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Instructor:	Xiaohua Li
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Email:	xiaohua.li@unt.edu
Lecture Time:	MW 4:00 p.m.-5:20 p.m. room D201 (section .001)
	MWF 10:00 a.m.-10:50 a.m. room B155 (section .002)

Office Hours (for teaching): Open Office Policy; MWF 1:00pm-2:00pm or by appointment
TA and his/her Office Hours: TBD; will be posted in blackboard later

Required Textbook: Engineering Mechanics: Statics, 14th Edition,
Pearson, 2016 R.C. Hibbeler
ISBN-13: 9780133915457

Or (you will use this textbook for dynamics class later)
Engineering Mechanics: Statics & Dynamics (14th Edition)
Pearson, 2016 R.C. Hibbeler
ISBN-13: 978-0133915426
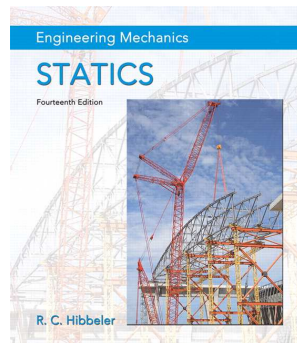
or
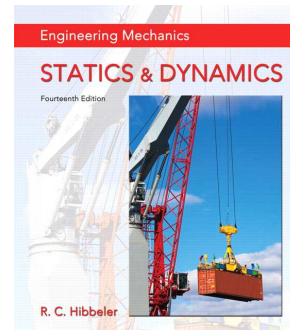
Course Description:
The course emphasizes the proper utilization of vector algebra and free-body diagrams to solve problems in the first course of the engineering mechanics sequence. The course begins with basic theory of engineering mechanics, using calculus, involving the motion of particles, rigid bodies, and systems of particles. The course covers six major areas of study: (1) vector algebra of forces and moments; (2) free-body diagrams and equilibrium of particles and rigid bodies, (3) structural analysis of internal and external forces of trusses, frames, and machines; (4) principles and application of friction; (5) centroids and centers of gravity; and (6) moments of inertia.

Prerequisite(s): MEEN 1000 AND PYHS 1710/1730.

Course Learning Outcomes (CLO):
Upon successful completion of the course, students will:
1. State the fundamental principles used in the study of mechanics
2. Define magnitude and directions of forces and moments and identify associated scalar and vector products
3. Draw free body diagrams for two- and three-dimensional force systems
4. Solve problems using the equations of static equilibrium
5. Compute the moment of force about a specified point or line
6. Replace a system of forces by an equivalent simplified system
7. Analyze the forces and couples acting on a variety of objects
8. Determine unknown forces and couples acting on objects in equilibrium
9. Analyze simple trusses using the method of joints or the method of sections
10. Determine the location of the centroid and the center of mass for a system of discrete particles and for objects of arbitrary shape
11. Analyze structures with a distributed load
12. Calculate moments of inertia for lines, area, and volumes
13. Apply the parallel axis theorem to compute moments of inertia for composite regions
14. Solve problems involving equilibrium of rigid bodies subjected to a system for forces and moments that include friction
15. Solve problems involving dry sliding friction, including problems with wedges and belts

ABET Student Learning Outcomes (SO)
a) Ability to apply mathematics, science and engineering principles.
b) Ability to design and conduct experiments, analyze and interpret data.
c) Ability to design a system, component, or process to meet desired needs.
d) Ability to function on multidisciplinary teams.
e) Ability to identify, formulate and solve engineering problems.
f) Understanding of professional and ethical responsibility.
g) Ability to communicate effectively.
h) The broad education necessary to understand the impact of engineering solutions in a global and societal context.
i) Recognition of the need for and an ability to engage in life-long learning.
j) Knowledge of contemporary issues.
k) Ability to use the techniques, skills and modern engineering tools necessary for engineering practice.

CLO	ABET Student Outcomes (SO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x		x		x						
2	x		x		x						
3	x		x		x						
4	x		x		x						
5	x		x		x						
6	x		x		x						
7	x		x		x						
8	x		x		x						
9	x		x		x						
10	x		x		x						
11	x		x		x						
12	x		x		x						
13	x		x		x						
14	x		x		x						
15	x		x		x						

Grades: Weighting of HW/Quiz/Exam and Letter Grades for Overall Performance

Homework (10; all of them)	10%	≥ 90%	A
Quizzes (highest 3 out of 5)	10%	80-89.9%	B
Exam 1 (Ch 1, 2 3 &4)	25%	70-79.9%	C
Exam 2 (Ch 5, 6 & 7)	25%	60-69.9%	D
Final/Exam 3 (Ch 8, 9 & 10)	25%	< 60%	F
Attendance (5 out of 6)	5%		
Total	100%		

Calculator Policy:

The use of a calculator is required and allowed on all homework, exams and quizzes. Calculators with graphing capabilities will be allowed in the course for homework and quizzes. However, only calculators currently allowed in the Fundamentals of Engineering (FE) and Professional Engineering (PE) exams will be allowed in all exams (Exam #1, Exam #2 and Exam #3/final exam). **NO other calculators will be approved for exams.** Please refer to the National Council of Examiners for Engineering and Surveying (NCEES) calculator policy for the list of acceptable calculators.

Casio: All fx-115 and fx-991 models (Any Casio calculator must have "fx-115" or "fx-991" in its model name.)
Hewlett Packard: The HP 33s and HP 35s models, but no others
Texas Instruments: All TI-30X and TI-36X models (Any Texas Instruments calculator must have "TI-30X" or "TI-36X" in its model name.)

Homework Policy:

1. "Homework Day": the day new homework will be assigned (HW assignment will be posted in Blackboard) and previous homework will be collected;
    For MW section: homework day is Wednesday
    For MWF section: homework day is Friday
2. Homework should be turned in on the due day before the lecture starts. **NO late homework will be collected. Exceptions**: medical emergence (student and important ones), transportation/traffic emergency; religious holidays/duty, jury duty and military duty. **Documentary evidences** must be submitted.
3. Definition of "**late**": when class is over and instructor steps outside the classroom, homework turned in thereafter will be considered as "**late**" and will not be collected.
4. Solutions to Homework will be posted in Blackboard after 11 am Friday
5. Having no textbook is not a valid excuse for not doing homework. It is the student's responsibility to acquire textbook for his/her study
6. Homework can be turned in earlier than the due day
7. Homework dropped in the instructor's departmental mailbox will NOT be collected
8. Homework slid through the door into the instructor's office will NOT be collected
9. Homework dropped in the "homework dropbox" in front of the department door will NOT be collected

10. Homework turned in other than the due day or outside classroom must be turned in to instructor either IN PERSON or through EMAIL.
11. If homework is turned in through email, it should be scanned (or pictured by a smart phone), legible, and emailed to instructor before the class ends (for MW class, 5:20pm; for MWF class, 10:50 am)
12. Homework should be stapled; instructor or TA will not be responsible for lost loose homework
13. Homework solutions from the students that appear to be the same or copied from a peer will not be graded. You can work with classmates if you have questions or problems, but you are responsible for your own work!

Format of Homework:
(1) Use engineering paper only
(2) **O**nly solve one problem per page of engineering paper. You may extend that problem into another page but then should begin the next problem on a new page if you require more room. If more than one page is needed for a solution you should number each page and the first page should be marked with a "continued on next page" note on the bottom.
(3) Done in pencil, no ink.
(4) No cross outs, use an eraser.
(5) Homework set number, name, date, course number, and page number(s) on the top of the page.
(6) **Free-body diagrams (FBD)** – Draw a neat FBD that includes arrows with arrowheads, necessary dimensions, and parameters needed to solve the problem
   **Example**:
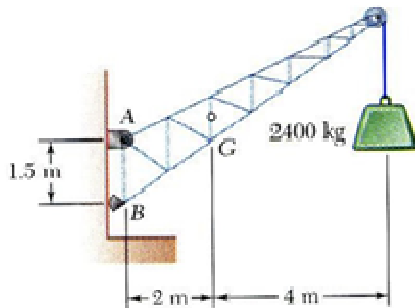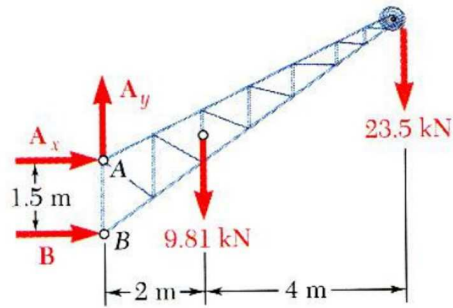
| Problem Statement | F.B.D |

(7) **Solution** – provide all the details so that anybody can easily follow your solutions and problem-solving approach. All intermediate values should be identified with the variable name and units (e.g., F_1=50 N; X_c = 2.1 m).
(8) **Answer** – the **Final Answer** at the end of the problem should be identified with the **variable name, include units, and inside a box.** Include an arrow (from the far right side of the page) pointing to each final answer.
   Example:

$\boxed{F_1 = 50 \text{ N}}$ ⟵

$\boxed{X_c = 2.1 \text{ m}}$ ⟵
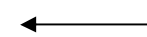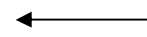
Exam Policy:

(1) Exams are closed book and closed notes with approved formula sheets only
(2) Formula sheets: Use the formula sheets provided only, NOTHING ELSE.
(3) Calculator: ONLY FE exam approved calculator models allowed
      Casio: All fx-115 and fx-991 models;
      Hewlett Packard: The HP 33s and HP 35s models;
      Texas Instruments: All TI-30X and TI-36X models;
(4) Using ANY unauthorized/unapproved materials during the exam is prohibited and considered as cheating.
(5) Exchanging (either borrowing or giving) ANYTHING without the approval from the proctor, including but not limited to, calculators/scratch papers/formula sheets/ thermodynamics tables/writing tools during the exam between/among students is prohibited and considered as cheating.
(6) Using cell PHONE for WHATEVER purpose during the exam is prohibited and considered as cheating.
(7) Using Internet through any device during the exam is prohibited and considered as cheating.
(8) Peeking, talking or discussing (either by oral/written/sign language) between/among students during the exam is prohibited and considered as cheating.
(9) Using any type of earpiece/earbuds/earphone/Bluetooth/Stereo Headset (except with doctor's prescription/notes) during the exam is prohibited and considered as cheating.
(10) Using any type of smart glasses (except with doctor's prescription/notes) during the exam is prohibited and considered as cheating.
(11) Using any type of smart watches during the exam is prohibited and considered as cheating.
(12) Cheating will result in SCORE ZERO in the exam
(13) Cheating will be reported to Department, College and University
(14) There will be NO make-up exam. Exceptions: medical emergence (student and important ones), transportation/traffic emergency; religious holidays/duty, jury duty and military duty. Documentary evidences must be submitted.
(15) Makeup exam should be scheduled within one week after the regular exam date.

Disability Accommodations: If you need academic accommodations for disability you must have document which verifies the disability and makes you eligible for accommodations, then you can schedule an appointment with the instructor to make appropriate arrangements.

Academic Dishonesty:
There is a zero tolerance policy. Cheating of whatsoever will result in an automatic 'F' in this course and the matter will be turned over to the appropriate student disciplinary committee.

Professionalism:
One of the goals of this course is to teach students about professionalism, including the standards and expected behavior of your chosen profession. With this in mind, students are expected to demonstrate a behavior consistent with the conduct of an individual practicing in the engineering profession. Students are expected to: (1) come prepared for class; (2) respect

faculty and peers; (3) demonstrate responsibility and accountability for your own actions; (4) sensitivity and appreciation for diverse cultures, backgrounds, and life experiences; (5) offer and accepts constructive criticism in a productive manner; (6) demonstrate an attitude that fosters professional behavior among peers and faculty; (7) be punctual to class meetings; (8) maintain a good work ethic and integrity; and (9) recognize the classroom as a professional workplace.

Classroom Inclusivity Statement
I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

IMPORTANT EXAM DATES
Exam #1 (tentative; depends on when chapter 4 is finished; Covers Ch 1, 2, 3 & 4**):**
>   **Oct.4th, 2017, Wednesday (for MW class)**
>   **Oct.6th, 2017, Friday (for MWF class)**

Exam #2 (tentative; depends on when chapter 7 is finished; Covers Ch 5, 6 & 7**):**
>   **Nov.8th, 2017, Wednesday (for MW class)**
>   **Nov.10th, 2017, Friday (for MWF class)**

Exam #3 (UNT official final exam schedule, **Covers Ch 8, 9 and 10**):
>   **Nov.13th, 2017, Wednesday; 1:30 -3:30 p.m. (for MW 4-520 class)**
>   **For MWF 10-1050am class: TBD**

UNT Official Academic Calendar: Fall 2017

Date	Event
August 28, 2017	First Class Day (Monday)
September 4, 2017	Labor Day (no classes; university closed)
November 23-26, 2017	Thanksgiving Break (no classes; university closed)
December 6-7, 2017	Pre-finals Days
December 7, 2017	Last Class Day
December 8, 2017	Reading Day (no classes)
December 9-15, 2017	Finals
December 23, 2017 - January 1, 2017	Winter Break (no classes; university closed)

Important event:

Engineering & Computer Science Internship & Career Fair

Thursday, October 5, 2017

11am-3pm

Discovery Park

MEEN 2301.001/.002 Mechanics I (Statics)

Schedule Overview
(Please note the schedule may change based on the needs during the semester)

Week	Date	Lecture Topics
#1	Aug.28th - Sept.1st	Review of syllabus; Introduction; Chapter 1: General Principle
		Chapter 2: Force Vector (1)
#2	Sept.4th – Sept.8th	Labor Day, no class
		Chapter 2: Force Vector (2)
#3	Sept.11th – Sept.15th	Chapter 2: Force Vector (3)
		Chapter 3: Equilibrium of a Particle (1)
#4	Sept.18th – Sept.22nd	Chapter 3: Equilibrium of a Particle (2)
		Chapter 4: Force System Resultants (1)
#5	Sept.25th – Sept.29th	Chapter 4: Force System Resultants (2)
		Chapter 4: Force System Resultants (3)
#6	Oct.2nd – Oct.6th	Review lecture
		Exam 1
#7	Oct. 9th – Oct.13th	Chapter 5: Equilibrium of Rigid Body (1)
		Chapter 5: Equilibrium of Rigid Body (2)
#8	Oct. 16th – Oct.20th	Chapter 6: Structural Analysis (1)
		Chapter 6: Structural Analysis (2)
#9	Oct. 23rd – Oct.27th	Chapter 6: Structural Analysis (3)
		Chapter 7: Internal Forces (1)
#10	Oct.30th – Nov.3rd	Chapter 7 : Internal Forces (2)
		Chapter 7 : Internal Forces (3)
#11	Nov.6th – Nov.10th	Review lecture
		Exam 2
#12	Nov 13th – Nov.17th	Chapter 8 : Friction (1)
		Chapter 8 : Friction (2)
#13	Nov.20th – Nov.24th	Chapter 9: Center of Gravity/Centroid (1)
		Thanksgivings (for MWF class)
#14	Nov.27th – Dec. 1st	Chapter 9: Center of Gravity/Centroid (2)
		Chapter 10: Moments of Inertia (1)
#15	Dec. 4th – Dec. 8th	Chapter 10: Moments of Inertia (2)
		Review lecture
		December 6-7, pre-final days (no new materials; review) Dec 7th last class day Dec 8th Reading day (No class)
#16	Dec. 11th – Dec. 15th	Final Exam week For MW 4:00-5:20 pm class: Dec 13th, 1:30-3:30 pm; room D201 For MWF 10:00-10:50 am class: TBD

Document History: Dr. Xiaohua Li, Prepared on 8/25/2017

Fall 2017 Final Exams - Discovery Park

http://registrar.unt.edu/exams/final-exam-schedule/fall

Pre-finals days are Wednesday, December 6 - Thursday, December 7. Reading Day is December 8 and no classes will meet.

* Evening Classes: have their final exams on the earliest usual class time this week. Classes with start times 4:00 p.m. and later are considered evening classes.

Saturday, December 9	
This class...	*Has a final exam at this time...*
All Saturday classes & All INET Classes with On Campus Finals	Contact Department
MWF 10:30 a.m.	8:00 a.m. - 10:00 a.m.
MWF 1:30 p.m.	10:30 a.m. - 12:30 p.m.
MWF 4:30 p.m.	1:30 p.m. - 3:30 p.m.
F 2:30 p.m. - 5:20 p.m.	1:30 p.m. - 3:30 p.m.
Monday, December 11	
This class...	*Has a final exam at this time...*
MWF 8:30 a.m.	8:00 a.m. - 10:00 a.m.
MWF 11:30 a.m.	10:30 a.m. - 12:30 p.m.
MWF 2:30 p.m.	1:30 p.m. - 3:30 p.m.
M 2:30 - 5:20 p.m.	1:30 p.m. - 3:30 p.m.
MW 2:30 p.m.- 3:50 p.m.	1:30 p.m. - 3:30 p.m.
Tuesday, December 12	
This class...	*Has a final exam at this time...*
TR 8:30 a.m.	8:00 a.m. - 10:00 a.m.
TR 11:30 a.m.	10:30 a.m. - 12:30 p.m.
TR 2:30 p.m.	1:30 p.m. - 3:30 p.m.
T 2:30 p.m. - 5:20 p.m.	1:30 p.m. - 3:30 p.m.
Wednesday, December 13	
This class...	*Has a final exam at this time...*
MWF 9:30 a.m.	8:00 a.m. - 10:00 a.m.
MWF 12:30 p.m.	10:30 a.m. - 12:30 p.m.
W 2:30 p.m. - 5:20 p.m.	1:30 p.m. - 3:30 p.m.
MWF 3:30 p.m.	1:30 p.m. - 3:30 p.m.
MW 4:00 p.m. - 5:20PM	**1:30 p.m. - 3:30 p.m.**
Thursday, December 14	
This class...	*Has a final exam at this time...*
TR 10:00 a.m.	8:00 a.m. - 10:00 a.m.
TR 1:00 p.m.	10:30 a.m. - 12:30 p.m.
R 2:30 p.m. - 5:20 p.m.	1:30 p.m. - 3:30 p.m.
TR 4:00 p.m.	1:30 p.m. - 3:30 p.m.