Wright State University Spring 2020
Department of Mechanical and Materials Engineering

ME 2120: STATICS

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Class Hours: MW, 6:10 pm - 7:30 pm, Russ Engineer Cntr 145
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Grading: Abby Neal, email: neal.81@wright.edu
Textbook: *Vector Mechanics for Engineers: Statics*, Beer, Johnston, Mazurek and Cornwell, McGraw-Hill, 10th or 11th edition (three copies of the textbook are on reserve in the main library). **No late homeworks.**
Course Grade: 10% Problem Sets, 20% Exam I, 30% Exam II, 40% Final Exam
A: 100 to 90; B: 89 to 80; C: 79 to 70; D: 69 to 60; F: ≤ 59

Course Schedule: **Late homework receives no credit.**

	Date	Subject	Chapter(s) Covered	Homework Handout/Assignment	Due Date
1	1/13	Introduction	1 and 2	#1: 2.22, 24, 26, 30, 46, 58, 66	
2	1/15	Statics of Particles	2	#2: 2.72, 74, 88, 94, 110	
3	1/22	Statics of Particles	2		Hmwk #1
4	1/27	Equivalent Systems	3	#3: 3.13, 22, 48, 58, 77, 97, 120	Hmwk #2
5	1/29	Equivalent Systems	3		
6	2/3	Equivalent Systems	3		
7	2/5	Review Session			Hmwk #3
8	2/10	**Exam I**	**1,2,3**		
9	2/12	Equilibrium of Rigid Bodies	4	#4: 4.3, 7, 15, 20, 30, 53, 78, 92, 116, 136	
10	2/17	Equilibrium of Rigid Bodies	4		
11	2/19	Equilibrium of Rigid Bodies	4		
12	2/24	Centroids	5	#5: 5.14, 23, 47, 76, 111, 129	Hmwk #4
13	2/26	Centroids	5		
14	3/9	Analysis of Structures	6	#6a: 6.5, 10, 15, 23, 43, 49, 52	Hmwk #5
15	3/11	Analysis of Structures	6		
16	3/16	Analysis of Structures	6	#6b: 6.79, 85, 95, 103, 123, 133, 145, 153	Hmwk #6a
17	3/18	Analysis of Structures	6		
18	3/23	Review Session			Hmwk #6b
19	3/25	**Exam II**	**4,5,6**		
20	3/30	Forces in Beams	7	#7: 7.7, 16, 40, 52, 80	
21	4/1	Forces in Beams	7		
22	4/6	Friction	8	#8: 8.2, 14, 65, 121	Hmwk #7
23	4/8	Friction	8		
25	4/13	Moments of Inertia	9	#9: 9.49, 50, 51, 54, 115, 127	Hmwk #8
26	4/15	Moments of Inertia	9		
27	4/20	Moments of Inertia	9		
28	4/22	Review Session			Hmwk #9
29	4/29	**Final Exam**	**1 to 9**		

All Exams are closed-book, closed notes, in-class exams. One-page (A4 format, both sides) formula sheet of your own creation is allowed. Make-up exams will be given only in the case of documented emergencies.

Comprehensive Final Exam: Wednesday, April 29, 2020 Time: 5:45 p.m. - 7:45 p.m.

http://www.wright.edu/raiderconnect/registration/exam-schedules#Spr2020

Additional Course Resources:

Solution of old tests, instructional PDF files containing lecture notes, and other educational materials are available in **Pilot** to provide 'supplemental information' and to improve your understanding of the content. This information *is intended to augment*, not replace the course information contained in the required textbook.

Prerequisites:

MTH 2310, PHY 2400

Problem Solutions:

Problem solutions must be neat and orderly. **They must include each of the following, when applicable.** You must be capable of making the decision of the information to include in your solutions. **For example:** To use Newton's law, you must draw a free-body diagram. Free body diagrams don't make sense, when not applying either Newton's laws or variants of Newton's laws, i.e. sketches for determining properties of areas, etc.

1. **Given:** Briefly state what you know from the problem statements
2. **Known Equations or Processes:** List all laws and principles that you will apply in solving the problem.
3. **Free Body Diagram:** Sketch *and/or* free body diagram (FBD). You must have at least one except under the most unusual circumstances where neither applies.
4. **List known quantities**, list *all* known variables and unknown variables in the vectors.
5. **What are you asked to find?** List exactly what you are expected to determine.
6. **Solution**: Generation of the set of equations with substitutions made. Solution if simple, set of equations to be solved if not. Solution is always expected on homework and exams.
7. **Check:** When you generate a solution, *does the result make sense*? As engineers, you must have insight as to whether or not an answer seems reasonable *before* you solve the problem. Check if units in the answer make sense.

Cheating: ***Don't***

Footnotes:

You may also be notified via email during the quarter of other course specific information. Email will only be sent to your class account.

Academic Integrity: Students are encouraged to work together on homework and laboratory assignments. However, **COPYING OF WORK IS NOT PERMITTED**. The graders have been instructed to identify homework that displays evidence of verbatim copying; all such solutions will receive zero credit regardless of the source of the solution, i.e. the person providing the solution will also receive a zero score. Cases of academic dishonesty, which include copying of homework or lab assignments, plagiarism of lab abstracts, or cheating on exams, will be dealt with according to the procedures set forth in the university's academic integrity policy at http://www.wright.edu/students/judicial/integrity.html. College of Engineering and Computer Science students found guilty of two violations of the university's academic integrity policy are subject to dismissal.