

Syllabus – Fall 2021

Physics 260, University Physics II

Professor information:

Robert N. Oerter

Email: roerter@gmu.edu or contact me through Blackboard

[Note: For fall 2021, I will not be on campus. Do not leave messages or course materials at my listed office location. Do not leave phone messages at my office phone number.]

Communications:

- All important course communications will be sent as email to your Mason email account and will be posted on Blackboard as announcements. You are expected to check your email regularly. Examples include changes to the class schedule and to exam dates. “I didn’t check my email” is NOT an excuse for missing an exam/quiz/due date.
- *Contacting the professor:*
 - Use the Discussion Boards in Blackboard
 - For questions about what’s covered in the lectures.
 - For questions about homework problems.
 - For questions about due dates, course policies, etc.
 - Use email (roerter@gmu.edu)
 - For personal communications – for example, special circumstances like illness on the day of an exam.
 - Come to office hours for any of the above. Hours are posted on Blackboard.
 - I will do my best to reply within 24 hours of an email or Discussion Board post, except on weekends.

Course Requirements:

Course prerequisite: Math 114

Corequisite: Math 213

Text: University Physics, 14th or 15th Edition, by Young and Freedman

Course Management system: Blackboard

Course delivery: Synchronous

Also required:

- Modified Mastering Physics homework system – purchase through the link on our Blackboard page.
- Learning Catalytics classroom response system (see below)
- Scientific calculator for classwork and exams.
- Computer with stable internet connection.

- Speakers and microphone for computer.
- A device for scanning/photographing your work for upload into Blackboard, for example a smart phone with a scanning app.

Tutor: S. Fisher

Tutor Hours: Email sfisher2@gmu.edu to set up a time to meet with Dr. Fisher.

Course Goals: Understand basic concepts of electricity and magnetism. Learn the equations for, and solve problems using Coulomb's Law, Gauss's Law, and Ampere's Law. Solve simple circuits involving resistors, capacitors, inductors, batteries, and AC voltage sources. Understand wave motion and sound waves. Understand the origin of electromagnetic waves and the electromagnetic spectrum.

Method of Instruction:

- **Lectures** will be synchronous. Attendance is required. You may miss four lectures without grade penalty. Further absences will not be excused *for any reason*. You will use the **Learning Catalytics** system (see below) during the lecture for classroom response. Your responses will count toward your class grade. Grading is partly participation and partly correct response.
- **Recitations** will be synchronous. Attendance and active participation is required. See the course schedule for the meeting time for your recitation. Your recitation instructor will provide more information about class activities and grading.

Homework and classroom response

Homework assignments will be done in the **Modified Mastering Physics** system. They may be accessed through the **Mastering Physics** link under "Homework Assignments" on the Blackboard page. To register, you will need an access code, that can be purchased using the same Blackboard link. If you have purchased Mastering Physics in the past two years you don't need to buy a new code. If your old code doesn't work, contact Pearson/Mastering support. Be sure to let them know we are using **Modified Mastering Physics**, as there is sometimes an issue using a (regular) Mastering Physics access code for Modified Mastering Physics.

You should work out each problem on paper before submitting an answer in Mastering Physics. This will help you organize your work and will give you a record to use for studying later. You have six attempts to get the correct answer. For numerical-answer questions, there is no penalty for wrong answers before the sixth attempt. For multiple-choice questions, you are penalized each time you submit a wrong answer. Some questions are "tutorial" questions that provide hints. There is no penalty for opening a hint, but there is a penalty for answering a question wrong inside a hint, or for requesting the answer to a hint. You get partial credit for answering hint questions correctly. Some questions require an algebraic answer. You can use the pull-down menus to enter fractions, exponents, etc. There are also keyboard shortcuts that can be found in the online help. Be careful about parentheses and order of operations!

If you score less than 90% on a homework assignment, you will be offered the opportunity to solve three additional problems for extra credit. You can earn up to 1 point

(about 10%) extra credit on each assignment. These "adaptive follow-up" assignments are due two days after the original assignment is due. If you test out by scoring over 90% then you automatically get the extra credit points. Note: your homework grade for the course maxes out at 100%. Homework averages over 100% will be recorded as 100% for the purposes of the final course grade.

You are encouraged to form study groups to work on homework together. Discussion boards on Blackboard may also be used for discussing homework problems. We will use **Piazza** for discussions (access through Blackboard). Feel free to give suggestions and hints when other students ask questions. However, you should not ask for or give complete solutions to problems.

Learning Catalytics: If you bought Modified Mastering Physics with etext access, Learning Catalytics is included. If you bought Modified Mastering Physics as a stand-alone, you will have to purchase Learning Catalytics separately. The first time you log in to Mastering Physics, you will be prompted to buy Learning Catalytics. The cost is around \$12.

Quizzes

There will be a quiz approximately every two weeks. These will be given as Blackboard assignments and will be time-limited as described in the schedule. Open the question, then solve it on a separate sheet of paper. Scan your work and upload it at the assignment link. There will be a practice quiz before the first graded quiz so you can learn the procedure. I will drop one quiz with the lowest grade. If you miss a quiz **for any reason**, that will be the dropped quiz.

Grading

Please do not pay any attention to the "Total" column in Blackboard or in Mastering Physics. That column does not take into account the percentage weights below.

Homework	15%
Midterm exams (2 at 15% each)	30%
Lecture attendance and classroom response	10%
Bi-weekly quizzes (Best 4 out of 5)	15%
Recitation	10%
Final exam	20%
Total	100%

Grading Scale:

The grading scale is given below. Note that I do not give any “minus” grades. Individual exams might be curved, but there will not be a curve for the final grade.

Letter Grade	Course average (sample)
A+	97% and above
A	90% to 96.99%
B+	87% to 89.99%
B	80% to 86.99%
C+	77% to 79.99%
C	70% to 76.99%
D	60% to 69.99%
F	Below 60%

The final exam is the “end date” for the course. I will not consider any requests for regrades, missing assignments, or other work submitted after that date.

Exams and Quizzes:

All exams and quizzes will be administered online. **Exams** must be taken during the scheduled time, unless other arrangements are made with the Office of Disability Services. For **quizzes**, there will be a time window during which you must take the quiz and submit your work. This time window will not be during class time. See the class schedule under the “Syllabus” category on Blackboard.

Students are required to have a **scientific calculator** with them for exams and quizzes. Cell phones or other wireless devices are **not** acceptable and may not be used during an exam. **All exams and quizzes will be open book and open notes.** You may not use any online materials (except for your e-text). You may not refer to your Mastering Physics homework during an exam. If you open any other assignments, you will immediately be kicked out of the exam and you will not be allowed to finish. However, you may use any homework notes or solutions you wrote yourself. The scientific calculator is the only allowed calculation aid – use of any algebraic manipulation software (like Mathematica or Matlab or the associated websites) or any circuit analysis software (like Falstad) will be considered an honor code violation.

Honor Code:

Academic integrity is a crucial part of George Mason's educational mission. Without academic integrity, a degree is a worthless piece of paper. Part of my job as your professor is to monitor academic integrity and report suspected violations to the Office of Academic Integrity. To avoid any such issues, please read and follow the Honor Code requirements listed here.

Do not use solutions from the instructor's solution manual or the internet in solving your homework problems. Do not refer to your online Mastering Physics homework during a quiz or exam. (You may refer to any notes you took while doing the homework.) Use of any solutions other than those available in the bookstore will be considered a violation of the honor code. Giving or receiving assistance on exams or quizzes, or the use of any online materials such as "homework help" sites, algebra sites, or circuit analysis sites will be considered a violation of the honor code. Penalties for violation of the Honor Code range from grade penalties (reduced grade on an exam/assignment) up to suspension or expulsion from the university.

[See: <http://academicintegrity.gmu.edu/honorcode>]

Mason Core

This course satisfies the [Natural Science core requirement](#).

If you are a student with a disability and you need academic accommodations, please contact the Office of Disability Resources at 703/993-2474. All academic accommodations must be arranged through that office.