

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan
	No School						
<i>Class Topic</i>			Introduction; Housekeeping		Vectors and Relative Motion (Analytic + Computational)		
<i>Core Idea(s)</i>			N/A		Pre-Class homework 1: due at 12:00pm		
<i>Activity</i>			Marshmallow Challenge; Introductory Assessment		Project 1: Toy Navy		
Week 2	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan
		Holiday					
<i>Class Topic</i>			Constant Force - 1 Dimension & 2 Dimension (Analytic)		Interactive Prediction of Motion - 2D Kinematics + Drag (Computational)		
<i>Core Idea(s)</i>			Forces cause change in momentum		Forces cause change in momentum		
<i>Activity</i>	Post-class homework 1: due at 8:00pm	Pre-class homework 2: due at 8:00pm	Project 2: Escape from Ice State McMurdo: Parts A & B		Project 2: Escape from Ice State McMurdo: Part C		
Week 3	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan
<i>Class Topic</i>			Predicting Motion with Non-constant forces - Gravitation (Analytical)		Predicting Motion with Non-constant forces - Gravitation (Computational)		
<i>Core Idea(s)</i>			Forces cause change in momentum		Forces cause change in momentum		
<i>Activity</i>	Post-class homework 2: due at 8:00pm	Pre-class homework 3: due at 8:00pm	Project 3: Geosynchronous Orbit		Project 3: Geosynchronous Orbit		
Week 4	31-Jan	1-Feb	2-Feb	3-Feb	4-Feb	5-Feb	6-Feb
<i>Class Topic</i>			Predicting Motion with Non-constant forces - Springs (Analytic)		Ball and spring model; Tension and Compression		
<i>Core Idea(s)</i>			Forces cause change in momentum		Atomic interactions cause macroscopic		
<i>Activity</i>	Post-class homework 3: due at 8:00pm	Pre-class homework 4: due at 8:00pm	Project 4: Pinball Wizard Designer: Part A		Project 4: Part B: Escape from Korath		

Week 5	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb
<i>Class Topic</i>			Predicting Motion with Non-constant forces - Springs (Analytic)	Exam 1	Ball and spring model; Tension and Compression		
<i>Core Idea(s)</i>			Forces cause change in momentum		Group and Individual Exam	Atomic interactions cause macroscopic	
<i>Activity</i>	Post-class homework 4: due at 8:00pm	Pre-class homework 5: due at 8:00pm	Project 5: Part A: Escape from Korath	6:00pm - 8:30pm	Project 5: Part B: CSI East Lansing		
Week 6	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb
<i>Class Topic</i>			Friction		Multiparticle systems; Conservation of linear momentum (Analytic)		
<i>Core Idea(s)</i>			Atomic interactions cause macroscopic phenomenon; Forces cause change in momentum		Atomic interactions cause macroscopic phenomenon; Forces cause change in momentum		
<i>Activity</i>	Post-class homework 5: due at 8:00pm	Pre-class homework 6: due at 8:00pm	Project 6: Part A: Six Flags over East Lansing		Project 6: Part B: Six Flags over East Lansing		
Week 7	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb
<i>Class Topic</i>			Curving Motion (Analytic)		Curving Motion (Analytic)		
<i>Core Idea(s)</i>			Forces cause change in momentum		Forces cause change in momentum		
<i>Activity</i>	Post-class homework 6: due at 8:00pm	Pre-class homework 7: due at 8:00pm	Project 7: Part A: The Leaning Tower of P-Cubed		Project 7B: Breakneck -- The new roller-coaster at Michigan		

Week 8	28-Feb	29-Feb	1-Mar	2-Mar	3-Mar	4-Mar	5-Mar
<i>Class Topic</i>			Energy Conservation; Work by Constant Forces; Single Particle Systems: Work-KE		Multiparticle systems; Potential Energy and Work; Local Gravitational PE		
<i>Core Idea(s)</i>			Forces cause change in momentum; Energy is conserved		Forces cause change in momentum; Energy is conserved		
<i>Activity</i>	Post-class homework 7: due at 8:00pm	Pre-class homework 8: due at 8:00pm	Project 8: Part A: Launching a communications		Project 8b: Launching a communications probe		
Week 9	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar	11-Mar	12-Mar
		Holiday	Holiday	Holiday	Holiday	Holiday	
<i>Class Topic</i>							
<i>Core Idea(s)</i>							
<i>Activity</i>							
Week 10	13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
<i>Class Topic</i>			Multiparticle Systems & Potential Energy; Newtonian Gravitational PE	Exam 2	Multiparticle Systems & Potential Energy; Gravitational PE & graphing PE (computational)		
<i>Core Idea(s)</i>			Energy is conserved	Exam	Energy is conserved		
<i>Activity</i>	Post-class homework 8: due at 8:00pm	Pre-class homework 9: due at 8:00pm	Project 9: Part A: Post Apocalypse Now	6:00pm - 8:30pm	Project 9: Part B: Post-Apocalypse Now		
Week 11	20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar
<i>Class Topic</i>			Multiparticle systems & Potential Energy; Spring PE		Multiparticle systems & Thermal Energy; Heat Exchange and Dissipation		
<i>Core Idea(s)</i>			Energy is conserved		Forces cause change in momentum; Energy is conserved		
<i>Activity</i>	Post-class homework 9: due at 8:00pm	Pre-class homework 10: due at 8:00pm	Project 10: Part A: Engineering a movie stunt		Project 10: Part B: Engineering a movie stunt		

Week 12	27-Mar	28-Mar	29-Mar	30-Mar	31-Mar	1-Apr	2-Apr
<i>Class Topic</i>			Multiparticle systems; Rotational and Vibrational Energy; Center of mass		Multiparticle systems; Real vs Point Particle Systems		
<i>Core Idea(s)</i>			Forces cause change in momentum; Energy is conserved		Forces cause change in momentum; Energy is conserved		
<i>Activity</i>	Post-class homework 10: due at 8:00pm	Pre-class homework 11: due at 8:00pm	Project 11: Part A: Saving a probe		Project 11: Part B: Saving a space station		
Week 13	3-Apr	4-Apr	5-Apr	6-Apr	7-Apr	8-Apr	9-Apr
<i>Class Topic</i>			Torque		Torque		
<i>Core Idea(s)</i>			Forces cause change in momentum; Energy is conserved		Forces cause change in momentum; Energy is conserved		
<i>Activity</i>	Post-class homework 11: due at 8:00pm	Pre-class homework 12: due at 8:00pm	Project 12: Part A: Over the top		Project 12: Part B: Over the top		
Week 14	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr
<i>Class Topic</i>			Collisions; conservation of	Exam 3	Collisions; conservation of		
<i>Core Idea(s)</i>			Forces cause change in momentum; Energy is conserved	Group and Individual Exam	Forces cause change in momentum; Energy is conserved		
<i>Activity</i>	Post-class homework 12: due at 8:00pm	Pre-class homework 13: due at 8:00pm	Project 13: Part A: You Spin me right round.	6:00pm - 8:30pm	Project 13: You Spin me right round - computational		

Week 15	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	22-Apr	23-Apr
<i>Class Topic</i>			Conservation of angular momentum		Conservation of angular momentum		
<i>Core Idea(s)</i>			Torques cause changes in angular momentum - Analytical		Torques cause changes in angular momentum - Analytical		
<i>Activity</i>	Post-class homework 13: due at 8:00pm		Project 14: Showdown at the Boar Tiger Corral		Project 14: Showdown at the Boar Tiger Corral		
Week 16	24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	29-Apr	30-Apr
<i>Class Topic</i>			Applying conservation theorems		Applying conservation theorems (spillover); post-assessment		
<i>Core Idea(s)</i>			Forces cause change in momentum; Energy is conserved; Torques cause changes in angular momentum		Forces cause change in momentum; Energy is conserved; Torques cause changes in angular momentum		
<i>Activity</i>		Pre-class homework 14: due at 12:00am	Project 15: Choose your own adventure: design		Project 15: Choose your own adventure: solution		Post-class homework 14: due at 12:00am
Week 17	1-May	2-May	3-May	4-May	5-May	6-May	7-May
		Final					
<i>Class Topic</i>		Group and Individual Exam					
<i>Core Idea(s)</i>		6:00pm - 8:30pm					
<i>Activity</i>							