



DEPARTMENT OF SCIENCE

COURSE OUTLINE – FALL 2017

EG1300 – ENGINEERING MECHANICS I – 4(3-0-2) UT (75 Hours Over 15 Weeks)

INSTRUCTOR: Tanvir Sadiq, Ph.D. P. Eng., FEC, FGC(Hon) **PHONE:** 780.539.2865
OFFICE: J 209 **E-MAIL:** Tsadiq@gprc.ab.ca

OFFICE HOURS: TR 1130 - 1300

COREQUISITE: MA 1000

REQUIRED TEXT/RESOURCE MATERIALS: Hibbeler, R. C. - *Engineering Mechanics: Statics and Dynamics*. 14th Edition. Prentice Hall/Pearson. Available in different formats

CALENDAR DESCRIPTION: The course covers the equilibrium of planar systems. Analysis of statically determinate trusses and frames, friction, centroids and centres of gravity, forces and moments in beams, second moments of area are included

DELIVERY MODE(S): Lecture, Lab

EVALUATIONS:

Quizzes*	5%
Labs**	10% (Attendance Required)
Midterm	35% (1400 – 1530, Monday October 16, 2017)
Final Exam	50% (Time & Location TBA by Registrar's office)

Your final course grades will be announced by the Student Services. Grades/Marks will NOT be disclosed by email or telephone.

*There will be a quiz at the completion of each chapter. Some quizzes may not be announced in advance. Missed quizzes cannot be made up. Minor (up to 10%) adjustments may be made to the weights of assignments and quizzes at the discretion of instructor.

**Late labs will NOT be accepted.

MIDTERM EXAMINATION MISSED FOR ANY REASON WILL NOT BE RESCHEDULED. Students not writing the midterm exam, with a valid excuse (as defined by College policy) will have the midterm weight added to the final exam. This is not automatic, and if you miss the midterm, you should follow all College guidelines and contact your instructor as soon as possible. Midterm will be from the material covered up to the end of 6th week.

Students are expected to attend all classes. If you miss a class, make arrangements to copy the notes from your class fellows. If you are using older edition of the textbook, you are responsible for matching page numbers, topics, figures, and problems with the editions being used in the class. You are encouraged to ask questions, but do not monopolize the class time.

The material is presented in the order covered in the text. Some parts of Chapters 2, 5, 6, 7, 8 and 10 are not covered in this course.

COURSE OBJECTIVES: The Instructor will provide an understanding of Cartesian 2-D vector representation tools for the calculation of forces and moments and will demonstrate the use of Free Body Diagrams as the main method of analysis for 2-D and 3-D trusses and frames. Also methods to evaluate the internal forces and moments of trusses and frames will be presented. Simply distributed loads will also be shown to be valid loading conditions using their centroids for calculating simply loaded structures in equilibrium.

LEARNING OUTCOMES: Students will have the knowledge to be able to analyze and calculate the forces and moments acting on members of 2-D and 3-D planar structures in equilibrium such as trusses and frames. They will be able to include various 1-D and 2-D distributed loading configurations using centroids and centers of gravity.

TRANSFERABILITY: This is a University of Alberta Engineering Transfer Course. A Grade of D or D+ may not be acceptable for transfer to UA or other post-secondary institutions.

NOTES: (i) All written assignments must be neat and hand written on **Engineering Paper**; use pencil; staple all pages and use the assignment solution format provided. (Template attached.) (ii) All submitted work must be your own. See “Code of Student Behaviour” in the College Calendar.

GRADING CRITERIA:

GRADING CONVERSION CHART			
This is a general guideline only			
Alpha Grade	4-point Equivalent	Percentage Guidelines (General)	Designation
A ⁺	4.0	90 – 100	EXCELLENT
A	4.0	85 – 89	
A ⁻	3.7	80 – 84	FIRST CLASS STANDING
B ⁺	3.3	77 – 79	
B	3.0	73 – 76	GOOD
B ⁻	2.7	70 – 72	
C ⁺	2.3	67 – 69	SATISFACTORY
C	2.0	63 – 66	
C ⁻	1.7	60 – 62	
D ⁺	1.3	55 – 59	MINIMAL PASS
D	1.0	50 – 54	
F	0.0	0 – 49	FAIL
WF	0.0	0	FAIL, withdrawal after the deadline

STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the Student Conduct section of the College Admission Guide at <http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/**

Note: All Academic and Administrative policies are available on the same page.