

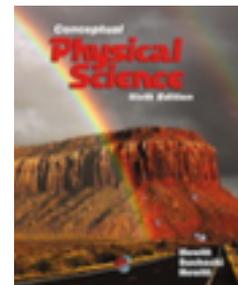
|                            |                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course:</b>             | PHY 102 Sections 3&4                                                                                                                                                                                                                        |
| <b>Instructor</b>          | Dr. N. Christensen                                                                                                                                                                                                                          |
| <b>Email:</b>              | <a href="mailto:neil.christensen.qft@ilstu.edu">neil.christensen.qft@ilstu.edu</a>                                                                                                                                                          |
| <b>Phone:</b>              | (309)438-5502                                                                                                                                                                                                                               |
| <b>Office:</b>             | MLT 312D                                                                                                                                                                                                                                    |
| <b>Office Hours:</b>       | TR 11:00-11:30<br>MWF 2:00-2:30                                                                                                                                                                                                             |
| <b>MasteringPhysics:</b>   | <a href="http://www.masteringphysics.com">http://www.masteringphysics.com</a><br>Course ID: MPCHRISTENSEN75063                                                                                                                              |
| <b>Lecture:</b>            | TR 9:35-10:50 in MLT 214                                                                                                                                                                                                                    |
| <b>Lab:</b>                | T-F 9:00AM-4:00PM in MLT 202 & 204                                                                                                                                                                                                          |
| <b>Required Materials:</b> | <ul style="list-style-type: none"><li>• Clicker</li><li>• Lab Manual: Hands on Activities for Physics 102</li><li>• MasteringPhysics with included electronic textbook: Conceptual Physical Science, 6e by Hewitt/Suchocki/Hewitt</li></ul> |
| <b>Homework:</b>           | On MasteringPhysics<br>One assignment per chapter                                                                                                                                                                                           |
| <b>Exams:</b>              | 2 Midterms and 1 Final<br>All are comprehensive                                                                                                                                                                                             |

## MasteringPhysics

Both the textbook and all homework will be done on MasteringPhysics. You will need access to MasteringPhysics immediately, since your first MasteringPhysics assignment will be due at the beginning of the very next class. You will have MasteringPhysics assignments due at the end of every chapter. You do not need to purchase a separate print copy of your textbook. An electronic version comes with MasteringPhysics.

The main benefit of doing homework online is that the homework software will give immediate feedback, including whether the homework problem was answered correctly. In some cases, it will also give guidance for what you may have done wrong. If you get the answer incorrect, try to understand why so that you will get it correct if it appears on an exam. If it is allowed for that problem, redo it until you get it correct. This is one of the best ways to prepare for the exams (along with reading the textbook for understanding and discussing the material with other students). Typically, you will get partial credit even if you get the answer correct on a later attempt. So, it is definitely worth it to attempt the problem until you get it correct.

To register for MasteringPhysics, go to [masteringphysics.com](http://masteringphysics.com) and follow the directions under register now. You will need the class ID which is “MPCHRISTENSEN75063”. The class textbook is “Conceptual Physical Science” 6th edition, by Hewitt, Suchocki and Hewitt. A picture of the front cover is shown to the right. If you purchased access at the bookstore, then you will enter your access code. If you did not, you can purchase access directly online. Note that you do not need to buy a separate print copy of the textbook unless you want to. An electronic version of the textbook will come with Mastering Physics.



## Clickers

Our class will be using “clickers”, or more technically the Turning Point technology system. Each student should purchase a clicker at the bookstore and bring it to *every* lecture. They will be used to answer questions during class. This will help you stay more focused on the lecture material and help me ascertain whether the class as a group understands a topic before moving on. Your clicker must be registered. You do this during your registration on MasteringPhysics. It will ask you to enter your clicker ID. If you do not have it during registration, please enter it as soon as possible since I need it to give you credit for your in-class participation. Correct answers are worth full credit while incorrect answers are worth 50% of the credit. Not answering at all is worth 0% of the credit. Unless told otherwise, you are allowed, even encouraged to discuss clicker questions with your neighbors.

You will also need to follow the instructions on the attached Clicker handout. Some things to consider:

- Even if a student currently owns a clicker, they will still need to purchase a subscription and create an account to use Clickers in the classroom.
- The only time a student should buy the “subscription only” option is if they already own a clicker. Otherwise, they should buy a clicker and subscription bundle.
- Students can buy their clicker and/or subscription through either the bookstores on campus (Alamo II or Barnes & Noble) or from TurningPoint directly. Students will have to create an account with their ISU email address before purchasing directly from the TurningPoint Student Store. After creating their account, students will see a link to the TurningPoint Student Store on the left of their Dashboard. Items bought from TurningPoint should take 3 days for delivery.
- Rebates are available for students. Students should keep their receipt and any packaging in order to qualify for the rebate. Rebates can be redeemed at <https://rebates.turningtechnologies.com/> using the following codes:
  - 1 year license: Risu20 (\$20.99)
  - 4 year license: Risu37 (\$37.00)
  - 4 year bundle: Risu20 (\$20.99)
- Students should contact TechZone for hardware support issues with their clickers. All other questions should be directed to the Technology Support Center at (309) 438-HELP.

## Free Tutoring

There are two free tutoring resources available to you. The first is offered by the ISU Physics Club. It is run by students majoring in Physics and is right here in MLT 213. The hours are tentatively M-F, 10AM-5PM when a tutor is available.

The second is provided by the Julia N. Visor Academic Center. They provide free weekly tutoring sessions for this course and many other general education courses. To sign up, call (309) 438-7100. The location of the Julia N. Visor Academic Center is Vrooman 012 (Vrooman is between the Manchester and Hewett dorms). Their usual hours are Mon-Thurs, 8:00 a.m.-9:00 p.m., Fri, 8:00 a.m.-4:30 p.m., Sun, 4:00 p.m.-8:00 p.m. You can find them on the web at [www.UniversityCollege.IllinoisState.edu/tutoring](http://www.UniversityCollege.IllinoisState.edu/tutoring).

## Grading

Your grade will be based on exams, homework, laboratories and in-class “clicker” questions in the following proportions:

- 40% Exams
- 30% Homework
- 20% Labs
- 10% In-Class Clicker Questions

Your letter grade will be determined according to the following percentages of the total possible scores:

- 90% A
- 80% B
- 70% C
- 60% D

You are required to complete all assignments and laboratories and to attend all exams. Only very good and documented excuses will be allowed for missing exams. You must discuss this with the instructor **as soon as possible** in such a situation and a makeup will be planned. The lowest 1 homework will be dropped, the lowest 1 lab will be dropped and the lowest 2 clicker scores will be dropped. This is to allow for unforeseen emergencies that make it impossible for you to complete these assignments. No other scores will be dropped. I strongly urge and recommend that you do not miss any assignments since their content will be seen again on the exam.

## Homework

A combination of continuously reading the textbook for understanding and doing a lot of homework problems is the best way to master the material in this course and therefore do well on the exams. There will be a homework assignments due for each chapter of the book. The majority of the problems will be based on material we have already covered in class. There may also be a small number of prelecture problems that help you start thinking about the material before it is covered in class. Furthermore, there may be a small number of problems from previous chapters to help you keep up on the cumulative material and do well on the exams.

Discussing homework problems with other students is ok, even good if you are stumped. But, remember that it is up to you to make sure you master each problem so that you will do well on the exams (you can not get help on the exams). You can do most problems multiple times. You should continue to do each problem until you get it correct. Only your first attempt at true/false questions is given credit. Multiple choice questions are reduced in credit for each incorrect answer. Furthermore, after you have completed the assignment and after the due date for the assignment, you may redo the assignment without affecting its grade as practice for the exams.

## Exams

All the exams will be comprehensive. The first exam will cover the Prologue and Chapters 1-4. The second exam will mainly cover Chapters 5-8 with a small number of questions from the Prologue and Chapters 1-4. The final exam will mainly cover Chapters 10-12 and 26-28 with a smaller number of questions from the Prologue and Chapters 1-8. There may also be some

questions based on the laboratories. All exam questions will come from your homework, clicker questions and labs.

## **Laboratories**

There will be ten laboratories spread throughout the semester (see the tentative schedule below). You can do the lab any time it is open to students during the week. I highly recommend you do the lab early in the week to avoid running out of time. You must bring your activity manual “Hands on Activities for Physics 102” to the laboratory. The normal hours of operation of the laboratory are T-F 9:00AM-4:00PM. The lab closes promptly at 4PM, so arrive with plenty of time to finish before it closes. The location of the labs is MLT 202 & 204.

## Tentative Schedule

|                                   | <b>Tuesday<br/>9:35-10:50</b>                    | <b>Thursday<br/>9:35-10:50</b>     | <b>Lab<br/>T-F 9AM-4PM</b>      |
|-----------------------------------|--------------------------------------------------|------------------------------------|---------------------------------|
| <b>Week 1</b><br>Aug. 22-26       | Prologue                                         | Ch. 1<br>Motion                    |                                 |
| <b>Week 2</b><br>Aug. 29- Sep. 2  | Ch. 1<br>Motion                                  | Ch. 2<br>Newton's Laws             |                                 |
| <b>Week 3</b><br>Sep. 5-9         | Ch. 2<br>Newton's Laws                           | Ch. 3<br>Momentum & Energy         | A2-GA<br>Graphical Analysis     |
| <b>Week 4</b><br>Sep. 12-16       | Ch. 3<br>Momentum & Energy                       | Ch. 4<br>Gravity, Projec. & Satel. | A5-CI<br>Computer Interface     |
| <b>Week 5</b><br>Sep. 19-23       | Ch. 4<br>Gravity, Projec. & Satel.               | Ch. 5<br>Fluid Mechanics           | A3-FF<br>Free Fall              |
| <b>Week 6</b><br>Sep. 26-30       | <b>Exam 1<br/>Prol. - Ch. 4</b>                  | Ch. 5<br>Fluid Mechanics           |                                 |
| <b>Week 7</b><br>Oct. 3-7         | Ch. 6<br>Thermodynamics                          |                                    | A4-PM<br>Projectile Motion      |
| <b>Week 8</b><br>Oct. 10-14       | Ch. 7<br>Heat Transfer & Change of Phase         |                                    | A6-NSL<br>Newton's 2nd Law      |
| <b>Week 9</b><br>Oct. 17-21       | Ch. 8<br>Electricity                             |                                    | A7-CE<br>Conservation of Energy |
| <b>Week 10</b><br>Oct. 24-28      | Ch. 10<br>Waves & Sound                          |                                    |                                 |
| <b>Week 11</b><br>Oct. 31- Nov. 4 | <b>Exam 2<br/>Chs. 5-8 + Prol.-Ch. 4</b>         | Ch. 11<br>Light Waves              | B3-CLE<br>Coulomb's Law         |
| <b>Week 12</b><br>Nov. 7-11       | Ch. 12<br>Atoms                                  |                                    | B1-WA<br>Wave Addition          |
| <b>Week 13</b><br>Nov. 14-18      | Ch. 26<br>Solar System                           |                                    | B2-WNL<br>Wave Nature of Light  |
| Nov. 21-25                        | Thanksgiving Break                               |                                    |                                 |
| <b>Week 14</b><br>Nov. 28- Dec. 2 | Ch. 27<br>Stars & Galaxies                       |                                    | D1-LFA<br>Light from Atoms      |
| <b>Week 15</b><br>Dec. 5-9        | Ch. 28<br>Structure of Space & Time              |                                    |                                 |
| Dec. 12-16                        | <b>Final<br/>Chs. 10-12, 26-28 + Prol.-Ch. 8</b> |                                    |                                 |

All dates are tentative.

## Academic Integrity

Although it is ok to discuss certain aspects of this course with other students, the final work on all assignments and exams must be your own. Homework and laboratories can be done in groups according to class policies but the final homework input and submission using MasteringPhysics and the final lab report must be the work of the student claiming credit for it. Additionally, exams must be done by the student alone and with no help from anyone other than the instructor. Any violations will be dealt with according to university policy.

## Accessibility and Accommodation

Any student needing to arrange a reasonable accommodation should contact Student Access and Accommodation Services at 350 Fell Hall, (309)438-5853, on the web at [StudentAccess.IllinoisState.edu](http://StudentAccess.IllinoisState.edu).

## Counseling

Life at college can get very complicated. Students sometimes feel overwhelmed, lost, experience anxiety or depression, suffer with relationship difficulties or diminished self-esteem. However, many of these issues can be effectively addressed with a little help. Student Counseling Services (SCS) helps students cope with difficult emotions and life stressors. Student Counseling Services is staffed by experienced, professional psychologists and counselors, who are attuned to the needs of college students. The services are FREE and completely confidential. Find out more at [Counseling.IllinoisState.edu](http://Counseling.IllinoisState.edu) or by calling (309) 438-3655.

## Absence Due to Bereavement

Students are eligible for up to five (5) consecutive days (not including weekends or holidays) of excused absence in the event of a death of a spouse, domestic partner, parent, child, grandparents, grandchild or sibling, uncle, aunt, niece, nephew, first cousin, in-law, or step-relative. The student is responsible for notifying the Dean of Students Office (DoS) **prior** to their absence. The DoS will communicate the absence and bereavement policy to the student's course instructors. Upon receiving proper documentation regarding the death and relationship, the DoS will provide this documentation to each of the course instructors, if requested. Upon notification of the absence and receipt of proper documentation, each faculty member shall excuse the student from class and provide an opportunity to complete missed exams, quizzes and other required work. Ultimately, the student is responsible for all material covered in class and must work with each individual professor as soon as they return to complete any required work. In the event that a death occurs to a family member or friend that is not specifically covered by the policy, students can communicate the circumstances to the DoS to determine on a case by case basis if it is covered by this policy: (<http://policy.illinoisstate.edu/students/2-1-27.shtml>) Contact us at (309) 438-2008 if you would like to make use of either of these services.

## Community Rights and Responsibilities

Students are expected to behave in a manner consistent with being in a professional environment. Open discussion and disagreement are encouraged in a respectful manner. Open hostility, rudeness, and incivility are discouraged and will result in appropriate action. Mechanical disruptions (cell phones, pagers, electronic toys, music players, etc.) are also strongly discouraged. Students acting in a disruptive or uncivil manner may be dismissed from the class for the remainder of the class period. If necessary, referrals may also be made to Community Rights & Responsibilities for violations of the Code of Student Conduct.