

1. Course evaluation: Your grade will be calculated as follows:

Homework* (Online)	10%	} 70% (16-week average)
Lab**	10%	
Quizzes [†]	5%	
Exam 1 [‡]	15%	
Exam 2 [‡]	15%	
Exam 3 [‡]	15%	
Final Exam [‡] (common)	30%	
Total	100%	

*An online homework assignment will be due each Sunday at 11 PM on WileyPLUS. There will be total fifteen (15) online homework assignments on WileyPLUS. **Late homework will not be accepted.**

**There will be total 10 labs (see the course schedule for details). During each lab you will write a report in you *lab-notebook* based on your own laboratory measurements and get your lab-report signed by me/the lab instructor at the end of your lab. After finishing all your labs, you will submit your *lab-notebook* (on Nov 29, 2012) to me to get your final lab grade.

[†] In-class quizzes will be given without any prior notice.

[‡]Four examinations are scheduled for the semester:

Exam 1	September 27, 2012 (Thursday)
Exam 2	November 1, 2012 (Thursday)
Exam 3	December 6, 2012 (Thursday)
Final Exam	date will be decided later

[Note: Exam 1, 2 and, 3 will be held in CH001, during regular lab hours (9:55 AM-11:45AM for Sec 4341 and 1:30PM-3:20PM for Sec 6541)]

2. Grades

Grades will be **linearly scaled** to a standard with which you are all familiar:

Greater than or equal to 90	A
Greater than or equal to 80 (but less than 90)	B
Greater than or equal to 70 (but less than 80)	C
Greater than or equal to 60 (but less than 70)	D
Less than 60	F

Syllabus, Topics, and Schedule

Textbook: Halliday and Resnick, Fundamentals of Physics, 9th edition, Vol. 1

The schedule of day-by-day lecture topics is listed below. To get the most out of each lecture, you should read -- AHEAD OF TIME! -- so that the lecture discussions will have something to stick to in your memory banks.

Course	Lecture time	Lecture Room	Lab Time	Lab Room
SP211/4341	MWF4	CH011	R34	CH001
SP211/6541	MWF6	CH011	R56	CH001

To access homework assignments on WileyPLUS

- Go to www.wileyplus.com.
- Click on the green button "Get started."
- In the find your class box type "US Naval Academy" and then click "Find."
- Click on the + under "Calc Physics" and then choose the green arrow for your Section Name (4341 or 6541) under Instructor "Rajratan Basu."

Week 1: 20 August - 24 August

Monday Administration

Wednesday 2.1 - 2.6 1D Kinematics

Thursday: Lab 0 (Introduction to Lab)

Friday 2.7 Constant Acceleration

HW1 due: Sunday 11 PM

Week 2: 27 August - 31 August

Monday 2.9 Free Fall

Wednesday 4.1 - 4.4 2D and 3D Kinematics

Thursday: Lab1 (1D Kinematics)

Friday 4.5 - 4.6 Projectile Motion

HW2 due: Sunday 11 PM

Week 3: 4 September - 7 September

Tuesday 4.7 Uniform Circular Motion

Wednesday 4.8 - 4.9 Relative Motion

Thursday 5.1 - 5.8 Newton's Laws

Friday 5.9 Applying Newton's Laws

HW3 due: Sunday 11 PM

Week 4: 10 September - 14 September

Monday 5.9 Applying Newton's Laws

Wednesday 6.1 - 6.3 Friction

Thursday: Lab2 (2D Kinematics)

Friday 6.4 - 6.5 Drag, Uniform Circular Motion

HW4 due: Sunday 11 PM

Week 5: 17 September - 21 September

Monday 7.1 - 7.6 Kinetic Energy, Work, Work Done by Gravity

Wednesday 7.7 - 7.9 Work done by Variable Forces, Power

Thursday Lab3 (Newton's Laws)

Friday 8.1 - 8.5 Potential Energy, Conservation of Mechanical Energy

HW5 due: Sunday 11 PM

Week 6: 24 September - 28 September

Monday 8.6 - 8.8 Conservation of Energy

Wednesday 9.1 - 9.5 Center of Mass, Momentum

*****Thursday EXAM-1*****

Friday Demo 1: Kinematics and Dynamics

HW6 due: Sunday 11 PM

Week 7: 1 October - 5 October

Monday Impulse, Conservation of Momentum

Wednesday 9.9 - 9.11 Collisions

Thursday: Lab4 (Uniform Circular Motion)

Friday 10.1 - 10.5 Rotational Kinematics

HW7 due: Sunday 11 PM

Week 8: 9 October - 12 October

Wednesday Rotational Kinetic Energy, Rotational Inertia

Thursday: Lab5 (Work and Energy)

Friday 10.8 - 10.9 Torque, Newton's 2nd Law for Rotation

HW8 due: Sunday 11 PM

Week 9: 15 October - 19 October

Monday 10.10 Work and Rotational Kinetic Energy

Wednesday 11.1 - 11.4 Rolling

Thursday: Lab6 (Momentum and 1D Collisions)

Friday 11.6 - 11.7 Angular Momentum

HW9 due: Sunday 11 PM

Week 10: 22 October - 26 October

Monday 11.8 - 11.11 Conservation of Angular Momentum

Wednesday 13.1 - 13.6 Newton's Law of Gravitation

Thursday: Lab7 (2D Collisions and Center of Mass)

Friday 13.7 - 13.8 Kepler's Laws, Satellites

HW10 due: Sunday 11 PM

Week 11: 29 October - 2 November

Monday 14.1 - 14.4 Fluids: Density and Pressure

Wednesday 14.6 - 14.9 Fluids: Pascal, Archimedes, Ideal Fluids

*****Thursday EXAM-2*****

Friday Demo 2: Energy and Momentum

HW11 due: Sunday 11 PM

Week 12: 5 November - 9 November

Monday 14.10 Bernoulli's Equation

Wednesday 15.1 - 15.4 Simple Harmonic Motion

Thursday: Lab8 (Rotational Kinematics and Dynamics)

Friday 15.6 Pendulums

HW12 due: Sunday 11 PM

Week 13: 13 November - 16 November

Wednesday 15.8 - 15.9 Damped and Forced Oscillations

Thursday Lab9 (Simple Harmonic Motion)

Friday 16.1 - 16.6 Traveling Waves

HW13 due: Sunday 11 PM

Week 14: 19 November - 21 November

Monday 16.7 - 16.10 Energy, Power, the Wave Equation, Superposition, Interference

Wednesday 16.12 - 16.13 Standing Waves (early schedule)

HW14 due: Sunday 11 PM

Week 15: 26 November - 30 November

Monday 17.1 - 17.3, 17.6 Sound Waves, Intensity

Wednesday 17.7 - 17.8 Sources of Musical Sound, Beats

Thursday: Lab10 (Standing Waves)

Friday 17.9 - 17.10 Doppler Effect, Shock Waves

HW15 due: Sunday 11 PM

Week 16: 3 December - 7 December

Monday Review Day

Wednesday Review Day

***** Thursday EXAM-3 *****

Friday Demo 3: Simple Harmonic Motion and Waves