The City College of New York Grove School of Engineering
2008 SCIENCE, TECHNOLOGY, ENGINEERING and MATHEMATICS (STEM)

PHYSICS - Mechanics / Course Syllabus

2008 Summer Schedule: July 2nd – August 10

Staff:

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Week	Date	Lesson	Section	Topic	Assignment
1	M 07/02	1		Introduction to Physics – Mechanics	
		2	1.2	Solving Physics Problems **p. 3**	
		3	1.3	Standards and Units **p. 5**	1.1, 1.2, 1.3
		4	1.4	Unit Consistency and Conversions **p. 8**	1.7, 1.9, 1.11
		5	1.5	Uncertainty and Significant Figures **p. 10**	1.13, 1.17
		6	1.6	Estimates and Orders of Magnitude **p. 13**	1.25
	TH 7/5	7	1.7	Vectors and Vector Addition **p. 14**	1.30, 1.33
		8	1.8	Components of Vectors **p. 18**	1.34, 1.35, 1.39
		9	1.9	Unit Vectors **p. 23**	
	F 7/6	Review / Exam 1			
2	M 7/9	10	2.1	Displacement, Time, and Average Velocity **p. 41**	2.2, 2.4, 2.5, 2.6
		11	2.2	Instantaneous Velocity **p. 44**	2.10
		12	2.3	Average and Instantaneous Velocity **p. 47**	2.12, 2.13, 2.19
	T 07/10	13	2.4	Motion with Constant Acceleration **p. 52**	2.32, 2.33
		14	2.5	Freely Falling Bodies **p. 58**	2.46
		15	2.6	Velocity and Position by Integration **p. 62**	2.50, 2.51
	W 07/11	16	3.3	Projectile Motion **p. 87**	3.9, 3.10, 3.11
		17	3.4	Motion in a Circle **p. 98**	3.29, 3.30
		18	3.5	Relative Velocity **p. 101**	3.36, 3.39
	TH 07/12	19	4.1	Force and Interaction **p. 120**	4.1, 4.4, 4.5
		20	4.2	Newton's First Law **p. 124**	
	F 07/13	Review / Exam 2			
3	M 07/16	21	4.3	Newton's Second Law **p. 128**	4.7, 4.8, 4.9
		22	4.4	Mass and Weight **p. 135**	4.15, 4.18
	T 07/17	23	4.5	Newton's Third Law **p. 138**	4.19, 4.23
		24	4.6	Free Body Diagrams **p. 143**	4.24
	W 07/18	25	5.1	Using Newton's First Law: Particles in Equilibrium **p. 154**	5.1, 5.3, 5.7
	TH 07/19	26	5.2	Using Newton's Second Law: Dynamics of Particles **p. 161**	5.15, 5.17
	F 07/20	Review / Exam 3			
4	M 07/23	27	5.3	Frictional Forces **p. 171**	5.21
	T 07/24	28	5.4	Dynamics of Circular Motion **p. 181**	5.43, 5.46
	W 07/25	29	6.1	Work **p. 208**	6.1, 6.3, 6.9
		30	6.2	Work and Kinetic Energy **p. 213**	6.10, 6.17, 6.21
	TH 07/26	31	6.3	Work and Energy with Varying Forces **p. 220**	6.28, 6.31
		32	6.4	Power **p. 227**	6.43, 6.44, 6.50
	F 07/27	Review / Exam 4			
5	M 07/30	33	7.1	Gravitational Potential Energy **p. 242**	7.1, 7.2, 7.9
	T 07/31	34	7.2	Elastic Potential Energy **p. 253**	7.15, 7.19
	W 08/01	35	7.3	Conservative and Nonconservative Forces **p. 260**	7.27, 7.31
		36	7.4	Force and Potential Energy **p. 265**	7.34
	TH 08/02	37	8.1	Momentum and Impulse **p. 283**	8.1, 8.2, 8.4
	F 08/03	Review / Exam 5			
6	M 08/06	38	8.2	Conservation of Momentum **p. 289**	8.14, 8.19
		39	8.3	Inelastic Collision **p. 295**	8.30, 8.33
	T 08/07	40	8.4	Elastic Collision **p. 300**	8.39, 8.40
	W 08/08			Project: Testing	
	TH 08/9			Project: Finishing	
	F 08/10	Final Presentation			