Concordia UNIVERSITY

Faculty of Engineering and Computer Science

ENGR 242/4-J Statics **Winter 2014**

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Lectures: Tuesday, Thursday 11:45 – 13:00, H-411 **Tutorials:** Friday, 13:45-15:25. H-423, FG-B055

Course objectives: To develop the basic concepts and principles of Statics as well as the ability to apply them in a systematic and logical manner for the solution of simple problems.

Text: Vector Mechanics for Engineers (Statics), Tenth Edition in SI Units, by Beer, Johnston & Mazurek, McGraw-Hill.

Previous editions of this book, particularly the 3rd ,7th, 8th and 9th SI Metric Editions, may also be used.

Performance: Grading is based on one of the following two weighting schemes, whichever is more favorable to the individual student:

(i) 100% on the final exam, or

(ii) 60% on the final exam; 30% on the average of the term-tests; and 10% on the tutorial work.

Also note that the final examination must be passed in order to pass the course.

Calculators: Sharp EL 531 or Casio FX-300 MS approved by ENCS; **cell phones** are prohibited

TENTATIVE SCHEDULE **ASSIGNMENTS**

Week	Date	Sections		Suggested Problems
1	Jan. 6	1.1-6		
		2.1-8	Ch. 2:	# 7, 35, 41
2	Jan. 13	2.9-11	Ch. 2:	# 45, 52, 60, 65
		2.12-15	Ch. 2:	# 75, 77, 86, 89, 104, 121
3	Jan. 20	3.1-8	Ch. 3:	# 7, 12, 21
		3.9-16	Ch. 3:	# 48, 51, 60, 71, 80, 98
4	Jan. 27	3.17-21	Ch. 3:	# 102, 105, 110, 115, 129
		4.1-5	Ch. 4:	# 4, 9, 23, 36, 51
	TBA	**TEST 1: Chapters 1, 2 & 3**		
5	Feb. 3	4.6-9	Ch. 4:	# 66, 84, 92, 97, 105, 114, 122, 145
6	Feb. 10	5.1-5	Ch. 5:	# 6, 15, 28, 32
		5.6-9	Ch. 5:	# 46, 56, 74, 84, 90
7	Feb. 24	5.10-12	Ch. 5:	# 97, 107, 119, 132
8	Mar. 3	6.1-5	Ch. 6:	# 1, 6, 21, 23, 31
		6.7, 6.9-11	Ch. 6:	# 43, 49, 53, 62
	TBA	**TEST 2: Chapters 4 & 5**		
9	Mar. 10	6.12	Ch. 6:	# 77, 81, 91, 111, 129, 137, 143, 148
		7.1-5	Ch. 7:	# 18, 30, 35, 49, 54
10	Mar. 17	7.6	Ch. 7:	# 63, 65
		8.1-4	Ch. 8:	# 1, 7, 12, 46
11	Mar. 24	8.5	Ch. 8:	# 54, 60
	TBA	**TEST 3: Chapters 6, 7 & 8**		
12	Mar. 31	9.1-5	Ch. 9:	# 2, 5, 10, 28
		9.6-8	Ch. 9:	# 31, 42, 45, 50
13	Apr. 7	9.11-15	Ch. 9:	# 71, 114, 128, 135, 141

Note: Assignments are to be kept in a binder for review and study.

CEAB graduate attributes to be taught in ENGR 242:

A knowledge base for engineering, i.e. demonstrated competence in university level mathematics, natural sciences, engineering fundamentals, and specialized engineering knowledge appropriate to the program.

Problem analysis, i.e. an ability to use appropriate knowledge and skills to identify, formulate, analyze and solve complex engineering problems in order to reach substantiated conclusions.

These attributes will be taught in the lectures by solving several sample problems and in the tutorials via specified problems; they will be **practiced** when students solve their assigned problems; and they will be **evaluated** in the term tests and the final exam of the course.