

**CALIFORNIA STATE POLYTECHNIC UNIVERSITY
MECHANICAL ENGINEERING DEPARTMENT
WINTER 2016**

CLASS	ME214 SECTION 03 (CRN 14755) VECTOR STATICS	
TEXT	VECTOR MECHANICS for ENGINEERS, STATICS F.P. Beer, E.R. Johnston, E.R. Eisenberg, 11th Edition McGraw-Hill	
INSTRUCTOR	M. IZADI Room 222, Bldg. 9 Phone: 909-869-2548	
CLASS HOURS	Tu & Th :	1:00 PM - 2:15 PM
OFFICE HOURS	Tu & Th :	10:30 AM - 12:30 PM
PRE-REQUISITES	C or better in ENG104 or IGE120/121/122 C or better in MAT114 C- or better in PHY 131	
CO-REQUISITE	ME 224L (for ME Students only)	
GRADE DISTRIBUTION	Home Work Assignments	5%
	Quizzes	55%
	Final	40%

15 min. Quiz will be given every Thursday. Minimum of 6 Quizzes and the lowest score will be dropped.
ABSOLUTLY NO MAKE-UPS.

Homework will be assigned on a weekly basis, and will be collected a week following the day of the assignment. The assignments should be submitted at the start of the class on the due date. All homework problems should contain *Chapter Number, Problem Number, Equations, Sketches and Free-Body-Diagrams*, if applicable.

The answers should be placed in a box with appropriate units.

This class is fairly difficult and challenging. To be successful student need to allocate 6 to 8 hours per week to do the homework assignment. Student should focus on the understanding of the concepts and logics of the materials presented in class. Each and every assigned problem should be approached systematically through the logical application of those basic concepts. Memorizing a formulas or a recipe to do the homework is worthless. Discussion and collaboration on homework is highly recommended, **copying is not!**

FINAL EXAM	Thursday March 17, 11:30 AM to 1:30 PM (Normal Scheduled Day)
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Proposed Course Outline: ME 214 Vector Statics

DATE	TOPICS	TEXT	HOMEWORKS (Not all assigned)
Jan	05	Introduction Forces in a Plane, Vectors 2-D Components of Vectors	1.1-1.6 2.1-2.2 CH 1: To be assigned CH 2: 4,5,6,8,10,11,13,14,15,18,19 24,26,29,31,32,34,35,36,37,40,41,42
	07	Equilibrium of a Particle (2-D) Free-Body-Diagram (F.B.D.)	2.3 43,44,45,46,48,49,51,53,55,56,58,61,62,63, 66,68,69,70
	12	Forces in Space	2.4 72,75,77,78,82,84,85,87,89,91,94,95,96,97
	14	Equilibrium of a Particle (3-D)	2.5 99,101,103,106,107,110,112,113,115,117, 123,124,125,133,135,136
	19	Vector Product & Applications Moment about a Point	3.1 CH 3: 2,3,4,5,6,7,9,12,13,17,18,20,21,22,23,24,25, 26,27,28,29,30,32,33
	21	Scalar Product & Applications Moment about an Axis	3.2 35,37,39,40,41,43,44 47,49,51,52,53,56,57,59,60,63,64,65
	26	Couples	3.3 70,71,73,74,76,77,79,80
	28	Equivalent Systems	3.4 82,84,86,87,89,90,91,93,96,97,99,102, 104,108,110,114,116,119,120,124,128,129
	02	Rigid Body Equilibrium (2-D)	4.1 CH 4: 1,2,4,5,7,14,15,17,19,22,23,25,28,31,33,36, 37,39,40,41,43,45,46,47,48,50
	04	2 & 3 Force Members	4.2 65,67,68,69,72,73,75,77,82
Feb	09	Rigid Body Equilibrium (3-D)	4.3 91,93,94,97,99,101,105,106,108,117,121
	11	Trusses, Joints Method	6.1 CH 6: 3,4,5,6,8,9,11,12,13,15,19,28,31,32,34
	16	Method of Sections	6.2 43,44,45,46,49,50,52,53,54,60
	18	Frames Machines	6.3 6.4 75,76,77,79,81,87,88,91,92,93,100,101,102 122,123,127,131,139,140,142,143,147,154
	23	Dry Friction	8.1 CH 8: 1,3,4,5,7,8,9,13,14,16,17,18,19,21,25,27,32, 36,39,41,46
	25	Wedges & Belts	8.2,8.4 48,49,52,54,55,64,66,103,105,106,107,115, 118,138,141
	01	Centroids, Composite Plates Direct Integration	5.1 5.2 CH 5: 1,2,4,6,7,8,9,10,13,20,21,22,137 34,35,36,39,40,41,43,44,51
	03	Distributed Loads, Centroid of a Volume	5.3,5.4 66,67,69,70,71,72,73,76,100,102,144
	08	Moment of Inertia	9.1 CH 9: 1,2,4,6,8,9,10,11,12,15,16,17,18,21,25
	10	Parallel Axis Theorem	9.2 31,32,33,34,43,44,49,50,51,52,54,55

Course Review: Tuesday March 15, 1:00 PM to 3:00 PM (Optional)