

CE215

Course Syllabus

Aug 7
2019

Part I Course Organization

CE215 Statics and Dynamics (4units)

Lecture (2): WPHB30	Mon 10:00-11:50am	Wed 10:00-11:50am	
Discussion (1)	Fri 2-2:50pm WPH102		
Professor	Vincent Lee		
Office	KAP230B		
Phone	213-7400568		
Email	Through https://blackboard.usc.edu and https://piazza.com		
Office Hours	MW 8:30-9:50am or other times through Piazza		
Teaching Assistant	TBD		
TA Office	Meeting at KAP239 or tba		
Email	Through https://blackboard.usc.edu and https://piazza.com		
Office Hours	TBD		
Prerequisites	PHYS 151		
Textbook(s)	Engineering Mechanics: Statics & Dynamics 14th Edition By Russell C. Hibbeler The above textbook is available to purchase from the USC bookstore, or at Amazon.com :https://www.amazon.com/Engineering-Mechanics-Statics-Dynamics-		
Course Descriptions	Statics of particles and rigid bodies; equivalent force systems; distributed forces; applications to trusses, frames, machines, beams, and cables; friction; moments of inertia. Elements of vector algebra; dynamics of particles, systems of particles and rigid bodies; kinematics; momentum relations, energy methods; vibrations;		
Course Objectives	This course is appropriate for engineering students who need a strong background in the applications of physics-based mechanics principles in their work. These engineering students are primarily those dealing with structural design, machine design, aerospace		
Learning Objectives	See Pages Below		
Policies on:			
Late work	Partial Credit		
Make-up work	Partial Credit		
Incomplete work	Partial Credit		
Extra credit			
Final grade schema is based on the following percentages of graded coursework :			
Homework	6%		
Best 9 of 11 Qz	30%		
Midterms& Final	64%		
Total	100%		

CE215 Statics and Dynamics Fall 2019 Class Schedule

	Topics/Daily Activities	Readings and Homework	Deliverable/ Due Dates
Week 1 Aug 26, 28	Force, Vectors, System Resultants	Statics Chap 1, 2 & 3	HW 1 Quiz 1
Week 2 Sep 4	Particle & Rigid Body Equilibrium	Statics Chap 3, 4 & 5 Sep 2 Mon: Labor Day	HW 2 Quiz 2
Week 3 Sep 9, 11	Structural Analyses: Truss & Frames	Statics Chap 6	HW 3 Quiz 3
Week 4 Sep 16, 18	Shear/Moment Diagrams	Statics Chap 7	HW 4 Quiz 4
Week 5 Sep 23,25	Shear/Moment Diagrams cont., Kinematics I	Statics Chap 7	HW 5 Quiz 5 (due Wk#7)
Week 6 Sep 30, Oct 2	Kinematics II: Rectangular & Curvilinear coordinates	Dynamics Chap 1 & 2	HW 6 Mon Sep30 MTerm#1-statics
Week 7 Oct 7, 9	Kinetics: Equations of Motions	Dynamics Chap 3	HW 7 Quiz 6
Week 8 Oct 14, 16	Kinetics: System of Particles	Dynamics Chap 3	HW 8 Quiz 7
Week 9 Oct 21, 23	Work & Energy	Dynamics Chap 4	HW 9 Quiz 8(due Wk#11)
Week 10 Oct 28, 30	Impulse & Momentum	Dynamics Chap 5	HW 10 Mon Oct28 MidTerm#2
Week 11 Nov 4, 6	Plane Rigid Body Kinematics I	Dynamics Chap 6	HW 11 Quiz 9
Week 12 Nov 11, 13	Kinematics II, Kinetics I of Rigid Bodies	Dynamics Chap 6 & 7	HW 12 Quiz 10(due Wk#14)
Week 13 Nov 18, 20	Kinetics II of Rigid Bodies Work & Energy I	Dynamics Chap 7	HW 13 Wed Nov20 MidTerm#3
Week 14 Nov 25 No class: Nov27	Rigid Bodies Work & Energy II Impulse & Momentum I	Dynamics Chap 8 Thanksgiving Wed : No Class	HW 14 Turkey Quiz 11
Week 15 Dec 2	Rigid Bodies Impulse & Momentum II	Dynamics Chap 9	HW 15 (not due)
FINAL	Dec16 Mon 11am-1pm Final		

STATEMENT ON ACADEMIC INTEGRITY

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own.

All students are expected to understand and abide by these principles. *SCampus*, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A:

<http://www.usc.edu/dept/publications/SCAMPUS/gov/>

Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at:

<http://www.usc.edu/student-affairs/SJACS/>

STATEMENT FOR STUDENTS WITH DISABILITIES

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible.

DSP Contact Information

OFFICE LOCATION STU301	HOURS OF OPERATION 8:30 a.m.until5:00p.m.,MondaytoFriday	PHONE NUMBER (213)740-0776
----------------------------------	--	--------------------------------------

Part II Detailed Course Objectives

	By the end of this course, the student should be able to have learned and has a basic understanding of ...
1	Force Vector, Particle Equilibrium, Force System Resultants, Distributed Loads
2	Rigid Body Equilibrium, Structural Analysis: Truss, Frames & Machines
3	Internal Forces, Shear & Moment Calculations and Diagrams, Dry Friction
4	Kinematics: Rectilinear, Cartesian & Curvilinear Coordinates
5	Kinetics: Equation of Motions & of a System of Particles
6	Work & Energy of a Particle & a System of Particles
7	Impulse and Momentum
8	Kinematics of Rigid Bodies, Kinetics of Rigid bodies
9	Work & Energy of Rigid Bodies
10	Impulse and Momentum of Rigid Bodies