

**GEORGIA INSTITUTE OF TECHNOLOGY**  
George W. Woodruff School of Mechanical Engineering  
ME 2110 - Creative Decisions and Design  
Fall 2018

Lecture: M & W, 3:00 – 3:50 PM, Clough Undergraduate Commons 152  
Studio: Various Times, MRDC 2101  
Lecturers: Prof. Thomas Kurfess, Love 101, [kurfess@gatech.edu](mailto:kurfess@gatech.edu)  
Research Group Meetings M 8-9 AM, Love 109  
Office Hours M 9-10 AM, Love 109, or by appointment  
Dr. Jeffrey Donnell, MRDC 3104, [Jeffrey.Donnell@me.gatech.edu](mailto:Jeffrey.Donnell@me.gatech.edu)

**Studio Instructors:**

Dr. Mahmoud Dinar, [mahmoud.dinar@me.gatech.edu](mailto:mahmoud.dinar@me.gatech.edu) (Sec L, F 8-10:45 AM; Sec M, F 11:15 AM-2 PM)  
Ms. Kristi Mehaffey, [kristi.mehaffey@me.gatech.edu](mailto:kristi.mehaffey@me.gatech.edu) (Sec B, T 8-10:45 AM)  
Dr. Roxanne Moore, [roxanne.moore@gatech.edu](mailto:roxanne.moore@gatech.edu) (Sec C, T 12-2:45 PM)  
Dr. Hassan Rashidi, [hrashidi@gatech.edu](mailto:hrashidi@gatech.edu) (Sec G, W 11:15 AM-2 PM)  
Dr. Richard Simmons, [richard.simmons@me.gatech.edu](mailto:richard.simmons@me.gatech.edu) (Sec E, T 6-8:45 PM)  
Dr. Christopher Saldana, [christopher.saldana@me.gatech.edu](mailto:christopher.saldana@me.gatech.edu) (Sec A, M 6-8:45 PM; Sec F, W 8-10:45 AM;)  
Dr. Jeffrey L Streator, [jeffrey.streator@me.gatech.edu](mailto:jeffrey.streator@me.gatech.edu) (Sec D, T 3-5:45 PM)  
Dr. Cassandra Telenko, [Cassandra.Telenko@me.gatech.edu](mailto:Cassandra.Telenko@me.gatech.edu) (Sec I, R 12-2:45 PM; Sec J, R 3-5:45 PM)  
Dr. Charles Ume, [charles.ume@me.gatech.edu](mailto:charles.ume@me.gatech.edu) (Sec K, R 6-8:45 PM)

All course material will be posted on the web site:

<http://2110.me.gatech.edu/>

**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 Requirements (100%):**

1)	Studio Preparedness	10%
2)	Homework	15%
3)	Class Participation	5%
4)	Structure Project	5%
5)	Introductory Project	10%
6)	Major Project	55%
	Planning Report and Presentation	(5%)
	Evaluation Report and Presentation	(5%)
	Machine Performance	(15%)
	Design Review / Presentation to Judges	(5%)
	Final Oral Presentation	(10%)
	Final Report	(15%)
6)	Give at least one oral presentation	P/F
7)	Electronics, machining, and pneumatics training	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.

All assignments must 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. Your class participation grade will be determined by the instructor's view of your participation in group activities and by peer reviews.

**Text:** W. Singhose, J. Donnell, Introductory Mechanical Design Tools, [www.lulu.com/content/3365814](http://www.lulu.com/content/3365814)

**Studio Equipment:** National Instruments myRIO. Please purchase this at the bookstore.

### **Attendance Policy**

You will be working on teams to complete the projects for this course. Therefore, you are required to attend **all studio sessions**.

You are required to attend all lectures. 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 impossible for the professors to repeat this information on a case-by-case basis to students who miss lecture. Furthermore, it is not the responsibility of your teammates to teach you the course material. Therefore, if you miss lectures your teammates will surely 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 3:10 PM. After 3:10 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. Providing false excuses regarding absence or tardiness instances will result in the reduction of your overall course grade by one letter per incident in addition to you being marked late or tardy whichever the case may be. 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.

Furthermore, 10% of your grade comes from in-studio quizzes that cannot be made up. These quizzes will be based on the reading assignments which are noted in the course calendar. Please ensure that you are keep up with the assigned readings.

Finally, you must participate in all competition events (2 individual contests, 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.

**NOTE: This class CANNOT be dropped.**