

Physics 350: Electromagnetic Theory

Gustavus Adolphus College

Spring 2017

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Textbook: *Electromagnetic Fields 2nd Ed.*, Wangsness

Course Policies and Evaluation

Pre-Requisite Expectations: Students in PHY350 are expected to have a solid background and have passed Calculus II, Electromagnetic Universe, and Applied Mathematics for Scientists and Engineers. Material from these courses will **be used frequently** in PHY215 including in homework **and exam** problems.

1. Class Meetings: The class will meet, M-F 9:00-9:50. Students are expected to have read the text and any other assigned materials **before** coming to class.

2. Homework: Problems sets will be assigned approximately every week.

- Written homework sets should be **legible**, neat, and organized, including a staple and your name, and lacking fringes.
- **Thorough explanations of answers are required of all problems.**
- You are encouraged to discuss and work problems with each other, with the instructor, and other professors.
- Working problems with other students should be an **equal effort** arrangement. **Direct copying** or **unequal effort answer sharing** is a violation of the honor code.
- If a homework problem appears as an in-class group or discussion problem, you may use the results in class to inform your homework.
- Mathematica and Schaums may both be used as needed, provided they are referenced properly in a separate box for each used result, e.g.:

$$\text{From Mathematica: } \int \frac{dr}{(r^2+x^2)^{3/2}} = -\frac{1}{r^2+x^2}$$

Note that Schaums may be used on exams, but Mathematica may not.

- **In all cases: the use of the internet (or any other place where the solution is simply given) for any homework, group, or discussion problem (or any part thereof), unless specifically stated otherwise, is not allowed, and will result in a zero for the assignment as a minimum penalty.**

3. Late Homework: Late homework will be accepted at the discretion of the instructor with loss of points. No homework will be accepted after the problems have been returned to the class or the solutions posted.

4. Problem Discussions: Most weeks, three students will each be assigned to present a discussion of a particular problem illustrative of the concepts studied in class that week. Each student should be prepared to present the **full and correct** solution in **about 10-12 minutes**, and to **respond to questions or lead further discussion** of the problem for an additional 2-3 minutes.

Each student will have several opportunities during the semester (~3) to lead a problem discussion. Grades will be given both for presenters and for participation by others in the subsequent discussions.

5. Attendance: Students are expected to attend all classes during the scheduled hours. Students are responsible for informing themselves of material and assignments covered during absences. Students must advise the instructor in writing during the first week of class of any scheduled athletic, music, or other college activities that will require their absence during the semester. Such written notice does not imply a waiver of course requirements or an agreement to reschedule exams. Excessive absenteeism will result in a reduction of the final grade.

Unexcused absences during group or discussion problems will lead to a zero for that day's activity.

6. Exams and quizzes: There will be four one-hour exams, and a two-hour written final exam. Quizzes will be given at the discretion of the professor. There is no separate mid-term exam.

7. Missed Exams: Students are expected to arrange in writing with the instructor well in advance to take an exam at other than the announced time. Requests to reschedule exams for non-emergency personal reasons will be declined. Permission to make up a missed exam after the fact will be at the discretion of the instructor and should not be assumed.

8. Academic Honesty: You will abide by the academic honesty policy printed in the Academic Bulletin, and abide by decisions of the joint student/faculty Honor Board. The honor code reads:

“On my honor, I pledge that I have not given, received, or tolerated others’ use of unauthorized aid in completing this work.”

Several components of this course, including homework, group problems, and discussion problems encourage collaboration between students or the use of tutors and the instructor for assistance. The instructor will attempt to make clear to what degree outside help is allowed, but it is the student's duty to clarify if there is an ambiguity. The instructor is bound to abide by the College's Honesty Policy and therefore must report all incidents of academic dishonesty (cheating, copying, etc.) to the Dean's Office.

9. Incompletes: A grade of incomplete will only be given for work not completed due to circumstances beyond the control of the student (college policy).

10. Disability: Gustavus Adolphus College is committed to ensuring the full participation of all students in its programs. If you have a documented disability (or you think you may have a disability of any nature) and, as a result, need reasonable academic accommodation to participate in class, take tests or benefit from the College's services, then you should speak with the Disability Services Coordinator, for a confidential discussion of your needs and appropriate plans. Course requirements cannot be waived, but reasonable accommodations may be provided based on disability documentation and course outcomes. Accommodations cannot be made retroactively; therefore, to maximize your academic success at Gustavus, please contact Disability Services as early as possible. Disability Services (<https://gustavus.edu/advising/disability/>) is located in the Advising and Counseling Center.

11. Evaluation:

Hour exams 40%

Homework 20%

Final Exam 20%

In class participation and group problems 10%

Problem Discussions 10%

Final course grades will be assigned using the following scale as a guide:

94-100 A	82-86 B	70-74 C	58-62 D
90-94 A-	78-82 B-	66-70 C-	0-58 F
86-90 B+	74-78 C+	62-66 D+	

Assignment of the final letter grades will also take into account other factors including the instructor's subjective evaluation of the student's attendance, initiative, evidence of improvement, and the quality of independent work.