

UNIVERSITY OF WISCONSIN
DEPARTMENT OF ENGINEERING PHYSICS
Schedule for EMA 201 - Statics

Second Semester 2004-05

TEXTBOOK: Engineering Mechanics: Statics (Ch.1-6), Plesha, Gray, and Costanzo, and Engineering Mechanics – Statics, 7th Ed., (Ch. 5, 7-9), Beer, Johnston, and Eisenberg

PREREQUISITES: Math 222 (or concurrent registration)

(HW = Homework problems in text)

INSTRUCTOR: Mr. David Hoerr, Room 3350 EH, 262-0434, dmhoerr@wisc.edu

(DSN = Design Homework problem)

COURSE HOME PAGE: <http://www.engr.wisc.edu/ep/ema> (click on: Course Descriptions, EMA 201, Homepage for Hoerr, ...)

OFFICE HOURS: 1:00-2:30pm TR

Week	Mtg.	Text Section	HW set*	Problem Assignment	CAE Tutorial #'s
1/19	1	Introduction		<i>(discussion sections meet starting 1/24)</i>	
	2	1.1-1.6		1.1, 1.3a, c, e, g, i, k, m, 1.8, 1.11a	
1/24	3	2.1		2.3, 2.10, 2.13	
	4	2.2		2.25, 2.29, 2.33	
	5	2.3	HW1*	2.44, 2.53, 2.56	5, 7, 9
1/31	6	2.4		2.64, 2.68, 2.73	
	7	2.5, 2.6		2.87, 2.93, 2.106	
	8	3.1	HW2*	3.7, 3.21, 3.23, 3.29	1, 3, 4, 13, 15, 49
2/7	9	3.2		3.32, 3.44, 3.46	
	10	3.3		3.48, 3.57, 3.64	
	11	3.4, 3.5		3.68, 3.74, 3.77, DSN1	11, 19, 26
2/14	12	<i>NO LECTURE</i>	EXAM 1	(Tue., Feb. 15, 5:45-7:00 pm & Make-up Wed., Feb. 16, 5:45-7:00 pm)	
	13	4.1		4.1, 4.7, 4.16, 4.17	21, 27
	14	4.2		4.25, 4.31, 4.41	25, 28
2/21	15	4.3		4.46, 4.47, 4.48	24
	16	4.4		4.47, 4.62, 4.63, 4.76	17, 23
	17	4.5	HW3*	4.78, 4.81, 4.85	
2/28	18	5.1, 5.2		5.4, 5.10, 5.29	30, 31, 32, 51, 53, 55
	19	5.3		5.35, 5.42, 5.43, 5.48	
	20	review	DSN1		
3/7	21	<i>NO LECTURE</i>	EXAM 2	(Tue., Mar. 8, 5:45-7:00 pm & Make-up Wed., Mar. 9, 5:45-7:00 pm)	
	22	5.4 - 5.6		5.75, 5.78, 5.87, 5.89	35, 37, 39, 41
	23	6.1		6.5, 6.7, 6.9a	43
3/14	24	6.2, 6.3		6.14, 6.18, 6.21	45, 47
	25	6.4, 6.5	HW4*	6.28, 6.30, 6.32a, 6.36, 6.38	56, 57, 59
	26	problems			
3/21	<i>SPRING RECESS: Saturday Mar. 19 – Sunday Mar. 27</i>				
3/28	27	5.1-5.5(BJE)		5.130, 5.26,	86, 87, 89
	28	5.6-5.7(BJE)		5.33, 5.43, 5.48	81, 83, 84
	29	5.8-5.9(BJE)	HW5*	5.63, 5.75, 5.82	29, 31, 32, 33
4/4	30	5.10-5.11(BJE)		5.91, 5.100, 5.109	85, 88, 90
	31	5.12(BJE)		Verify \bar{x} for the solid cone (p. 261), 5.119	
	32	review		DSN2	
4/11	33	<i>NO LECTURE</i>	EXAM 3	(Tue., Apr. 12, 5:45-7:00 pm & Make-up Wed., Apr. 13, 5:45-7:00 pm)	
	34	7.1-7.2(BJE)		7.4, 7.5, 7.18(A: $F=130\text{ lb}\leftarrow$, $V=30.0\text{ lb}\downarrow$, $M=72.0\text{ lb}\cdot\text{ft}\text{ CW}$)	
	35	<i>ENGINEERING EXPO – NO CLASS</i>			
4/18	36	7.3-7.5(BJE)		7.30, 7.40, 7.47	61, 63, 65, 67, 69
	37	7.6(BJE)		7.65, 7.80	
	38	8.1-8.4(BJE)		8.16(A: $P=141.3\text{ N}$, $h=0.800\text{ m}$), 8.21, 8.141b	73, 75, 76, 77
4/25	39	8.5, 8.10(BJE)	DSN2	8.48, 8.60, 8.107, 8.111a	78, 79, 80
	40	problems			
	41	9.1-9.5(BJE)	HW6*	9.2(A: $a^3b/30$), 9.3, Find J_o , k_x , k_y for Fig. P9.3(A: $bh(h^2+b^2)/4$, $h/\sqrt{2}$, $b/\sqrt{2}$)	91, 93
5/2	42	9.6-9.7(BJE)		9.31, 9.33, 9.53	
	43	9.11-9.15(BJE)		9.114, Verify I_x for the solid sphere (p. 517), 9.144, 9.145	
	44	review			

Final Examination: 7:25 – 9:25PM, Tuesday, May 10 (**NO MAKE-UP FINAL**)

The student is responsible for arranging a program that has neither conflicts nor excessive demands in its final exam schedule.

* See reverse for list of problems included in each HW Set to be collected

<u>Weighting</u>		<u>Approximate grading</u>		
Average of three one-hour exams	45%	A	- 90 - 100 %	AB, BC and borderline grades decided based on final exam.
Final exam	30%	B	- 80 - 90	
HW	5%	C	- 70 - 80	
Design HW	10%	D	- 60 - 70	
Lecture participation	5%	F	- Below 60	
Discussion sec. participation	5%			

Attendance is required at all lectures and discussion sections.

Walk-In-Help
starting Jan. 24

M-F 11:00-1:00
M,W,Th 4:35-5:30
4th Floor,
Wendt Library

HOMEWORK SETS

- HW1:** 1.1, 1.3a, c, e, g, i, k, m, 1.8, 1.11a
2.3, 2.10, 2.13 **NOTE:** HW problems not listed here will not be collected.
- HW2:** 2.25, 2.29, 2.33
2.44, 2.53, 2.56
2.64, 2.68, 2.73
- HW3:** 4.1, 4.7, 4.16, 4.17
4.25, 4.31, 4.41
- HW4:** 5.75, 5.78, 5.87, 5.89
6.5, 6.7, 6.9a
- HW5:** 6.14, 6.18, 6.21, 6.28, 6.30, 6.32a, 6.36, 6.38
- HW6:** 7.4, 7.5, 7.18
7.30, 7.40, 7.47
7.65, 7.80
8.16, 8.21, 8.141b

INSTRUCTIONS FOR ACCESSING THE UW-CAE STATICS TUTORIALS

- Step 1: Go to any NT machine in CAE.
- Step 2: Press CTRL-ALT-DEL & Login.
- Step 3: Click on START (lower left-hand corner of screen).
 - Highlight: CAE APPLICATIONS
 - Highlight: ADD APPLICATION TO "START" MENU
 - Highlight: BY ALPHABETICAL
 - Highlight: T-Z
 - Highlight: UW STATICS PROBLEMS & put ckeckmark in box
- Follow the on-screen instructions from there ...

Next time you log in, the STATICS TUTORIALS will automatically appear in your personal list of applications.

Printed copies of the tutorial problems, with answers, are available at Bob's Copy Shop for about \$2.00-\$2.25. It is suggested that you work these problems on your own first, and then consult the tutorial to check your solution, or to see if there are alternative solution approaches, etc.

TECHNICAL WRITING

A technical writing guide for use on the Design Homeworks (courtesy of Prof. Mike Plesha) is located at:
<http://courses.engr.wisc.edu/ecow/get/ema/201/plesha/designhw/>