Course: online (no lectures)
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Course description: This course teaches physics on a descriptive level. Three main subjects of physics are discussed during the course: Classical Mechanics, Properties of Light, and Special Theory of Relativity. After completing the assignments and tutorials of these chapters you will be able to read the concepts of other territories of physics.

Student learning outcome:

1) As the main goal, you will learn the important concepts necessary to describe the laws of nature.
2) You will be able to use mathematical tools necessary to understand the relationships among physical quantities, involved in the laws of physics. The math tools are not more than you have learned in high school.
3) Classical Mechanics is the science of motion of macroscopic bodies. In this part, you will learn the three laws of Newton and the concepts of momentum and energy.
4) In the Light and Atoms part, you will gain better understanding of our surroundings, including the properties of light and materials.
5) You will be surprised that the theory of Special Relativity follows from very simple principles and observations. In this part, you will learn the knowledge of modern physics, especially related to knowledge about the universe, and the basic concepts involving time and space.

Chapters to be covered from your textbook: Chapters 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 27, 32, and 35.

Course Schedule and assessment:

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter numbers/topics</th>
<th>Assessment procedure</th>
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<tbody>
<tr>
<td>1 - 2</td>
<td>1. About Science</td>
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<td></td>
<td>2. Newton’s 1st law of motion –inertial</td>
<td>Test 1 (overall assessment)</td>
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<td>3 - 4</td>
<td>3. Linear motion</td>
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<td>4. Newton’s 2nd law of motion</td>
<td>Test 2 (overall assessment)</td>
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<td>5 - 6</td>
<td>5. Newton’s 2nd law of motion</td>
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<td>6. Newton’s 3rd law of motion</td>
<td>Test 3 (overall assessment)</td>
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<td>7 - 8</td>
<td>7. Energy</td>
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<td>8. Rotational motion</td>
<td>Test 4 (overall assessment)</td>
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<td>9 - 10</td>
<td>9. Gravity</td>
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<td>26. Property of light</td>
<td>Test 5 (overall assessment)</td>
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<td>11 -12</td>
<td>27. Color</td>
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<td>32. The atom and the quantum</td>
<td>Test 6 (overall assessment)</td>
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<td>13-14</td>
<td>35. Special Theory of relativity</td>
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<tr>
<td>15</td>
<td>Review of all above chapters</td>
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<tr>
<td></td>
<td>Final Exam (comprehensive assessment)</td>
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**Learning and assessment details:**

The book has outstanding facilities such as simulations, and interactive problems, which will help you understand the material.

1. I will set up the schedule of reading and solving problems that you have to follow, and you should **make sure that you stick to that schedule.** Each week will have specific chapters to complete and specific problems to solve.

2. **At the end of each bi-week**, there will be a test on the material covered during the last two weeks. **There will be 7 such during-semester tests in total.** Each test problem will be available online at our UWF eLearning class website so that one can download it and/or also be email with a hard copy for you to work with in convenience. **You need submit your answer online at the eLearning for your test by midnight Sunday (0:00 am, before Monday) through the QUIZZES forum (login to your UWF account for your registered class and see it).** But you need work out your answer first before you start the submission process.

3. **There is a final exam.** Your total grade will be based on your bi-weekly test scores and your final exam score.

4. **Note:** There are no makeup tests in this course. If you miss a test, you get zero for it.

**Homework:**

(1) You homework is the **Chapter Quiz** and the **Media Quiz** of each relevant chapter. These are located on the [http://physicsplace.com/](http://physicsplace.com/) website (Note: NOT the UWF eLearning website)

See the Physicsplace.com login instructions and login. Select the assigned chapter of the week from the roll down menu. Click the quizzes and when you have finished them send them to grading automatically. Your result will be recorded in the “Result Reporter”.

You can complete the quiz as many times as you wish.

(2) Homework (**Chapter Quiz** and the **Media Quiz**) will **not be counted for grade, but it is essential that you work out the problems, since the bi-weekly tests will be closely based on these problems.** Tutors are available at the Physics Department if you need help.

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Grading:
Each bi-weekly test score: 100 points  (7 tests ⇒ 700 points)
Final Exam: 300 points
Total: 1000 points

90 -100% = A; 85 - 89% = A- ; 80 - 84% = B+; 75 - 79% = B; 70 - 74% = B- ; 60 - 69% = C; 50 -59% = D, <50% = F.

Additional suggestions:
(1) How to get a good grade in this course?

The URL below will provide some good general hints on how to succeed in an online course.

http://www.ehow.com/how_2225775_succeed-online-college-course.html

You will find that an online course puts a lot of responsibility on the student. Contrary to common perception, online courses are in fact more difficult than classroom courses. I will put a schedule of completion of the chapters, and it will be up to you to complete them on time.

Your textbook is available online (you need purchase your own license).

(2) How you should read your textbook?

Step 1: Read Chapter 1 RIGHT NOW. Read every word. It explains how to read the rest of the book, describes the features such as the text, the simulations, the interactive problems, whiteboards, etc, and how to use them.

Step 2: In every chapter, read each section completely before attempting to solve the homework problems.

COMMON MISTAKE: Directly going to the homework problems without reading the textbook and trying to solve each problem by somehow finding a “formula” into which you substitute numbers and get an answer. DON’T DO IT!

Read the section completely, then work out the Chapter Quiz and the Media Quiz there

NONE OF THE PROBLEMS IN THE HOMEWORK OR THE TESTS CAN BE SOLVED BY “FINDING A FORMULA”! THEY ALL NEED CLEAR UNDERSTANDING OF THE TEXTBOOK!

You should find your text readable. I encourage you to read it daily with pencil in hand and work the HW as you go. In particular you should read and try to understand the scheduled sections before you attempt the problems given for homework.

(3) How to get help immediately?

If you feel that you have not understood something, send me an email, and I will explain it to you.

If you find you are having difficulty with a particular problem while doing your homework, don’t spend too much time on it -- 20 minutes is long enough. Get help! Perhaps the most important thing is don't fall behind. Don't fall behind! Don't fall behind! If you find yourself falling behind, get help as soon as possible, from me or from someone else. Do not put this off until the situation is desperate.

If you come in the day before the test with excellent reasons why you couldn't get around to doing the problems, or couldn't make it to the class, there's not a thing I can do to help you. I will not let you take the test late.
**Special Assistance:** Students with special needs who require specific examination-related or other course-related accommodations should contact Barbara Fitzpatrick, Director of Disabled Student Services (DSS), dss@uwf.edu, (850) 474-2387. DSS will provide the student with a letter for the instructor that will specify any recommended accommodations.

**Withdrawals:** UWF policy requires that students submit to the Office of Records and Registration a completed withdrawal form to withdraw from courses, which is a different policy from that used by some other institutions. Check the 2011-2012 Catalog of UWF for the due dates of withdrawing.

**Expectations for Academic Conduct/Plagiarism Policy:**
As members of the UWF, we commit ourselves to honesty. As we strive for excellence in performance, integrity—personal and institutional—is our most precious asset. Honesty in our academic work is vital, and we will not knowingly act in ways that erode that integrity. Accordingly, we pledge not to cheat, nor to tolerate cheating, nor to plagiarize the work of others. We pledge to share community resources in ways that are responsible and that comply with established policies of fairness. Cooperation and competition are means to high achievement and are encouraged. Indeed, cooperation is expected unless our directive is to individual performance. We will compete constructively and professionally for the purpose of stimulating high performance standards. Finally, we accept adherence to this set of expectations for academic conduct as a condition of membership in the UWF academic community.