Three Rivers Community College Syllabus for Physics 221, Fall 2016/BLS

Text: Physics for Scientists and Engineers; by Douglass Giancoli, 4th ed

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Week	Topics
1, 8/29	Units, Gravity, Measuring, Kinematics, Scalars & Vectors Lab #1: Measuring length, mass, time; Calculating density
2, 9/12	Displacement, Velocity and Acceleration; Free Fall Lab#2: The Force Table and Equilibrium of Forces
3, 9/19	Vectors in Two Dimensions, Projectile Motion Lab#3: Studying Projectile Motion using the Spring Gun
4, 9/26	Newton's Laws of Motion, Free Body Diagrams Lab#4: Measuring Gravity using the Atwood Machine
5, 10/3	FIRST EXAM (Chapters 1, 2 & 3) 75 minutes; Friction Lab#5: Measuring Friction Coefficients
6, 10/10	Free Body Diagrams with Friction, Circular Motion No Lab: Time will be devoted to practicing problem solving.
7, 10/17	Gravitational Fields, Work and Energy Concepts Lab#6: Hooke's Law and determining spring constants
8, 10/24	SECOND EXAM (Chapters 4, 5, 6) 75 minutes: Conservation of Energy Lab#7: Energy Conservation measuring kinetic and potential energies
9, 10/31	Conservative and Non Conservative Systems, Linear Momentum Lab #8: The First Condition for Equilibrium, " The Bird on the Wire."
10, 11/7	Momentum Conservation, Elastic and Inelastic Systems Lab#9: Investigating Linear Momentum using the Ballistic Pendulum
11, 11/14	Introducing the Second Condition for Equilibrium, Material Properties Lab#10: Balancing Moments
12, 11/21	THIRD EXAM (Chapters 7, 8 & 9) 75 minutes: Rotational Motion Lab#11:
13, 11/28	Torque, Moments of Inertia,Angular Momentum Lab#12: Determining Moment of Inertia for Rotating Disk
14, 12/5	Simple Harmonic Motion (SHM) Lab: Determining Characteristics of SHM
15, 12/12	FINAL EXAMINATION (Chapters 10, 11, 12, 14)

Course grading will be based 75% exam scores and certain assigned homework, 25% laboratory reports.