ENGR2202 SPRING 2018 SCHEDULE

*PAY ATTENTION TO DUE DATES

*DATES WITH AN ASTERISKS INDICATES ASSIGNMENT/PROJECT DUE OR A TEST/QUIZ

Week	Lecture Date	Lecture Topic	Practice Problems	Reading
1	T Jan 9	Review: Newton's Laws, Dimensions, Units, Gravitation Velocity, acceleration, position, Rectangular Co-ordinates	12.20, 24, 26, 28, 13.2, 4, 12,	Ch 12-13.1
	R Jan 11	Kinematics of a particle in Rectilinear Motion, Forms of acceleration	13.28, 30, 37, 38, 42, 46, 52, 60, 64	Ch 13.2-13.3
2	T Jan 16	Curvilinear Motion, Angular motion	13.70, 72, 76, 86, 94, 96,	Ch 13.4-13.5
	R Jan 18*	Angular motion **Quiz 1 (13.1-13.2)** Normal/Tangential co-ordinates	13.102, 108, 110, 112, 118, 122, 126	Ch 13.5-13.6
3	T Jan 23	Polar and Cylindrical co-ordinates**,** Relative Motion	13.138, 140, 146, 152, 154, 162, 164,	Ch 13.7-13.8
	R Jan 25*	Relative Motion, Equations of motion for particles, Inertial reference Frames **Quiz II (13.3-13.6)**	13.168, 170 14.2, 6, 8,14, 22, 28	Ch 14.1-14.2
4	T Jan 30	Equations of motion (contd) Applications-normal/tangential, polar/cylindrical	14.42, 48, 52, 58, 68, 72, 78, 94, 14.96, 102	Ch 14.2-14.3 **Project 1 due Feb 27**
	R Feb 1	Principles of Work and Energy, Work done by particular forces	15.4, 8, 12, 20, 22, 24, 32, 36, 40, 42, 54, 64	Ch 15.1-15.2
6	T Feb 6	Work and Potential Energy, Conservative Forces, Force relationship with Potential Energy	15.80, 88, 92, 94, 110, 112	Ch 15.3-15.4
	R Feb 8	Principles of Impulse and Momentum for a particle	15.114, 16.4, 16.12, 16.32	Ch 15.4, 16.1
7	T Feb 13*	**Exam 1**		
	R Feb 15	Impacts, direct/oblique, coefficient. of restitution,	16.44, 50, 52, 58, 60, 74,	Ch 16.2
8	T Feb 20	oblique, coefficient of restitution (contd), Angular Momentum **Quiz III (15.2-15.3)**	16.84, 86, 88, 90, 92	Ch 16.3
	R Feb 22	Planar Kinematics of Rigid Bodies Velocity relationship of two points on a Rigid Body	17.2, 4, 8, 12	Ch 17.1-17.2
9	T Feb 27* **(Project 1 due)**	Velocity relationship (contd.), Instantaneous center of zero velocity, Rolling on a plane curve	17.14, 16, 20, 34, 40, 64, 72, 78, 80	Ch 17.3-17.4

	R Mar 1	Acceleration Relationship of two points on the same rigid body), Secondary frame of reference (sliding)	17.48, 50, 82, 86, 88, 98, 102, 17.118, 120, 122, 130, 134	Ch17.4, 17.5
10	T Mar 6	Velocity/acceleration relationship wrt a secondary frame of reference (moving)	17.146, 150, 152, 154	Ch 17.6, 17.7
	R Mar 8	**Exam II (Chap 16.1-17.4)**		
11	T Mar 20	Coriolis Effects, Plane Motion-Equations of motion Rigid Bodies	18.10, 14, 18, 24, 38, 46, 48, 54, 60	Ch 18.1-18.2
	R Mar 22*	Momentum principles for a system of particles contd. **Quiz IV (17.5-17.6)**	18.64, 68, 88, 90, 18.94,	Ch 18(Appendix)
12	T Mar 27	Composite bodies, Radius of Gyration Moment of inertia, Work-Energy Rigid Body	18.96, 100, 106, 19.2, 8, 10, 18, 20	Ch 19.1 **Project 2 due April 24**
	R Mar 29	Power**,** Impulse-momentum: Rigid Body	19.24, 26, 28, 32, 34, 48, 50, 54, 60	Ch 19.1-19.2
13	T April 3	Impact: Rigid Bodies **Quiz V (18.1, 18.2)**	19.64, 66, 70, 76, 80, 82	Ch 19.3
	R April 5*	3-D Dynamics of Rigid Bodies, moving reference frames**,** Euler's Equations	20.2, 4, 8, 10, 12, 14	Ch 20.1
14	T April 10	3-D Dynamics of Rigid Bodies, moving reference frames**,** Euler's Equations	20.14, 16, 26, 28	Ch 20.2
	R April 12*	**Exam III (Chap 19.1-20.1)**		
	T April 17	Euler's Equations: General 3D motion 3D Equations of plane motion	20. 32, 42, 46, 48, 50, 52	Ch 20.2
16	R April 19	Euler Angles: Steady Precession, Precession of a Top	20.66, 68, 70, 72	Ch 20.3
	T April 24* **(Project 2 due date)**	Moments and Products of Inertia	20.80, 82, 88, 92	Ch 20 Appendix
17	R April 27	Moments and Products of Inertia Principal axes **Quiz VI (20.2, 20.3)**		
	T May 1*	**Final Exam, UH120 1400-1600 hrs**		