PEP 4200: Biomechanics
Tentative Course Outline
Spring 2017

Unit I: Introduction, Skeletal and Muscle Biomechanics

Dates	Topics	Readings from text	Problems	Assignments	Lab
Week 1 January 9	Introduction to biomechanics Kinematic concepts	Chapter 1 Chapter 2	Ch 1 Introductory Problems (IP; pg 16-17) 2, 3 & 8	Acknowledge Quiz Quiz A CYU Quiz Introduce Discussion	
Week 2 January 17	Kinetic concepts	Chapter 3	Ch 3 IP 1, 2, & 10	Assignment #1	
Week 3 January 23	Biomechanics of bone	Chapter 4	Ch 4 IP 1, 4, & 8		Laboratory Exercise 1
Week 4 January 30	Biomechanics of joints Biomechanics of muscle	Chapter 5 Chapter 6	Ch 5 IP 1 Ch 6 IP 1, 2, 4, & 5	**Quiz 1**	
Week 5 February 6	Biomechanics of muscle	Chapter 6	Ch 6 IP 1, 2, 4-9	Assignment #2	Laboratory Exercise 2
Week 6 February 13	**Exam 1**	Chapters 1-6			

Unit II: Linear and Angular Kinematics

Dates	Topics	Readings from text	Problems	Assignments	Lab
Week 7 February 21	Linear Kinematics	Chapter 10 321-333	Ch 10 IP 1, 2, & 3		Laboratory Exercise 3 & Laboratory Exercise 4

Week 8 February 27	Linear Kinematics	Chapter 10 333-349	Ch 10 IP 6, 7, 8, 9, & 10	Assignment #3	Laboratory Exercise 5
Spring Break March 6					
Week 9 March 13	Angular Kinematics	Chapter 11	Ch 11 IP 5 & 8	**Quiz 2**	
Week 10 March 20	**Exam 2**	Chapters 10-11			

Unit III: Linear and Angular Kinetics

Dates	Topics	Readings from text	Problems	Assignments	Lab
Week 11 March 27	Linear kinetics	Chapter 12 Chapter 15 (drag, 474)	Ch 12 IP 1-6, 8-10 Ch 15 IP 1-3		Laboratory Exercise 6 & Laboratory Exercise 7
Week 12 April 3	Linear kinetics	Chapter 12 Chapter 15 (drag, 474)	Ch 12 IP 1-6, 8-10 Ch 15 IP 1-3	Assignment #4	
Week 13 April 10	Linear kinetics	Chapter 12 Chapter 15 (drag, 474)	Ch 12 IP 1-6, 8-10 Ch 15 IP 1-3		
Week 14 April 17	Angular kinetics	Chapter 13	Ch 13 IP 1-5	**Quiz 3**	
Week 15 April 24	Angular kinetics	Chapter 14	Ch 14 IP 1, 2, 4 & 5	Term Paper (Research Abstract)	
Week 16 Final Week May 1	**Exam 3**	Chapters 12-15			