

## MECH 3305- Computer Aided Design Course Syllabus

---

### Course Information

MECH3305. Computer Aided Design

Fall 2014

Tuesday & Thursday: 11:30am-12:45pm

Lecture Room: CN 1.304

Starts: August 25, 2014

Ends: December 18, 2014

---

### Professor contact Information

Yonas Tadesse, Ph.D

Email: [yonas.tadesse@utdallas.edu](mailto:yonas.tadesse@utdallas.edu)

Office Phone: 972-883-4556

Office: ECSN 3.204

Office Hours: Office Hours: Tu. and Th., 2:00-3:30pm, Wed., 11:00am-12:00pm

Personal Website: <http://www.utdallas.edu/~yonas.tadesse/>

Course Website: <https://elearning.utdallas.edu/webapps/portal/frameset.jsp> ( UTD login ID and password required.)

---

### TA Contact Information

Name: Akshay Potnuru

Office: ATC 1.406

Office Hours: Wednesday and Friday 11:00am-12:30pm;

Email: [Akshay.Potnuru@utdallas.edu](mailto:Akshay.Potnuru@utdallas.edu)

---

### Course Pre-requisites co-requisites and/or restrictions

Pre-requisite(s): MECH 1208 – Intro to Mechanical Engineering

ENGR 2300 – Linear Algebra for Engineers

PHYS 2325 – Mechanics

Pre or Co-requisite: CS 1325 – Intro to Programming (or CE/CS/TE 1337)

Co-requisite: MECH 3105 – Computer Aided Design Laboratory

Other Restrictions: None

---

### Description:

Lecture course. Course material includes an introduction to Computer-Aided Mechanical Design (CAMD) tools and their applications to mechanical systems design.

---

### Course Learning Outcomes (CLOs)

1. Students will understand the role of CAD in mechanical component and system design by creating geometric models and engineering drawings.
  2. Students will understand the basic mathematics fundamental to CAD software.
  3. Students will work in teams to design a mechanical system and fabricate a prototype of their design.
- 

### Topics Covered:

1. Role of CAD in mechanical design
  2. Sketching
  3. Solid modeling
  4. Engineering drawings
  5. Assembly modeling
  6. Parametric curves and surfaces
  7. Rotation, translation, scaling and projection matrices
- 

### Textbooks and Materials

**Required:** Computer Aided Engineering Design, by Anupam Saxena and Birendra Sahay ISBN-13: 978-1402025556. The eBook is available at UTD library website (UTD login ID and password required)

---

### Grading policy

Assignments (~5) and classwork .....	25%
Exams (2) .....	45%
Team Project.....	30%

---

**Class attendance:** Attendance will be taken once in a while or upon needed

Final letter grades will be assigned according to the following ranges. This guideline is subject to change at the discretion of the instructor.

<b>A+</b>	$97 \leq x$	<b>C+</b>	$77 \leq x < 80$
<b>A</b>	$93 \leq x < 97$	<b>C</b>	$73 \leq x < 77$
<b>A-</b>	$90 \leq x < 93$	<b>C-</b>	$70 \leq x < 73$
<b>B+</b>	$87 \leq x < 90$	<b>D+</b>	$67 \leq x < 70$
<b>B</b>	$83 \leq x < 87$	<b>D</b>	$63 \leq x < 67$
<b>B-</b>	$80 \leq x < 83$	<b>D-</b>	$60 \leq x < 63$
		<b>F</b>	$60 > x$

---

## Course and Instructor Policy

---

### Email

Email must be sent from your UTD email account to UTD email address of the instructor or TA. Please allow 24-36 hours for a response during the week.

### Lecture

Most lecture notes will be posted in eLearning. However, some concepts will be discussed on white board or overhead projector. You are required to take notes in that case. No use of cell phones or other devices that may disturb others is allowed in class. Talking during lectures is disruptive to those around you and is not allowed. Surfing on social media sites during the lecture is not allowed as well.

### Assignments and Projects

The assignments and project must be submitted on the due date and cutoff time. The assignment may be submitted through eLearning or in class depending on the nature of the assignment. Read the instructions carefully. If not submitted by due date, some points will be deducted for late submission.

### Make-up Exams

Make-up exams will only be given with instructor approval which must be granted before the exam date or under unusual circumstances. If an exam is missed due to illness, the student must bring a proof from doctor's office.

### Rules for Exams

1. Whenever possible, an empty seat should be left between each student during an exam.
2. Only three 8.5"x11" formula sheets or notes (front and back) are allowed. Other materials such as lecture slides, notebooks and backpacks must be placed at the front of the room or under your chair. You may not open your bag inside the room once the exam has begun.
3. Exam materials will be passed out at the beginning of class or as soon as all extraneous materials are placed in the front of the room or under your chair.
4. Turn-off your cell phone.
5. If late to an exam, remove any necessary materials (pencil, etc.) from your bag before entering the room. Quietly enter the room and wait for further instructions.

### Academic Dishonesty

Academic dishonesty will not be tolerated and will result in a grade of F in this course

---

### Policies and Procedures for Students

The University of Texas at Dallas provides a number of policies and procedures designed to provide students with a safe and supportive learning environment. Brief summaries of the policies and procedures are provided for you at <http://coursebook.utdallas.edu/syllabus-policies/> and include information about technical support, field trip policies, off-campus activities, student conduct and discipline, academic integrity, copyright infringement, email use, class attendance, withdrawal from class, student grievance procedures, incomplete grades, access to disability services, and religious holy days.

---

The descriptions are subject to change at the discretion of the instructor.