PHYS112N
Introductory General Physics 2
(Online Lecture)
Spring 2018

Instructor

Dr. Bala Ša Terzić
Email: bterzic@odu.edu
Website: http://www.odu.edu/~bterzic

Virtual Office Hours via Adobe Connect at: https://connect.odu.edu/terzic_spring2018/
Tuesdays and Thursdays: 10am – 11am (or by appointment)

Office Hours: Thursdays 10am – 11am at Oceanography and Physics Building (OCNPS) 233

To contact Professor Terzić, click on the Adobe Connect link during his office hours or send him an email to the account listed above.

Course Content

In this class, the continuation of PHYS111N, you will be introduced to some further core topics in physics – electricity, magnetism, light and optics and aspects of modern physics. 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. Furthermore, since the concepts and methods developed in Phys111N will be used regularly, it is strongly recommended that you attain a grade of C or better in PHYS111N before taking PHYS112N.

Lecture Schedule

Recorded lectures will feature a mixture of traditional lecturing and problem solving. It is VITALLY IMPORTANT that you read the appropriate sections of the textbook BEFORE viewing the lectures.

There will also be optional (but recommended) study sessions where you can get assistance with the current homework and the upcoming exam. The schedule for these will be announced in class.
Course Information

All information on the class, including slides, course schedule and other announcements will be posted on the class’s Blackboard page: http://blackboard.odu.edu. Please familiarize yourself with this resource, as it will answer almost every question you may have about the class. If, after carefully reading all the available info on Blackboard, you still cannot find what you are looking for, email Professor Terzić at bterzic@odu.edu.

Required Materials

- **Textbook:** “(Sears & Zemansky’s) College Physics” by Hugh D. Young, 9th or 10th edition [Addison Wesley]
- **Online Homework Access:** “Mastering Physics” Student Access Kit
  Contains a code required to access the online homework system at www.masteringphysics.com
  There are several options to obtain the textbook/homework access:
  - Chapters 17-30 are required for this class – they are available as a standalone volume or as part of the full-length textbook. In either case you will need access to MasteringPhysics
  - The 8th edition of the textbook may be available in used copies and is very similar to the 9th edition – if you choose this option, or if you buy a used copy of the 9th edition, you will need to also purchase access to MasteringPhysics from www.masteringphysics.com (for around $60)
  - There are e-text options available at www.masteringphysics.com
- **Lab:** “Physics 112 & 232 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.

Labatory

**Attendance and participation is required in the on-campus 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.**
Exams

There will be three semester exams (the lowest score from the three is dropped) and a final exam. The final exam will contain questions taken from all subject areas covered in the course.

Exams will be administered through ProctorU service. Details of how to sign up for ProctorU account can be found on Blackboard under Orientation.

ProctorU is a live online proctoring service that allows you to take your exam from the comfort of your home. ProctorU is available 24/7. However, you will need to schedule your proctoring session at least 72 hours in advance to avoid any scheduling fees. Create your ProctorU account at [http://go.proctoru.com](http://go.proctoru.com) at least 3 days before the first exam. Free tech support is available at [http://www.proctoru.com/testitout](http://www.proctoru.com/testitout). On this page, you will also be able to test your equipment, learn about what to expect during your proctoring session, and ask any questions you may have about the proctoring process with a ProctorU representative.

In order to use ProctorU, you will need to have a high-speed internet connection, a webcam (internal or external), a Windows or Apple Operating System, and a government issued photo ID. ProctorU recommends that you visit [http://www.proctoru.com/testitout](http://www.proctoru.com/testitout) prior to your proctoring session to test your equipment. For additional technical services needed before your exam, you can click on the button that says “connect to a live person.”

All exams will have the same format, and will be administered through Blackboard. They will balance out multiple choice questions (worth 52% of the grade) with word problems (worth 48%). Multiple choice will be automatically collected by Blackboard. At the end of the exam, you will have 10 minutes to either scan or take a picture of the word problems and submit them.

All exams 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.

The semester exams will take place at the specified window of time (see box to the right). Make-up exams will not be given unless there was a truly unavoidable reason for not taking the scheduled exam. Let me know (by email) in advance if you absolutely cannot make an exam, or as soon as possible afterwards if you were unexpectedly prevented from attending.

<table>
<thead>
<tr>
<th>Tentative Dates for Midterm and Final Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 8 – 11</td>
</tr>
<tr>
<td>Exam 1 (Modules 1 and 2)</td>
</tr>
<tr>
<td>March 15 – 18</td>
</tr>
<tr>
<td>Exam 2 (Modules 3, 4 and 5)</td>
</tr>
<tr>
<td>April 12 – 15</td>
</tr>
<tr>
<td>Exam 3 (Modules 6 and 7)</td>
</tr>
<tr>
<td>April 25 – 28</td>
</tr>
<tr>
<td>FINAL EXAM (cumulative)</td>
</tr>
</tbody>
</table>

Homework

Physics is best learned 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 Mastering Physics 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](http://www.masteringphysics.com). If you have bought a used textbook you can purchase access to the homework system at [www.masteringphysics.com](http://www.masteringphysics.com).
Once registered with the service you should put yourself on the class-list for this course using the code **TERZIC112SPRING18**. 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 **Mastering Physics** homework deadlines is given below – any changes will be announced on Blackboard.

- Sun 21st Jan. (12 midnight) HW1: Electrostatics
- Sat 27th Jan. (12 midnight) HW2: Electric Potential
- Sun 4th Feb. (12 midnight) HW3: Capacitance
- Sun 18th Feb. (12 midnight) HW4: Currents
- Sun 25th Feb. (12 midnight) HW5: Magnets
- Sun 4th Mar. (12 midnight) HW6: Induction
- Sun 25th Mar. (12 midnight) HW7: Electromagnetic Waves
- Sun 1st Apr. (12 midnight) HW8: Optics 1 (mirrors)
- Sun 8th Apr. (12 midnight) HW9: Optics 2 (lenses)
- Sun 22nd Apr. (12 midnight) HW10: Diffraction

**No individual extension of assignment submission dates will be given except in truly exceptional circumstances.**

**Course Grading**

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

- Homework – 15%
- Lab – 15%
- Semester exams (best two out of three) – 35%
- Final Exam – 35%

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

**Grading Scale**

The grading policy is non-competitive and lenient, but there will be **no curve**. A letter grade is determined only at the end of the semester.

- 92 ≤ A, 88 ≤ A- < 92, 84 ≤ B+ < 88, 80 ≤ B < 84, 76 ≤ B- < 80,
- 72 ≤ C+ < 76, 68 ≤ C < 72, 64 ≤ C- < 68, 60 ≤ D < 64, F < 60

**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: https://www.odu.edu/physics/resources/learning-center

- Professor Terzić will hold virtual office hours, at times indicated above (Instructor section). Log on to: https://connect.odu.edu/terzic_spring2018/ during the office hours, and interact with him as you would in a real office.

- Professor Terzić will run optional (but recommended) virtual study sessions in which you can get assistance with the current homework and the upcoming exam. The schedule for these will be announced in class. Follow: https://connect.odu.edu/terzic_spring2018/

- Professor Terzić is also available by appointment via Adobe Connect. Send him an email if you would like to arrange a meeting time.

- Another way to get help, either from Professor Terzić or from your fellow students is by using the Discussion Board on Blackboard. There you can post questions about the course material, course organization, deadlines, technical issues, etc...

**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, consult with Professor Terzić for clarification.

**Special Accommodations**

Students are encouraged to self-disclose disabilities that have been verified by the Office of Educational Accessibility by providing Accommodation Letters to their instructors early in the semester in order to start receiving accommodations. Accommodations will not be made until the Accommodation Letters are provided to instructors each semester.