Course Syllabus
MECH 3305- Computer Aided Design

Course Information

MECH3305. Computer Aided Design	Fall 2016
Mon & Wed: 7:00 pm- 8:15pm	Lecture Room: ML2 1.218
Starts: August 22, 2016	Ends**:** December 15, 2016

Professor contact Information

Yonas Tadesse, Ph.D   Email**:** yonas.tadesse@utdallas.edu
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Office Hours: TBD
Personal Website: http://www.utdallas.edu/~yonas.tadesse/   (Teaching Tab, sample projects can be found from this website)
Course Website**:** https://elearning.utdallas.edu/webapps/portal/frameset.jsp (UTD login ID and password required; lecture notes, tutorials and assignments will be posted on this website)

TA Contact Information

Name: Lianjun Wu (Jason)   Office: ATC 1.406
Office Hours: TBD   Email: lxw132630@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: Be able to create 3D geometric models, assemblies, and engineering drawings that are suitable for manufacturing.
2: Be able to determine degrees of freedom of sketches and assemblies.
3: Be able to generate fabrication packages to represent mechanical assemblies ready for traditional and emerging manufacturing processes.
4: Be able to function effectively in teams to generate concepts and prototypes for the design of mechanical assemblies.

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 (not required)

Reference book: 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 (midterm and final) …….…………………………………… 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.

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

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
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.

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 secretion of the instructor.