

## Phys 152 Section 1001: General Physics 2

**Text:** *College Physics: A Strategic Approach* 3<sup>rd</sup> Ed. (ISBN-10: 0321908821; ISBN-13: 9780321908827) with Mastering Physics, by Knight, Jones, and Field (Pearson 2015).

**We will use the Mastering Physics online homework system for our homework. Students must register first.**

**Class ID:** MPRAVICA2016 **Link:** <https://session.masteringphysics.com/myct/courseHome?courseID=1166792>

**Content:** We will be studying, electricity and magnetism, electric circuits, wave phenomena, light, optics, and relativity and possibly atomic physics, covering roughly Chapters 15-30 of your text. The amount of detail will be adjusted according to the interest of the class.

**Learning Outcomes:** It is expected in the very least that you will:

1. Understand and solve basic problems (at the level of non-starred problems in your text) in electricity, magnetism, optics, waves (including interference), and introductory nuclear physics
2. Be able to estimate magnitudes
3. Be proficient in using scientific notation and vectors
4. Have a good grasp of units and their critical importance in connecting with the natural world
5. Have gained some practical laboratory experience which aids in understanding these concepts

### **Grading:**

**15%** Homework (including online assignments from Mastering Physics®),

**25%** Laboratory Grade

**20%** Midterm Exam

**20%** Quizzes

**20%** Inclusive Final Exam

### **Grading Scale:**

90 → 100: A- → A+; 80 → 89: B- → B+; 70 → 79: C- → C+; 60 → 69: D- → D+; Below 60: F

**DO NOT AUTOMATICALLY EXPECT A CURVE!**

### **ATTENDANCE FOR THE FINAL EXAM AT THE SCHEDULED TIME IS REQUIRED.**

**Attendance:** You are expected to attend all lecture and laboratory periods. You are responsible for all assignments and announcements given in class. Missed exams will result in a grade of zero. In the event of an extreme emergency (e.g. hospitalization), make-up exams may be given only with the written permission of the Chair of the Physics Department or the Dean of Arts and Sciences. You may be asked to provide written documentation to justify your request to make up material. For example, often an excuse such as “I had a death in the family” is given for an absence. If such is the case, then proof of death and proof of close family relation must be supplied in order for the work to be made up. If you represent UNLV at any official extracurricular activity, you shall have the opportunity to make up assignments, but you must provide official written notification to the instructor no less than one week prior to the missed class. A student missing a class or laboratory assignment because of observance of a religious holiday shall have the opportunity to make up missed work. The student must notify the instructor of anticipated absences by the last day of late registration (9/2/16). Students who represent UNLV at any official extracurricular activity shall have the opportunity to make up lost work but must provide written notification to the instructor no less than one week prior to the missed class(es).

**Homework:** Homework will be assigned weekly and due one week later. Physics cannot be mastered without working out physics problems. Don't be discouraged when the material initially seems unfamiliar or the homework is difficult. Your mastery of physics will be a gradual process that will develop through diligent practice. Although each homework assignment is numerically worth the least in terms of your overall grade, it is the most important part of your studies. You should plan to spend an average of two hours on homework for every hour of lecture. Although homework may be discussed in lecture, questions can always be raised during the course office hours.

**Laboratories:** Physics is an experimentally-driven science and laboratory work is essential to understanding theoretical concepts tested in the laboratory, allowing you the chance to develop a physical intuition. A C or better grade in PHY 152L is required to pass PHY152.

**Exams:** Each student must be prepared to present a pictured ID if requested during an exam. The Final Exam will encompass ALL of the material covered in the class.

## UNLV POLICIES

**Academic Misconduct:** Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the Student Academic Misconduct Policy (approved December 9, 2005) located at: <https://www.unlv.edu/studentconduct/student-conduct>.

**Rebelmail:** By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always **@unlv.nevada.edu**. **Emailing within WebCampus is acceptable.**

**Disability Resource Center (DRC):** The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

**Religious Holidays Policy:** Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor within the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or within the first 7 calendar days of the course for summer and modular courses, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

**Transparency in Learning and Teaching:** The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information: <https://www.unlv.edu/provost/teachingandlearning>  
<https://www.unlv.edu/provost/transparency>

**Incomplete Grades:** The grade of I—Incomplete—can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

**Copyright:** The University requires all members of the University Community to familiarize themselves **with** and to follow copyright and fair use requirements. **You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws.** Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright>.

**Tutoring and Coaching:** The Academic Success Center (ASC) provides tutoring, academic success coaching and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, visit <http://www.unlv.edu/asc> or call 702-895- 3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of the SSC (ASC Coaching Spot). Drop-in tutoring is located on the second floor of the Lied Library and College of Engineering TEB second floor.

**UNLV Writing Center:** One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>.

**Library Resources:** Students may consult with a librarian on research needs. For this class, the subject librarian is [https://www.library.unlv.edu/contact/librarians\\_by\\_subject](https://www.library.unlv.edu/contact/librarians_by_subject). UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at <https://www.library.unlv.edu/>.

**Final Examinations:** The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: <http://www.unlv.edu/registrar/calendars>.

**Final Note:** Physics has a reputation of being a difficult subject. However, you will see that it is not really that bad! You will find that the knowledge and problem solving skills that you learn here will be extremely valuable no matter what career path you follow. Therefore, don't be intimidated, try hard, and **never** be afraid to ask questions. ***This syllabus may change as the course progresses. The instructor will provide advance notice if and when this happens.***

### Tentative Schedule:

<b>Week 1</b> (8/30, 9/1)	<b>Chapter 15</b>	Traveling Waves and Sound
<b>Week 2</b> (9/6, 9/8)	<b>Chapter 16</b>	Superposition and Standing Waves
<b>Week 3</b> (9/13, 9/15)	<b>Chapter 20</b>	Electric Fields and Forces
<b>Week 4</b> (9/20, 9/22)	<b>Chapter 21</b>	Electric Potential
<b>Week 5</b> (9/27, 9/29)	<b>Chapter 22</b>	Current and Resistance
<b>Week 6</b> (10/4, 10/6)	<b>Chapter 23</b>	Circuits
<b>Week 7</b> (10/11, 10/13)	<b>Chapter 24</b>	Magnetic Fields and Forces
<b>Week 8</b> (10/18, 10/20)	<b>Chapter 25</b>	Electromagnetic Induction and Electromagnetic Waves
<b>Week 9</b> (10/25, 10/27)	<b>Chapter 26</b>	<b>(AC Electricity) and Midterm Exam</b>
<b>Week 10</b> (11/1, 11/3)	<b>Chapter 17</b>	Wave Optics
<b>Week 11</b> (11/8, 11/10)	<b>Chapters 18</b>	Ray Optics
<b>Week 12</b> (11/15, 11/17)	<b>Chapter 19</b>	Optical Instruments
<b>Week 13</b> (11/22)	<b>Chapter 28</b>	Quantum Physics
<b>Week 14</b> (11/29, 12/1)	<b>Chapter 30</b>	Nuclear Physics
<b>Week 15</b> (12/6, 12/8)	<b>Chapters 30 and review</b>	Nuclear Physics

***FINAL EXAM: Thursday, December 15 from 10:10am – 12:10pm.***