

Physics 2212K - Spring 2018, Monday and Wednesday 5:30 PM - 6:45 PM

Principles of Physics II:

Electricity and Magnetism, Light, Modern Physics

Course Objectives: The primary objectives of the course are for students to develop understanding of fundamental physical principles. The focus will be not on "training" and "dry" learning of the lecture materials but on conceptual understanding and developing skills to apply basic principles to actual problem solving. Lectures will include examples of how to approach problems; students are expected to spend as much as possible of their own time on problems, tests, etc.

Room: 225 Aderhold Learning Center

Instructor: Dr. Vadym Apalkov, (<http://www.physics.gsu.edu/apalkov/>)
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Office hours: Monday, Wednesday: 10:00 am -1:00 pm, 3:00 pm – 5:00 pm

Textbook: **Physics for Scientists and Engineers** by R. D. Knight (chapters 22-42 will be covered)

Prerequisite: Physics 2211, Math 2211, and Math 2212 or equivalent.

Laboratory: Labs will start Monday, January 8.

Physics Lab Coordinator: [Carola Butler](mailto:butler@phy-astr.gsu.edu), 214 Natural Sciences Center (email: butler@phy-astr.gsu.edu)

For more information about the labs, go to the lab web page at

<http://www.physics.gsu.edu/butler/labs/>

Homework: Homework will be assigned each week and will be available online at
http://www.physics.gsu.edu/apalkov/phys2212_HW.htm

Quizzes : There will be a quiz at the end of (almost) each class. Each quiz will have two problems with 4 points per problem. You are **allowed** to use the **textbook and classnotes**.

Exams: Three midterm exams will take place at the class hour on (i) **February 5** (Monday), (ii) **March 5** (Monday), and (iii) **April 2** (Monday). You are **not allowed** to use the **textbook and classnotes**. You can only use **two pages** with formulas or summary as the reference.

Final Exam: The final exam is scheduled for Monday, **April 30, 16:15 PM** in 225 Aderhold Learning Center. The exam will be 2.5 hours in duration. You are **not allowed** to use the **textbook and classnotes**. You can only use **two pages** of formulas or summary as the reference. **The final exam is comprehensive but weighed more heavily toward the material at the end of the course.**

Disclaimer: The course syllabus provides a general plan for the course, deviations may be necessary. Students are responsible for adhering to the GSU academic honesty policy (www2.gsu.edu/~wwwcam/index.html)

Grading:

Quizzes: 4 points for correct answer, 2 points for wrong answer.

Homework:

Each problem will be graded out of **ten (10)**. **The homework with the lowest score will be dropped.**

Exams:

- Each midterm exam will have **five (5)** equally weighted problems, the final exam will have **ten (10)**.
- Each problem will be graded out of **ten (10)**.
- You will have three midterm exams.
- Your answer **MUST** be circled.
- Numerical answers require **UNITS**.
- Show all work. Explain in words what you are doing. **A few words can make your score higher.**
- Work problems algebraically first, and then insert numerical values at the end. This is good practice always, as it minimizes errors along the way. It also makes it easier to follow what you are doing and give appropriate partial credit.
- The correct answer is **NOT** enough. You **MUST** show clearly how you arrived at the answer in order to receive full credit. Where appropriate, use a drawing. Make the drawing larger, rather than smaller. Indicate clearly on your drawing, where appropriate, you coordinate system, including the origin, and your choice of sign convention.

Final Grades:

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| Laboratory (see http://www.physics.gsu.edu/butler/labs/) | – 25% |
| Homework (the homework with the lowest score will be dropped) | – 25% |
| Midterm Exams (1-3) | – 25% |
| Quizzes | – 10% |
| Final Exam | – 15% |