PHYSICS 2135 COURSE HANDBOOK
Spring 2019


This handbook is your guideline for Physics 2135: Engineering Physics II procedures. If corrections are required, the “official” version of this handout is maintained on the Physics 2135 web site (http://campus.mst.edu/physics/courses/24/index.html).

Course Description: An introduction to electricity, magnetism, and light, with emphasis on topics needed by engineering students. Prerequisites: Physics 1135 or Physics 1111, Math 1221 or Math 1215

Purpose

The purpose of this course is to provide students with knowledge, conceptual understanding and problem-solving skills in the discipline, so that students have the opportunity to be successful in further studies in science and/or engineering.

Major Course Elements

Professionalism [Required]. Faculty and staff will model professional behavior and expect professional behavior from students. Professional behavior includes respectful interactions with all others both face to face and in correspondence, regular punctual attendance, regular completion of assignments, active engagement in course activities and appropriate outside commitment of time and resources. See student Honor Code (http://stuco.mst.edu/honor-code/).

Lecture [Required] (Mondays and Wednesdays). Lectures will elaborate on concepts that are difficult to master or understand on a first reading of the material. In addition, examples will be worked to demonstrate the concepts and assist in the development of your problem solving skills. You are expected to have completed your reading assignment prior to lecture.

Recitation [Required] (Tuesdays and Thursdays). Recitation will be an additional source of instruction on important course concepts, with emphasis on developing the problem solving skills necessary for completion of the assigned homework. Your mastery of the material and your problem solving skills will be tested through collection of the assigned homework, collection of in-class exercises and student presentation of homework at the chalkboard.

Physics Learning Center [Recommended] (Mondays and Wednesdays). This is an open learning environment where you can solve problems in informal student groups, get help and insight in a relaxed setting, and prepare for your recitation class. You can come at any time during operating hours in rooms 129-130 of the Physics Building. At least one physics instructor will be there to help you. For more information about the Physics Learning Center, contact your recitation instructor or the LEAD office (573-341-7276, lead@mst.edu).
Laboratory [Required] (every other week beginning the second week of classes). See the “Physics 2135 Laboratory” handout for details. This handout is available from your laboratory instructor, or online at http://campus.mst.edu/physics/courses/2135lab/. The laboratory is designed to reinforce concepts learned in lecture and recitation, to connect those concepts to physical experience, to illustrate scientific methods, and teach measurement theory.

Sources of Points and Grading

Exams. There will be three hour exams, given only 5:00 PM – 6:00 PM on the Tuesdays listed in the Schedule of Classes (Feb. 19, Apr. 2 and Apr. 23). See the course website for the location where the exams will be given for your recitation section. The final exam is 10:00 AM – 12:00 PM, Tuesday, May 14. These four exams are worth 200 points each. Your lowest exam score (out of the three exams and the final) will be dropped.

End-Material Test. A 50-point end-material test will be given concurrent with the final exam on May 14. This test will cover material presented in class after the material for Exam 3.

Homework. On unannounced recitation days, assigned homework will be collected during recitation, or you may be asked to work and hand in a homework problem (or one similar to it). A total of six homework sets will be collected and your lowest score will be dropped.

Recitation. Your recitation instructor will call students to solve a homework problem (or one similar to it), usually at the blackboard, and without the use of notes. If you are absent when called, a grade of zero will be recorded. One lowest recitation score will be dropped. In addition, expect your recitation instructor to collect and grade other written work that you do during recitation, including test-level problems. A maximum of 150 points will be given for work done during recitation. [There is not universal number of recitation assignments. The final recitation average will be converted and reported relative to a 150 point maximum.]

Laboratory. There will be six laboratories during the semester. Your reports are to be turned in to your lab instructor at the end of the lab period. Lab reports will be graded on the basis of 100 points, and reports will be returned by your lab instructor. The lowest lab report score will be dropped. Each Physics 2135 student must purchase a lab manual. Manuals are available in the department office. Students not purchasing a lab manual will receive a laboratory grade of 0.

Course Points:

<table>
<thead>
<tr>
<th>Source</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>600</td>
</tr>
<tr>
<td>End Material Test</td>
<td>50</td>
</tr>
<tr>
<td>Homework</td>
<td>50</td>
</tr>
<tr>
<td>Recitation</td>
<td>150</td>
</tr>
<tr>
<td>Six Laboratories</td>
<td>150</td>
</tr>
<tr>
<td>Total</td>
<td>1000</td>
</tr>
</tbody>
</table>

One exam, and one homework score will be dropped. Your recitation points will be your average recitation percentage times 1.5 after the lowest recitation score is dropped. Your lab points will be 1.5 times your average lab percentage after the lowest lab grade is dropped. Grading is on an absolute scale.
The cut-offs for grades are:

- **A** \((\geq 89.50\%)\) \(\geq\) 895.0
- **B** \((\geq 79.50\%)\) \(\geq\) 795.0
- **C** \((\geq 69.50\%)\) \(\geq\) 695.0
- **D** \((\geq 59.50\%)\) \(\geq\) 595.0
- **F** \((< 59.50\%)\) < 595.0

### Some Course Rules

Those participating in a major university or intercollegiate event on the day of an exam may take the exam on *that day* at some time other than the normal time if they submit a written request for an excused absence *and* if the event’s Faculty Sponsor can ensure exam security. The student must submit a written request (email is acceptable) to Dr. Musser, acknowledged in writing (email is acceptable) by the event's Missouri S&T Faculty Sponsor, *no later than the end of the last Wednesday lecture the week before the exam*. The Faculty Sponsor must be willing to arrange proctoring and ensure exam security. See course website for details.

**Your lowest exam score will be dropped.** This accommodates students who miss one test due to reasons beyond their control (minor illness, athletic events, family events, etc.). If you did well on all three tests, you may decide to skip the final. If you request and are issued a grade of incomplete due to dire personal circumstances at the course's end, all your exams will count in a prorated way, with none being dropped, in the determination of your course grade.

**There are NO make-ups of exams, recitation assignments, labs, or the end-material test.** Any missed assignment will result in a grade of zero. The single lowest homework, recitation, lab, and exam score will be dropped. **There will be no laboratory make-ups.** Laboratory policies are set by faculty in charge of the labs. Because the lowest lab score is dropped, no make-ups will be given.

**Regrade policy.** Requests for regrades must be submitted no later than the end of the second recitation meeting after the general return of the graded material, except that lab regrade requests must be submitted in accordance with the current lab policy. Except for labs, all regrade requests must be submitted to your recitation instructor. Compose a detailed but brief written statement on a separate sheet of paper explaining why you are requesting a regrade. Attach the sheet to the front of the full assignment and submit it to your recitation instructor by the appropriate deadline.

**There are occasional instances in which a score is not entered correctly in the spreadsheet record.** In such an event, you must bring your recitation instructor the assignment that was incorrectly recorded, and the correction will be made. It may be necessary to bring *all* assignments of that type (e.g. homework, etc.) in order to have your scores correctly entered. Spreadsheet corrections involving exams must be requested within two weeks of posting of the exam grades. Other spreadsheet corrections must be requested before the start of the Final Exam.

**Academic dishonesty will be dealt with severely, and disruptive talking and other distractions will not be tolerated.** There are too many students in a room to allow disruptive behavior. A
course instructor may request the campus Judicial Officer to take effective disciplinary action after issuing a single warning. See *Student Academic Regulations* at [http://registrar.mst.edu/academicregs](http://registrar.mst.edu/academicregs).

**Students with inadequate attendance may be dropped.** Any student who has inadequate attendance, as evidenced by 5 confirmed absences or by missing a total of 5 graded assignments of any kind (exams, homework, recitation, and labs) are subject to being dropped if a subsequent class or assignment is missed.

**Appeals.** If you believe an exception to a course rule should be made, you may file a written appeal with your recitation instructor. Appeals must be filed within one week of the occurrence of the circumstance that causes your appeal, or by the end of your last recitation of the semester, whichever comes first. Your appeal will be considered by the entire Physics 2135 teaching staff. This appeals policy applies to course rules given in this handbook, but does not apply to laboratories. Minor illness, lack of preparation, “I did poorly on two exams,” non-emergency family events, oversleeping, “I forgot about it,” etc., are not reasons for filing an appeal.

**Complaints About the Course**

**Unresolved complaints about a laboratory or recitation instructor:** Occasionally, a student has a conflict with a laboratory or recitation instructor. It is hoped that any complaints can be resolved in a collegial manner through discussions between student and instructor. However, if such a situation continues or remains unresolved, please feel free to discuss it with Dr. Musser.

**Unresolved complaints about the course:** It is hoped that any complaints about the course can be resolved in a collegial manner through discussions with Dr. Musser. However, if there are any complaints that cannot be resolved, you may take them up with Dr. Thomas Vojta, Physics Department Chairman.

**Title IX:** Missouri University of Science and Technology is committed to the safety and well-being of all members of its community. US Federal Law Title IX states that no member of the university community shall, on the basis of sex, be excluded from participation in, or be denied benefits of, or be subjected to discrimination under any education program or activity. Furthermore, in accordance with Title IX guidelines from the US Office of Civil Rights, Missouri S&T requires that all faculty and staff members report, to the Missouri S&T Title IX Coordinator, any notice of sexual harassment, abuse, and/or violence (including personal relational abuse, relational/domestic violence, and stalking) disclosed through communication including but not limited to direct conversation, email, social media, classroom papers and homework exercises.

Missouri S&T’s Title IX Coordinator is interim chief diversity officer Neil Outar. Contact him (naoutar@mst.edu; (573) 341-6038; Temporary Facility A-1200 N. Pine Street) to report Title IX violations. To learn more about Title IX resources and reporting options (confidential and non-confidential) available to Missouri S&T students, staff, and faculty, please visit [http://titleix.mst.edu](http://titleix.mst.edu).
Course Assistance

If you require additional assistance you should not hesitate to take advantage of the multiple opportunities available to receive help. You may arrange for extra assistance with your recitation instructor or through the Physics Learning Center (PLC). The PLC for Physics 2135 will operate on Mondays and Wednesdays between 2:00-4:30 pm and 6:00-8:30 pm. If you desire additional or alternate learning assistance and consultation for this course visit the web site of the Learning Enhancement Across Disciplines (LEAD) program at http://lead.mst.edu/.

The Student Success Center: The Student Success Center is a centralized location designed for students to visit and feel comfortable about utilizing the campus resources available. The Student Success Center was developed as a campus wide initiative to foster a sense of responsibility and self-directedness to all S&T students by providing peer mentors, caring staff, and approachable faculty and administrators who are student centered and supportive of student success. Visit the SSC at 198 Toomey Hall; 573-341-7596; success@mst.edu; facebook: www.facebook.com/SandTssc; web: http://studentsuccess.mst.edu/

Accessibility and Accommodations: It is the university’s goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please contact Student Disability Services at (573) 341-6655, sdsmst@mst.edu, visit http://dss.mst.edu/ for information, or go to mineraccess.mst.edu to initiate the accommodation process.