PHYS 111N
Introductory General Physics

Instructor: Dr. Suba De Silva
E-Mail: pdesilva@odu.edu
Phone: 757 683 6536
Office: OCNPS 213 (or Center for Accelerator Science 1021 W. 47th by Appointment)
Office hours: Tuesday 5.00pm – 6.00pm

Course Content

In this course you will be introduced to some core topics in physics - mechanics, the propagation of waves in substances and properties of fluids. Through lectures, labs, reading and homework problem solving you will learn how to describe simple physical processes in terms of the laws of physics in their mathematical formulation.

Prerequisite

This is an algebra-based course and without some command of this part of mathematics you will not be able to proceed in the class. You are required to have completed at least one of Math102M, Math162M, Math166 or an equivalent. If you are registered for Phys111N and do not have a passing grade in one of these classes, you must contact pdesilva@odu.edu before the semester begins.

Lecture Schedule

Tuesday/Thursday 7:10pm – 8:25pm, OCNPS 200

Class-time will feature a mixture of traditional lecturing, problem solving and class participation. There will be regular questions to be answered during the class that are designed to get you thinking about physics as we go. Because of this there will be limited time for presenting information in class so it is VITALLY IMPORTANT that you read the appropriate sections of the textbook BEFORE coming to class.

I will inform you at the end of each class what the appropriate reading for the next class will be and you will be evaluated with simple questions (for credit) about what you have read. Credit will be given for class participation in solving practice problems and answering questions during each class.
There will also be optional (but recommended) study sessions where you can get assistance with the current homework and the upcoming exam. The schedule will be announced in the class.

**Course Information**

All information on the class, including slides and homework solutions will be posted on the class’s Blackboard page: [www.blackboard.odu.edu](http://www.blackboard.odu.edu).

**Required Materials**

- **Textbook:** *(Sears & Zemansky's) College Physics* by Hugh D. Young, 10th edition [Addison Wesley]
- **Online Homework Access:** *MasteringPhysics* Student Access Kit
  Contains a code required to access the online homework system at [www.masteringphysics.com](http://www.masteringphysics.com)

There are several options to obtain the textbook/homework access:

- The bookstore should have copies of the first 16 chapters with MasteringPhysics access - this is all that's required for Phys111N
- There is also a longer version of the textbook that contains the remaining chapters (17-30) to be used in Phys112N
- The 9th edition of the textbook may be available in used copies and is very similar to the 10th edition - if you choose this option, or if you buy a used copy of the 10th edition, you will need to also purchase access to MasteringPhysics from [www.masteringphysics.com](http://www.masteringphysics.com) (for around $60)
- There are e-text options available at [www.masteringphysics.com](http://www.masteringphysics.com) (around $110 for e-text & MasteringPhysics access)

- **Lab:** *Physics 111 Laboratory Manual*
  This is available from the campus bookstore. You should check with your Lab TA if they require you to have any other materials.

**Laboratory**

*Attendance & participation is required in the laboratory portion of this course.*

**ANY STUDENT WITH MORE THAN ONE ABSENCE WILL FAIL THE ENTIRE COURSE.**

You must hand in a lab report to get credit for each session. If you cannot avoid missing a lab session, contact the instructor in advance.

You should bring with you to the lab session a scientific calculator and a copy of the laboratory manual. The lab instructor will detail the format of lab reports and the grading criteria to be applied.

**Questions regarding the lab portion of the course should be directed at your lab instructor.**
Homework

Physics is best learnt by attempting to solve problems - in this way one becomes familiar with the concepts and comfortable with the mathematical methods required. Homework assignments will be set and your answers collected using the MasteringPhysics online service. You must be sure to have the Student Access Kit that comes with your copy of the course textbook – this contains a code that allows you to register at the website www.masteringphysics.com. If you have bought a used textbook you can purchase access to the homework system at www.masteringphysics.com.

Once registered with the service you should put yourself on the class-list for this course using the code DESILVA111FALL2017. More detailed instructions are available in the "Orientation" section of the class Blackboard page. It is advisable to register in this way as soon as you can.

A tentative list of homework deadlines is given below – any changes will be announced in class and posted to blackboard.

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<thead>
<tr>
<th>Date</th>
<th>Assignment Due Through</th>
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<tbody>
<tr>
<td>Wed 06th Sep. (11.59 pm)</td>
<td>HW1: Math due through masteringphysics</td>
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<tr>
<td>Wed 13th Sep. (11.59 pm)</td>
<td>HW2: One-Dimensional Motion due through masteringphysics</td>
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<tr>
<td>Fri 22nd Sep. (11.59 pm)</td>
<td>HW3: Two-Dimensional Motion due through masteringphysics</td>
</tr>
<tr>
<td>Fri 29th Sep. (11.59 pm)</td>
<td>HW4: Forces due through masteringphysics</td>
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<tr>
<td>Fri 06th Oct. (11.59 pm)</td>
<td>HW5: Forces and Newton’s laws due through masteringphysics</td>
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<tr>
<td>Wed 25th Oct. (11.59 pm)</td>
<td>HW6: Circular Motion/Gravitation due through masteringphysics</td>
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<tr>
<td>Fri 03rd Nov. (11.59 pm)</td>
<td>HW7: Work &amp; Energy due through masteringphysics</td>
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<td>Fri 10th Nov. (11.59 pm)</td>
<td>HW8: Momentum due through masteringphysics</td>
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<td>Mon 20th Nov. (11.59 pm)</td>
<td>HW9: Rotations due through masteringphysics</td>
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<tr>
<td>Wed 06th Dec. (11.59 pm)</td>
<td>HW10: Oscillations &amp; Waves due through masteringphysics</td>
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No individual extension of assignment submission dates will be given except in truly exceptional circumstances.

Examinations

There will be three 1-hour midterm exams (the lowest score from the three is dropped). Final exam will be a 3 hour test. The final exam will contain questions taken from all subject areas covered in the course.

All examinations are closed book. You are advised to bring along a scientific calculator. You will be permitted a formula-sheet of your own construction (both sides of a single 8.5” × 11” sheet) which may not contain any words. You must hand in your formula-sheet along with your test and you will lose points if there is anything but formulae and diagrams on your sheet. Cell phones may not be used or accessible during tests. Any cell phone that is seen will be confiscated.

The midterms and final exam will take place in the classroom (OCNPS 200). Note that no make-up tests will be given. If you have to miss a test, you must contact me as soon as possible (i.e., before the test, if possible). A grade of zero will be assigned unless you have a very good excuse for missing
the test. If you do have an acceptable excuse (including a doctor’s note in case of illness), your grade for the missed test will be the grade you receive on the final examination.

Course Grading

Your final grade will be assembled from your course scores according to a weighting given approximately by

- Class Participation (reading quizzes, answering questions in class) – Extra credit
- Homework - 20%
- Lab - 20%
- Midterms (best two from three) - 25%
- Final Exam - 35%

N.B. You must receive a passing grade from your lab instructor to pass the course.

Getting Help

There are a number of sources of help for this class:

- The Physics Learning Center is a place where students can get together to work on their homework and get assistance, if needed, from physics faculty and grad students. No appointment is necessary. Students in all introductory classes are encouraged to drop by the Learning Center for help on homework, lab, lecture, other course material, or just for a place to work while in the physics building. (Note: staffing of the Physics Learning Center starts the second week of classes). More info, including a detailed staffing schedule, can be found at the following link: [http://sci.odu.edu/physics/resources/learning_center.shtml](http://sci.odu.edu/physics/resources/learning_center.shtml)
- Prof. De Silva will run optional (but recommended) study sessions in which the previous homework will be discussed and help sessions where you can get assistance with the current homework. The schedule for these will be announced during the semester.
- Prof. De Silva is also available by appointment in her office (Center for Accelerator Science 1021 W. 47th) during the working day on Tuesdays and Thursdays, please drop her an email if you would like to meet.

Academic Honesty

You are expected to conform to the University Honor Code in all aspects of your conduct in this course.

You may work with others on the homework assignments, however, what you submit must represent your own understanding of the problem. Submitting answers online for problems that you have not worked out is cheating.

Accessing solution manuals on-line or otherwise is cheating. This includes use of services like Cramster or using Google or similar in order to find worked solutions.

Allowing other students to copy your solutions is cheating. You can and should help others if they ask you for help, but by explaining the solution, not by allowing copying of your solution.
Misconduct of any form will not be tolerated. If you are ever unsure of what is allowed, please consult with Prof. De Silva for clarification.

Attendance

You are advised to consult the Undergraduate Catalog for information concerning university policies relating to class attendance. Attendance in the laboratory is mandatory.

Attendance at the lecture is not mandatory, but is advisable for several reasons:

- Physics is best learned when you are exposed to the concepts several times, i.e., by reading the book, attending lecture, doing the homework, doing the labs and studying for the tests.
- Material that is not in the book may be presented in class.
- There will be demonstrations as part of the lecture (the results of which may show up on tests).
- There will be quizzes during the class. It is not possible to make up in-class quizzes.
- Any changes to test dates will be announced in class.
- Homework problems may be discussed in class.
- Extra credit for attendance will be factored into the final grade.