

Physics 2212 -- Spring 2020

Text: Physics for Scientists and Engineers, 10th ed., by Serway and Jewett
Prerequisites: PHYS 2211, Math 2202 [C or better required for both.]

The topic areas for this course are: Electricity and Magnetism, Wave Optics, and Quantum Theory. There will be four tests given during the semester, and a comprehensive final exam at the end of the semester. During each test you may use a 1-page [8.5 × 11, front & back] formula sheet, which you will prepare and bring with you. A model formula sheet will be available at the course D2L BrightSpace site. The four regular tests will be primarily multiple choice but will also each contain three free-response items; the final exam will consist of twenty-four multiple-choice items.

The test schedule for this semester is:

Test 1	Chapters 22 – 25	Thursday, Jan. 30
Test 2	Chapters 26 - 29	Tuesday, Feb. 25
Test 3	Chapters 30 – 33	Thursday, March 19
Test 4	Chapters 36 & 37, 39 – 41, & 43	Tuesday, April 21
Final Exam	Comprehensive	Thursday, April 30

The final exam will not be individually rescheduled to accommodate any other plans. There are *no exemptions* from the final exam. [The time period for the exam is 1:00 – 3:00 p.m.]

Plan to take the tests as scheduled; no make-up tests will be given and no test will be individually rescheduled. If one test is missed a replacement score will be created from the corresponding problems on the final exam. *The final exam will consist of four sections of six items each.* [If the absence was *unavoidable* and the reasons for it are *verifiable*, then the reasons *must be submitted in writing*, along with supporting documentation, upon your return to class. This statement must also be signed.] If multiple tests are missed without such reasons (or if the reasons are not provided as described) a grade of zero will be assigned for each missed test after the first. [The replacement procedure described is applied for each *excused* absence.] If all four tests are taken, or if at least three tests are taken and the missed test is excused (as described above) the lowest test grade will be compared to the replacement score from the corresponding section of the final exam and will be replaced if improvement has occurred.

The point credit distribution for the class is as follows:

4 tests @ 12 points each	48 points
Homework	14 points
Quizzes	16 points
Final Exam	24 points

This list contains all of the sources for credit in this course. No “special projects”, papers, re-opened homework, etc. will be made available at the end of the course to repair an individual’s grade. [Note that there are already 2 “extra points”.] Stay on track and get the credits as they become available.

Cell phones, pagers, etc. must be silenced during class. Especially during testing, no use of any device capable of transmitting a signal is permitted. Cell phones may not be used as calculators; be sure to bring a working calculator with you for the tests. Late-arriving students will not be allowed to begin a test if other students have already completed the test and left the classroom.

Homework problems will be assigned for each chapter covered. The tests and the final exam for this course will be primarily problem-based instruments, though each will also include conceptual items. The homework problems are intended to provide practice for the tests. The assigned homework sets represent a minimum number of problems for the material covered; if you find particular areas to be difficult you should find similar problems to those assigned and do those also.

Homework *collection* will be done through WebAssign. You must have access to WebAssign in order to obtain homework credit; See the information given at the D2L site for self-enrollment and start-up procedures for WebAssign. [The *class key* appropriate for your section will be sent to you by email.] Note that WebAssign provides an initial 14-day period during which you can enroll and work without an access code though you do need a class key. WebAssign includes an *ebook* version of the text; it is not required that you have a printed copy of the text. Both for-credit and practice-only problems will be available from within WebAssign.

The WebAssign system will compute a percentage score (points obtained divided by points available, dropping the two lowest-scored assignments) and report that percentage score to me. I will multiply that fraction by 14; this will be your homework score. Every assignment will have a clearly indicated deadline for submission; no extensions will be given for students missing those deadlines. Also, it is very important that you do all assigned work in a timely manner – not just the part of it that is submitted through WebAssign for grading.

Quizzes will be given through D2L BrightSpace. There will be twelve 2-point quizzes, but the total value for them is capped at 16 points. The quizzes will occur on the following dates: January 17, 22, 27; February 7, 12, 19; March 4, 9, 13, 27; April 8, 13. [There are no *make-ups* for quizzes; the extra points allow up to four misses. You should, however, take all twelve (for practice) even if you get all 16 points early.]

At KSU, you are required to have a minimum grade of 'C' in any course (including this one) in order to use it as a pre-requisite for a more advanced course unless the department providing that course explicitly decides otherwise.

The items in the following list are the expected Course Learning Outcomes for PHYS 2212:

Students completing this course will be able to:

1. Analyze and solve electrostatic problems for discrete and continuous charge distributions using pictorial, graphical, physical, or mathematical representations (including calculus and vectors), and other representations as appropriate.
2. Analyze and solve magnetostatics and induction problems using pictorial, graphical, physical, or mathematical representations (including calculus and vectors), and other representations as appropriate.
3. Analyze and solve DC and AC circuit problems using pictorial, graphical, physical, or mathematical representations (including calculus and phasors), and other representations as appropriate.
4. Explain the nature of electromagnetic waves and predict the behavior of light waves passing through single or multiple slits.
5. Identify and describe the basic ideas of quantum theory, and apply its principles to simple systems.

PHYS 2212 satisfies one of Kennesaw State University's general education program requirements. It also addresses the Natural Sciences general education learning outcome. The learning outcome for Natural Sciences states: Students will demonstrate an understanding of college-level scientific principles, theories, and laws, and apply them to solve problems and explore natural phenomena.

For more information about KSU's General Education program requirements and associated learning outcomes, please visit: http://catalog.kennesaw.edu/preview_program.php?catoid=29&poid=3434.

Students are solely responsible for managing their enrollment status in a class; nonattendance does not constitute a withdrawal. The last day to drop this course with a grade of 'W' is Wednesday, February 26.

Official KSU policies regarding withdrawals from classes (as well as additional information on additional registration-related policies) can be found at the following address:

<http://catalog.kennesaw.edu/content.php?catoid=24&navoid=2171#withdrawalfromclasses>.

PHYS 2212L is a lab course that is associated with this course. The lab component is neither a pre-requisite nor a co-requisite for the lecture component, but PHYS 2212 is a pre-requisite or concurrent for PHYS 2212L. Note that generally programs listing PHYS 2212 as a requirement will also require PHYS 2212L and that the same holds for their use as pre-requisites for other courses. Also, Area D will require both if you are using this course there.

A variety of materials will be placed at the D2L site for this course. These include this syllabus, model formula sheets for each test, and a notice concerning policy in the event of university closure. Solutions for quizzes and tests will also be placed there, and additional materials may appear at that location as well.

Recitation (also known as breakout) will be used to reinforce the lectures; new material will not be introduced during the recitations. The recitation meetings will mainly consist of additional examples. There will, of course, also be the opportunity to ask questions in a smaller group setting.

Every KSU student is responsible for upholding the provisions of the Student code of Conduct, as published in the Undergraduate and Graduate catalogs. The Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic malicious/intentional misuses of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the Student Conduct and Academic Integrity department, which includes either an "Informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimum one semester suspension requirement. The link to the full university honor code is: <https://web.kennesaw.edu/scai/content/ksu-student-code-conduct>.

Any student with a documented disability or medical condition needing special accommodations for testing or other class-related activities must contact the instructor concerning this matter as soon as possible. Written verification from the KSU Student Disability Services at: <http://studentsuccess.kennesaw.edu/sds/> is required. No special accommodations can be made prior to completion of this approved University documentation. All discussions will remain confidential.

Each assessment category (tests, quizzes, homework, final exam) produces points that contribute to your total. There are specified numbers of these points in each category, but they all simply add together; there is no reweighting. When each test is returned to you it will have both its own score and your total accumulated points to that point written on it. The test score will be in red and the total points score will be in blue.

At the time that the tests are returned (or very shortly thereafter) a histogram of the total scores distribution will be published at the course D2L site; this document will also include a calculation of the present total that would be on track for an ultimate total of 100. This is intended to allow you to compare yourself to the larger group and to also produce a current percentage score for yourself.

At the end of the course, the conversion of the number scores into letter grades is done using the standard 10-point blocks: [90, 100] is A, [80, 90) is B; [70, 80) is C, [60, 70) is D, and below 60 is F. No overall “curve” will be applied. Minor adjustments to the boundaries (especially the C-D boundary) may occur but you should not anticipate that to happen; it also may not occur. Of course, in no case would such adjustments be so as to increase a threshold. {Note that the ‘[’ square-bracket symbol indicates that the end-point is included in the range and the ‘)’ close-parenthesis indicates that the end-point is not included in the range.}

Professor: Dr. M. G. Thackston
Office: H 260-i
Phone: (470) 578-4214
Email: mthacks1@kennesaw.edu

Note: Use the email address above to contact me. Do not send email through WebAssign or D2L. Send email to me only through your KSU student Outlook account.

I do not monitor the message center at WebAssign.

If you do use D2L to send a message, it *will forward* email to my regular address but the mail server will block any reply I send back to you. Also, mail sent through D2L has a header indicating that I sent it and I may not notice it. At times I will send group emails through D2L; do not attempt to reply to those as those replies will be blocked by D2L also.

Also, you should ignore (or report to abuse@kennesaw.edu) any email that appears to come from me but does not originate from either my regular address (shown above) or the D2L mass-mailer that I use for class-wide messages. We have had several impersonation scams occur here using gmail or other addresses made to appear to be from faculty, staff, or administration. Do not allow yourself to be a scammer’s or a phisher’s victim.

Scheduled Office Time for Spring 2020

Tuesday	10:00 – 10:50 a.m.	3:00 – 4:00 p.m.
Thursday	10:00 – 10:50 a.m.	3:00 – 4:00 p.m.