

GEORGIA INSTITUTE OF TECHNOLOGY
George W. Woodruff School of Mechanical Engineering
ME 2110 - Creative Decisions and Design, Fall 2019

Lecture: M & W, 3:00 – 3:50 PM, Instructional Center 103 (see assigned seating zones)
Studio: Various Times, IDEA Laboratory, MRDC 2101
Lecturers: Dr. Christopher Saldana, GTMI 259, christopher.saldana@me.gatech.edu
Office Hours M 9-10 AM, GTMI 259, or by appointment
Dr. Jeffrey Donnell, MRDC 3104, Jeffrey.Donnell@me.gatech.edu
Lead TAs: Mr. Patrick Jung, pjung@gatech.edu
Ms. Zoe Klesmith, zklesmith3@gatech.edu

Studio Professors:

Ms. Kristi Mehaffey, kristi.mehaffey@me.gatech.edu (Sec B, T 0800-1045)
Dr. Richard Cowan, [rick.cowan@gatech.edu](mailto:rck.cowan@gatech.edu) (Sec C, T 1200-1445; Sec I, R 1200-1445)
Dr. Christopher Adams, cjadams@gatech.edu (Sec D, T 1500-1745)
Dr. Richard Simmons, richard.simmons@me.gatech.edu (Sec E, T 1800-2045)
Dr. Hassan Rashidi, hrashidi@gatech.edu (Sec F, W 0800-1045; Sec J, R 1500-1745; Sec L, F 0800-1045; Sec M, F 1115-1400)
Dr. Christopher Saldana, christopher.saldana@me.gatech.edu (Sec G, W 1115-1400)

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) Canvas Assessments	5%
2) Homework	10%
3) Class Participation	10%
4) Studio Preparedness	5%
5) Catapult Project Report	3%
6) Lab Stewardship	2%
7) Introductory Project and Presentation	15%
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. All assignments are due at the beginning of class. Late work is NOT accepted.

Canvas Assessments:

5% of your grade comes from Canvas-based assessments that cannot be made up and are based on the lecture information.

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.

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 will result in a final grade penalty:

2-3 missed lectures = 1 letter grade reduction

4-5 missed lectures = 2 letter grade reduction

6-7 missed lectures = 3 letter grade reduction

8-9 missed lectures = 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.

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.

Finally, you must participate in all competition events (individual, team, preliminary, qualifying and final contests). Failure to participate in any of these events will result in the automatic reduction of your final grade by one level per event missed.

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.