Course Syllabus for

MECH 1208 – Introduction to Mechanical Engineering

Summer 2015, Class meets on MW from 10:00am-11:45am
Note: One week of class time during summer roughly equals 1.5 weeks during semester

Professor Contact Information

Dr. Oziel Rios
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Office Hours: Monday and Wednesday 3:00pm-4:00pm
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Teaching Assistant Contact Information

Name: Rifat Kabir
Office: ECSN 2.316 (Studio)
Office Hours: Tuesday and Thursday 10:00am-12:00pm
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Note: Rifat is available on Friday (7:00am-5:00pm) only by appointment. Send her an email in advance if you wish to meet on Friday. On certain weeks, Rifat will hold review sessions and/or tutorials on Fridays. The time for these Friday sessions will depend on the availability of rooms.

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Pre-requisite: ECS 1200
Co-requisite: PHYS 2325/2125 and MATH 2419 or MATH 2414
Other Restrictions: None

Course Description

The purpose of this course is to give students a general understanding of the broad range of technical areas and applications specific to the mechanical engineering profession. Course activities include team oriented competitions and lectures by mechanical engineering experts.

Course Objectives and Topics

The learning objectives/outcomes for this course are as follows:
- Introduction of mechanical engineering topics (mechanical design, forces in structures and machines, materials and stresses, motion and power transmission, fluids engineering, thermal and energy systems).
- Problem-solving and communication skills.
- Teamwork and group projects.

Required Textbook and Supplies

An Introduction to Mechanical Engineering, 3rd Ed.
by Jonathan Wickert and Kemper Lewis
CL-Engineering Publishing
ISBN-13: 978-1-111-57680-6

It is strongly suggested (but not required) you purchase personal copies of Microsoft Office (Word, Excel, Power Point), Matlab and SolidWorks. These software packages can be purchased from the UTD Technology Store (http://www.utdtechstore.com/).

Notes, supporting material and other resources will be posted on eLearning.

Course Structure and Schedule

In MECH 1208, you will attend two class sessions each week which will take place in **JSOM 1.102**. Some class sessions will be held in the freshman studio located in **ECSN 2.316** and **2.318** (the space adjacent to the atrium in the north side of ECS building) as indicated in the "Location" column of the schedule below were you will work on activities related to the course topics.

The following is a *tentative* schedule of class topics. These dates are subject to change. It is your responsibility to keep up with any changes.

Week	Day	**	Topic(s)	Location
1				
	5-27		Overview of Course; The MECH Profession **[Ch. 1]**; Mechanical Design **[Ch. 2]**	
2	6-1	A1	Systems of Units **[Ch. 3]**; SolidWorks Examples	
	6-3	A2	Computer-Aided Design	Studio
3	6-8	A3	Computer-Aided Design	Studio
	6-10	A4	Computer-Aided Design	Studio
4	6-15	A5	Computer-Aided Design	Studio
	6-17	A6	Computer-Aided Design	Studio
5	6-22	A7	Forces and Moments **[Sec. 4.1-4.5]**; MATLAB Examples	
	6-24	A8	Force Calculations	Studio
6	6-29	A9	Force Calculations	Studio
	7-1	A10	Force Calculations	Studio
7	7-6	A11	Force Calculations	Studio
	7-8		**Mid-term Exam (Covers Ch. 1-4)**	
8	7-13	A12	Energy, Work and Power **[Sec. 7.1-7.2, 8.1]**; Gear Sets **[Sec. 8.2-8.5]**	
	7-15	A13	Mechanical Components	Studio
9	7-20	A14	Mechanical Components	Studio
	7-22	A15	Mechanical Components	Studio
10	7-27	A16	Thermal Energy Systems **[Sec. 7.3-7.5]**	
	7-29	A17	Thermal Calculations	Studio
11	8-3	A18	Thermal Calculations	Studio
	8-5		Thermal Calculations	Studio
12	Follow Final Exam Schedule		**Final Exam (Covers Ch. 7-8)**	TBD by Registrar

** Column 3 indicates the label used for attendance in eLearning gradebook. A value of 0 indicates a missed class. See "Grading Policy" section if you need to appeal any grade.

Important Dates

Memorial Day (no classes):	May 25
First day of classes:	May 27
Census day:	June 5
Last day to withdraw without "W":	June 5
Independence Day (no classes):	July 4
Last day to withdraw with "W":	July 13
Last day of classes:	August 6
Final Exams:	August 7-8

Grading Policy

[**10%**] **Class Attendance**: You are required to attend all class sessions. Your attendance grade will be determined as follows:

- 3 or fewer absences receive full 10% attendance credit
- 4 or more absences receive 0% attendance credit
- 6 or more absences will result in a grade of **F** in MECH1208

Being 10-minutes late or leaving before class has ended will result in an absence for that class session. Proper documentation must be provided for excused absences (such as a doctor's note).

[**40%**] **Exams**: There will be two exams each worth 20%. Make-up exams will only be allowed for the cases of illness, attendance of a university-sponsored event (such as an athletic activity) or under unusual circumstances. For each case, you are required to provide proper documentation (such as doctor's note or note from athletic advisor).

[**50%**] **Homework Assignments and In-Class Activities**: Unless otherwise stated, homework assignments and deliverables for in-class activities will be submitted in eLearning. *No late homework assignments or in-class activities will be accepted under any circumstances*.

You have five business days to appeal any grade or absence (contact the instructor or TA during office hours). The days will be counted starting from the day the assignment or exam is returned or the day of the absence. You must send an email to the instructor or TA explaining the situation and you must provide all necessary documentation at that time.

Your final grade will be rounded to the nearest whole number and the final letter grade will be assigned based on the following ranges:

	Plus (+)		Minus (-)
A	100 - 97	96 - 93	92 - 90
B	89 - 87	86 - 83	82 - 80
C	79 - 77	76 - 73	72 - 70
D	69 - 67	66 - 63	62 - 60
F		59 and below	

Course & Instructor Policies

Email <u>must be sent from your UTD email account</u> to the UTD email address of the instructor or TAs *for your section*. Emails related to homework submissions should be addressed to both the instructor and TA. Please allow 24-36 hours for a response during the week. Please format your emails professionally before sending: (i) address the recipient appropriately (e.g., "Prof. Rios" or "Dear Dr. Rios"), (ii) use correct grammar, capitalization, and sentence structure, and (iii) add a closing (e.g., "Best regards", or "Best wishes").

Throughout the semester, the instructor will have intermittent, unavoidable professional travel commitments. On these days, the instructor will provide advance notice and class will be canceled or taught by a TA.

The use of laptop computers, tablets, cell phones, or other electronic devices are ***not*** allowed during lectures or exams. The use of laptops is encouraged during studio sessions (see "Course Structure and Schedule").

The rules for exams are as follows:
- Only a pencil, eraser and calculator are allowed. Other materials such as books, notes, other electronic devices and backpacks must be placed under your chair. You may not open your bag inside the room once the exam has begun.
- If late to an exam, remove permitted items from your bag before entering the room. Quietly enter the room and wait for further instructions.

Academic dishonesty will not be tolerated. All suspected cases of academic dishonesty will be sent to the Office of Judicial Affairs (see http://www.utdallas.edu/deanofstudents/managing/). If it is determined that academic dishonesty occurred you will receive a grade of **F** in this course.

For a full list of university policies, please visit http://go.utdallas.edu/syllabus-policies

THE INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE AT THE DISCRETION OF THE INSTRUCTOR.