Stevens Institute of Technology
PEP 123-A Syllabus

123-A: Physics I for B & T

Instructor: Dr Monika Sikand
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Light and Life Lab
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Office Hours: Friday 9-10 am

Course Web Address:
Course description embedded in Canvas and HW assignments available on Webassign

TA : Milos Stipanov
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Overview

Physics for Business and Technology is a first-year course that provides an introduction to Classical Mechanics including concepts of units and measurements, Newtonian mechanics, fluid mechanics, and thermodynamics. The objective of this course is to understand nature at its deepest level and provide knowledge and tools to understand the relevance of physics in Business and Technology world. This course is ideal for students whose ultimate goal is career in modern industry involving both technical and managerial components.

Prerequisites

This course will make use of language of science: mathematics including algebra, trigonometry etc.

Learning Goals

After taking this course, the student will be able to:

- Apply the physical laws and principles to practical problems
- Will learn to reduce the complexities of real-life physical situations to soluble problem using scientific approach
- Learn the art of problem solving using appropriate mathematical equations

Pedagogy

The course will employ lectures, class discussion, in-class reasoning questions, Webassign homework assignments, Lab reports and Recitations. A website for this course is embedded in Stevens canvas environment as well as in Webassign.

1. All subscribed student will have access to the canvas site using his or her stevens campus account username and password.
2. Access to the Webassign site has been granted with student access kit (part of your books) and please register to the class as soon as it is set up.

a) Go to link http://webassign.com

b) Then to header option “Students”.

c) Choose “ I have a key”. Students must use the class key

stevens 3700 9808 to enroll in this class and create an account with Webassign.

d) For student tech support go to

https://www.webassign.com/support/student-support/ OR call webassign at **1-800-955-8275**

Required Text

College Physics: REASONING AND RELATIONSHIPS, Volume 1, 2nd Edition by **Nicholas Giordano** ISBN-13: 9781111570958 (Vol. 2 is needed for PEP 124). If additional special literature is needed, it will be mentioned in class.

You can purchase textbook from Book store or here is online link:

http://services.cengagebrain.com/course/site.html?id=1607750

OR

http://www.cengage.com/coursepages/stevens_pep123_fall17/116213

Meetings

Two lectures per week.

1. Monday at 8:00-8:50AM,
2. Friday at 9:00-9:50 AM

One Two hour recitation/lab per week. Choose recitation/lab schedule from any of the sections

1. PEP 123LA, T 09:00-10:50AM (Location: Mclean Building X 105)

2. PEP 123LB, W 08:00-09:50AM (Location: Burchard Building B 714)

3. PEP 123LC, R 11:00-012:50PM (Location: Burchard Building B 714)

Attendance is mandatory at all lectures and lab. Attendance will be added into your class participation grade.

Computers

You are encouraged to make certain calculation, graphs, spreadsheets with the computer. Use of Scientific calculator is allowed during Quizzes.

Quiz Schedule

You will have three quizzes scheduled as follows

Quiz 1: September 22
Quiz 2: October 20
Quiz 3: November 17

The Freshman Quiz Schedule is available for viewing at the following site: http://www.stevens.edu/sit/registrar/schedule-calendars/quiz-sections

Lab Schedule

Labs will be conducted during TWO HOUR RECITATION/LAB per week.

1. **PEP 123LA, T 09:00-10:50AM**
2. **PEP 123LB, W 08:00-09:50AM**
3. **PEP 123LC, R 11:00-012:50PM**

Grading

The course will emphasize on the following categories for your overall grades:

1. Class Quizzes - To enhance the learning experience, all students are expected to participate in class quizzes. Class attendance is must in Lectures and Recitations. **Attendance at the lecture will be checked via class quizzes and you will have to initial a sign-in sheet in Lab/Recitation .**

2. Homework – Homework assignments must be completed by the required date and submitted via Webassign. Webassign will compute your weighted score of HW assignments and add to final score. **Late submissions will incur penality.**
   a) **1st missed deadline will have 20% grade cut on unsubmitted work.**
   b) **2nd missed deadline will have 50% grade cut on unsubmitted work.**
   c) **No more further extensions**

3. Quizzes – **Three Quizzes** will be given during the semester. Quizzes will be graded and returned within one week to you. Quiz scores will be uploaded to your Webassign account.

4. Lab Reports – Your TA will conduct **four labs** in semester during weekly recitations. Lab reports are due in one week time.

5. Final Exam – The final exam will be in class. The schedule will be posted on the website once finalized by registrar.

6. The grading categories are as shown below:

1. Class Participation	5%
2. Technology Presentation	5%
3. Homework	25%
4. Quizzes	20%
5. Lab Reports	15%
6. Final Exam	30%
TOTAL	**100%**

At the end of the semester, we add all these components up, based on your actual scores and weighted by the above factors. Your final grade is determined by the final score according to the following table:

Score range (%)	Letter grade
> 95	A
90-94	A-
87-89	B+
83-86	B
80-82	B-
76-79	C+
70-75	C
67-69	C-
63-66	D+
60-62	D
<60	F

PEP 123-A Fall 2017 Lesson Plan

Day	DATE	LECTURE	CH	TITLE		
Mon	28-Aug	1	1	Introduction & Measurements		
Fri	1-Sep	2	1	Introduction & Measurements		
Mon	4-Sep	No class				
Fri	8-Sep	3	2	Motion, Forces and Newton's Laws		
Mon	11-Sep	4	2	Motion, Forces and Newton's Laws		
Fri	15-Sep	5	3	Forces and 1-D motion		
Mon	18-Sep	6		Review for Quiz 1		
Fri	22-Sep	7	3	Forces and 1-D motion	Quiz 1	Ch 1-2
Mon	25-Sep	8	4	Forces and Motion in 2-D and 3-D	Lab1	
Fri	29-Sep	9	4	Forces and Motion in 2-D and 3-D		
Mon	2-Oct	10	5	Circular Motion and Gravitation	Lab2	
Fri	6-Oct	11	5	Circular Motion and Gravitation		
Mon	9-Oct	Fall recess- No classes				
Tue	10-Oct	12	6	Work and energy(Monday schedule on Tuesday)		
Fri	13-Oct	13	6	Work and energy		
Mon	16-Oct	14		Review for Quiz 2		
Fri	20-Oct	15	7	Momentum, Impulse and collisions	Quiz 2	Ch 3-6
Mon	23-Oct	16	7	Momentum, Impulse and collisions	Lab3	
Fri	27-Oct	17	8	Rotational Motion (Selective)		
Mon	30-Oct	18	8	Rotational Motion (Selective)		
Fri	3-Nov	19	9	Energy & Momentum of Rotational Motion (Selective)		
Mon	6-Nov	20	10	Fluids		
Fri	10-Nov	21	10	Fluids		
Mon	13-Nov	22		Review for Quiz 3		
Fri	17-Nov	23	11	Harmonic Motion and Elasticity (selective)	Quiz 3	Ch 8-10
Mon	20-Nov	24	12	Waves(Selective)		
Fri	24-Nov	No class				
Mon	27-Nov	25	13	Sound(Selective)	Lab4	
Fri	1-Dec	26	14	Temperature and Heat (Selective)		
Mon	4-Dec	27	15	Gas and Kinetic Theory (Selective)		
Fri	8-Dec	28	16	Thermodynamics (Selective)		
Final Exam 9-22-Dec						