

**PHY 2211K-004 and 005 – PRINCIPLES OF PHYSICS I**  
Fall 2013

**Instructor:** Dr. Kisa Ranasinghe

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**Office Hrs:** MTWR 11.15am-12.15pm and T 1-2.00pm and MW 2:00 pm-3:00 pm.

Location and Time:    Lecture: **J 161 MWF 10.00 – 10.00 am**  
                              Recitation: Section 004 **M 1.00 – 1.50pm @ D 156**  
                              Section 005 **W 1.00 – 1.50pm @ D 156**

Required Materials:

Textbook: **Physics for Scientists and Engineers with Modern Physics, 9e by Serway and Jewett.**

This book is leaf bound and specially made for SPSU for a special price. You can obtain the book from the following site. This site provides quick and easy access for students to purchase learning tools and materials. Follow the URL below to access the site:

<http://www.cengagebrain.com/micro/1-1C3DCC0>

Web-assigned:

Go to <http://www.webassign.net/> and click on the I have a class key. Then follow the keys below, section 004 use class key spsu 3359 3927  
section 005 use class ket spsu 3860 1832

If you prefer to use the ebook, instead of buying paper version, you can buy the webassign and the ebook using the website. The web-assign would be free during the first two weeks of classes for you to get started.

A scientific calculator (capable of computing trigonometric functions and their inverses)

Course Requirements: Previously, this course existed as PHYS 2211K, which had a linked lab. Now, there are two separate courses: PHYS 2211L and PHYS 2211 are mutual pre or co-requisites. You must be signed up for the lab course in order to take this lecture course, and you must be signed up for this lecture course in order to take the lab course. If you drop either the lab or lecture, you must drop both. **No lab exemptions are allowed**, regardless of any prior history at SPSU. The only circumstance in which you could take this course without also taking PHYS 2211L is if you have previously taken PHYS 2211L at another institution and have transferred the credit for the lab course. [Note: if your major shows a requirement for PHYS 2211K, you are now required to take both PHYS 2211 and PHYS 2211L.]

Attendance for both lecture and recitation is strongly recommended. You will not be graded explicitly on attendance; however large amount of materials/assignments will be covered during the lecture/recitation.

Exams:

There will be five scheduled exams. . Only four highest scored exams will be counted towards to your final grade. Each exams consist of constructive response + a set of multiple-choice questions. Exam problems will be similar to the suggested homework problems and the problems discussed during the class and the recitation. Only four highest scored exams will be counted towards to your final grade. **NO makeup exams will be given for any reason.** If you missed an exam you will be given zero and that will be your dropped exam. You are allowed to bring a hand written formula sheet. This must be a one- sided letter size paper. Partial credit will not be given in multiple-choice problems. **There will be no extra credit work in this course.** Please do not ask for any.

**Final Exam:** A comprehensive multiple choice **Final Exam** will be schedule on a later date by the registrar's office and the time constraints for the Final Exam will be strictly enforced. Final Exam will count for 25% towards your total grade.

Quiz:

All the quizzes will be administrated online via D2L. The quizzes would be available on a Thursday noon to Friday noon; a twenty-hour window. The quiz will be 60 minutes. After the 60 minutes you will not have a chance to submit, therefore use your time appropriately. No makeup quizzes. If you have any online problems it is your responsibility contacts IT and let me know as soon as it happens. (see the student support below)

Recitation:

This component is added for your benefit. You will be working as a group during this time. You will be solving extra problems and Q/A. Some of the recitation work will be graded.

Homework:

Physics course always involve homework. It is not possible to learn physics by just reading a text and taking exams. The homework assignments will be via **web assign**. **You are responsible in meeting the due dates, the quizzes will not be open for any reason.** If you miss a quiz, you will be given a zero.

Grade Weights:

Your final grade will be based on your performance on homework, lab, and exams. Contributions from each of these components towards your final grade will be determined according to the following table

COMPONENTS	POINTS	MAXIMUM POINTS POSSIBLE	MY POINTS
Highest scored Exam I	12.5	14	
Highest scored Exam II	12.5	14	
Highest scored Exams III	12.5	14	
Highest score Exam IV	12.5	14	
Homework	10	10	
Quiz	8	10	
Recitation	7	8	
Final Exam	25	25	
Total	100	108	

Important Dates:

Drop/add: 08/19/2013

Engagement reports due:9/4/2013

Withdrawal day: 10/3/2013

Department policy is that **NO one withdraws after this date** except for non-academic reasons such as long-term health problem or birth/death in the family etc. And the chair will make the decision.

**Contacts to get Help:**

For Technical Support,

Call: 678-915-HELP (x4357)

[support@spsu.edu](mailto:support@spsu.edu)

<http://spsu.edu/uits/gethelp.htm>

GeorgiaVIEW Online Support Center

<https://d2lhelp.view.usg.edu/>

For Wimba Technical Support, go to <http://www.wimba.com/services/support/>

If there is an emergency and you can't reach me via phone or email, call physics administrative assistant's office (678-915-7215)

Tentative Schedule:

The list of topics that follows is tentative; following could change due to class performances. Topics may be added or deleted, and in some chapters I will cover some sections only. The given quiz/exam dates may change: Any changes will be notified in advanced. **You are expected to read the appropriate chapters prior to the lecture.**

**We are using a new book. The following schedule may change due to students performances.**

<b>Week</b>	<b>Materials Covered</b>	<b>Exam/Quiz Dates</b>
1-8/14	1. Physics and Measurements. (Reading Material)	8/15 noon to 1/16 Dummy Quiz
	2. Motion in One Dimension.	
	2.Motion in One Dimension and 3. Vectors.	
2-8/19	4. Motion in Two Dimensions.	822 noon to 1/23 noon -Quiz 1
3-8/26	Labor day, exam and 5. The Laws of Motion.	
4-9/2	5. The Laws of Motion.	9/4 – Exam 1 (No Recitation-labor day Monday)
5-9/9	5. The Laws of Motion.	
6-9/16	6. Circular Motion and Other Applications of	9/19noon to 9/20 noon - Quiz 2
7-9/23	Newton's Laws.	9/27- Exam 2
	7. Energy of a System.	
8-9/30	8. Conservation of Energy.	
9-10/7	9. Linear Momentum and Collisions.	10/10 noon to 10/11 noon – Quiz 3
10-10/14	10. Rotation of a Rigid Object	10/18 –Exam 3
11-10/21	11. Angular Momentum.	10/24 noon to 10/25 noon - Quiz 4
12-10/28	15. Oscillatory Motion.	10/31 noon to 11/1 noon - Quiz 5
13-11/4	16. Wave Motion and 17.Sound Waves.	11/8- Exam 4
14-11/11	18. Superposition and Standing Waves. Exam	11/14 noon to 11/15 noon - Quiz 6
15-11/18	and thanksgiving holiday 11/27-12/1	11/21 noon to 11/22 noon -Quiz 7
16-11/25	Last day of class and Final Exam	11/27- Exam 5
17-12/2		Final exam is TBA

Students Learning Outcomes:

- 1) Given the position of an object as a function of time, using calculus, compute the velocity and/or acceleration of the object at any particular time.
- 2) Apply Newton's second law to the behavior of objects under the influence of forces.
- 3) Using calculus, compute the work done on an object by a force. Also, infer the change in the kinetic energy due to the work done.
- 4) Analyze collision problems using the concept of conservation of momentum.
- 5) Solve rotational kinematic problems for rotation about a fixed axis with constant angular acceleration.

Disability Statement:

"Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the counselor working with disabilities as soon as possible to better ensure that such accommodations are implemented in a timely fashion."

**If you need to use the testing services, you are required to register with them and you need to inform me. You are responsible to make arrangements to have your exams with them.**

Academic Dishonesty:

The policy of academic dishonesty as stated in the Southern Polytechnic State University Undergraduate Catalog will be fully enforced during this course.

Below is a link to the SPSU Honor Code and Standards of Academic Conduct.

[http://fac-web.spsu.edu/aa/honorcode/honor\\_code\\_and\\_conduct.html](http://fac-web.spsu.edu/aa/honorcode/honor_code_and_conduct.html)

Comments:

**I reserve the right to change any part of this syllabus depending on the interest of students and the class progress. Any modification to this syllabus during the course of this semester will be announced in class in advance of the effective date(s).**