

# Syllabus – Spring 2021

## Physics 260, University Physics II

### Professor information:

**Robert N. Oerter**

[Note: For spring 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.]

### *Contacting the professor:*

- Use Piazza
  - 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](mailto:roerter@gmu.edu)) or Private Message in Piazza
  - For personal communications – for example, special circumstances like illness on the day of an exam.

### Course Requirements:

*Course prerequisite:* Math 114

*Corequisite:* Math 213

*Text:* University Physics, 14<sup>th</sup> Edition, by Young and Freedman

*Course Management system:* Blackboard

*Course delivery:* Mixed asynchronous/synchronous

### *Also required:*

- Modified Mastering Physics homework system – purchase through the link on our Blackboard page.
- 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](mailto: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:

This section of PHYS 260 will be taught in a **mixed asynchronous/synchronous** manner.

- **Lectures** will be asynchronous. The lecture modules are available through the course Blackboard site under "Weekly Lessons". You should take careful notes during the lecture – the note-taking process is the first step of your learning process! Each lecture segment has an embedded **quiz** with a specific due date. So, you can listen to the lecture at any time convenient for you, but do it before the due date or you won't get credit for that quiz. Some quiz questions are easy – they are there to make sure you are paying attention and taking notes. Others require some calculation. There are typically 3-6 quiz questions in each lecture segment. When you have answered all the quiz questions, be sure to **submit** the quiz using the icon in the lower right corner. You can go back and listen to an earlier part of a lecture, but you cannot jump forward in the lecture, and you cannot go on to the next part of the lecture until you have answered the quiz question(s).
- **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 the method of taking attendance.

## Homework

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.

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.

### **Quizzes**

There will be a quiz approximately every two weeks. These will be given as Blackboard assignments. 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.

### **Grading**

Homework	15%
Midterm exam	20%
Lecture questions	10%
Bi-weekly quizzes (Best 5 out of 6)	20%
Recitation	10%
Final exam	25%
<b>Total</b>	<b>100%</b>

### **Grading Scale:**

The grading scale will be determined after all the grades are in. An example grading scale is given below. I reserve the right to alter the grading scale (“curve”) according to the class performance. The grade cut-offs might be lowered – they will not be raised above those given below. Note that I do not give any “minus” grades.

<b>Letter Grade</b>	<b>Course average (sample)</b>
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%

### **Exams and Quizzes:**

Exams must be taken during the scheduled class time, unless other arrangements are made with the Office of Disability Services. All exams will be administered online.

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. However, you may use any homework notes or solutions you wrote yourself.

### **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 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.*