ENGR 220 – Statics
Fall 2021

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Description:
Principles of mechanics, force systems, equilibrium, structures, distributed forces, moments of inertia of areas, and friction. The course will serve the requirements of the several engineering curricula.

Text:
Hibbeler, R.C., *Engineering Mechanics: Statics* (**ANY EDITION**) by Prentice Hall
- If you will take Dynamics at UWSP consider purchasing the combined text with Dynamics.

Topics:
- Force vectors and moments
- Equilibrium of particles and rigid bodies
- Trusses, frames, and machines
- Friction
- Center of Gravity
- Moment of Inertia

Website:
https://canvas.uwsp.edu
- This class is a hybrid format so much of the course in online at the above website.

Meeting Times:
- Wednesday - Marshfield - Room 126 - 1:00PM - 1:50PM
- Thursday - Wausau - Room 284 - 9:00AM - 9:50AM
- Friday - Stevens Point - Science Building A106 - 10:00AM - 10:50AM
- All meetings also in Zoom, check Canvas for link

Grading:
5% - In-class problems: During the face-to-face portion of the class problems will be completed with help from other students and the instructor. Credit will be given for simply doing these problems
10% - Homework: Assignments are due weekly. Group work is encouraged on homework; however, each student must submit their own assignment. The answers will be given with the assignment. These answers should be used as a guide as to whether you've done the problem correctly. The homework will be graded for completeness only.
10% - Online quizzes: Online quizzes via Canvas corresponding to each homework assignment. Each quiz will consist of a handful of questions from a larger bank of questions. You will be allowed 2 attempts for each quiz and the best score will be recorded.
50% - Exams: 4 equally weighted exams as shown on the schedule. These exams will be proctored outside of class. Each exam will consist of a few open-ended problems like those done for homework. One 8.5" x 11" sheet of notes, your textbook, and calculator is allowed. You must use your own note sheet. Partial credit will be given.
15% - Final Exam: The final exam will consist of 10 multiple choice questions taken from the Fundamentals of Engineering certification exam. Partial credit will be given for getting the correct answer and partial credit will be given for the work done to achieve the answer. One sheet of notes, your textbook, and a calculator will be allowed on the final exam.
10% - Bridge Project: Design, build, and mathematically model a bridge made from wood.

Grading Scale
- 93 – 100% = A
- 90 – 92% = A-
- 87 – 89% = B+
- 83 – 86% = B
- 80 – 82% = B-
- 77 – 79% = C+
- 73 – 76% = C
- 70 – 72% = C-
- 67 – 69% = D+
- 63 – 66% = D
- 60 – 62% = D-
- < 59% = F

Course Schedule:

Date	Topic	Date	Topic
2-Sep	Introduction	25-Oct	Exam 2
3-Sep		26-Oct	
6-Sep	Labor Day	27-Oct	Trusses
7-Sep	2D Vectors	28-Oct	
8-Sep		29-Oct	
9-Sep		1-Nov	Frames/Machines
10-Sep		2-Nov	
13-Sep	3D Vectors	3-Nov	
14-Sep		4-Nov	
15-Sep		5-Nov	
16-Sep		8-Nov	Friction
17-Sep		9-Nov	
20-Sep	Moments	10-Nov	
21-Sep		11-Nov	
22-Sep		12-Nov	
23-Sep		15-Nov	Exam 3
24-Sep		16-Nov	
27-Sep	Equivalent Systems	17-Nov	Centroids
28-Sep		18-Nov	
29-Sep		19-Nov	
30-Sep		22-Nov	Bridge Work
1-Oct		23-Nov	
4-Oct	Exam 1	24-Nov	
5-Oct		25-Nov	Thanksgiving
6-Oct	2D Equilibrium	26-Nov	
7-Oct		29-Nov	Moments of Inertia
8-Oct		30-Nov	
11-Oct	Static Equilibrium	1-Dec	
12-Oct		2-Dec	
13-Oct		3-Dec	
14-Oct		6-Dec	Exam 4
15-Oct		7-Dec	
18-Oct	3D Equilibrium	8-Dec	Bridge/Review
19-Oct		9-Dec	
20-Oct		10-Dec	
21-Oct		14-Dec	Final Exam
22-Oct		15-Dec	