grading on assignments and reports, which is controlled by your Studio Professor. For course-level questions and concerns, the lead TAs and myself are here to help.

NOTE: This class CANNOT be dropped.