Course Policies and Information

Objective
The primary objective of this course is to introduce students to the solution of practical problems involving electromagnetic field theory. A major goal will be to expose students to technologies that they are likely to encounter in their careers. Topics covered include static electric and magnetic fields, Maxwell's equations, propagation and reflection of transverse electromagnetic waves, and antenna and transmission line theory. This course also exposes students to analysis and design issues often encountered by electrical engineers in professional practice.

Textbook

Web Page
http://www.facstaff.bucknell.edu/dkelley/elec390/index.html

Prerequisites
ELEC 226 and MATH 212 or their equivalents, unless waived by instructor

Instructor
Prof. David Kelley, Dana 301A, 577-1313, dkelley@bucknell.edu

Communication
Check your e-mail and the course web page at least once per day. Most announcements, assignments, study aids, and other course materials will be distributed only via the web page or Blackboard. E-mail will be used occasionally to distribute time-sensitive announcements. You are responsible for knowing and adhering to any policies posted at the course web site.

Academic Responsibility
You are expected to comply fully with the university's academic responsibility policies. Copying solutions, looking over a classmate's completed solutions, and other forms of plagiarism are not acceptable. I expect all submitted problem solutions to be your own work. Team exercises, if applicable, should be your group’s own work. General discussion of solution techniques is okay, but sharing step-by-step instructions for solving a problem, sharing computer files, and direct copying are not. Please refer to the “Academic Responsibility at Bucknell” web site (www.bucknell.edu/x1324.xml) or see me if these policies are not clear.

Grading Policy
The final course grade will be computed as shown below, although your weighted exam average must be greater than 50 in order for you to pass the course. Significant extra credit opportunities are not likely to be provided. Exam dates will be posted at the course web site.

- Special Lecture(s) 1% Incorporated into Professional Conduct if not needed
- Professional Conduct 4%
- Reading Quizzes 5% Roughly weekly; variable weights
- Homework 15% Weighted equally; lowest score dropped
- Individual Invest. 10%
- Exams #1, #2, #3 40% Lowest of three scores dropped; other two weighted equally
- Final Exam 25%

Grades will not be discussed until a 24-hour “cooling off” period has passed, except when points have been added incorrectly to obtain an overall score. An absolute scale with the following distribution will be used to determine your final course grade. Note that with an absolute scale you are not in competition with each other over grades.

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<thead>
<tr>
<th>Grade</th>
<th>93-100</th>
<th>90-92.9</th>
<th>87-89.9</th>
<th>83-86.9</th>
<th>77-79.9</th>
<th>73-76.9</th>
<th>60-69.9</th>
<th>&lt; 60</th>
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<tbody>
<tr>
<td>A</td>
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**Conflict Policy**

If you know that you will not be able to complete an assignment by its deadline or take an exam at its scheduled time, you must notify me at least 48 hours in advance in order to avoid an automatic 5% grade penalty on the assignment, except in extraordinary cases. Official university commitments such as recitals and athletic competitions will normally be accommodated; however, in accordance with university policy, personal travel plans under your control will not. If you miss a deadline due to illness, you must contact me as soon as possible to avoid a lateness penalty.

**Exam Policy**

Unexcused absences from exams (e.g., due to oversleeping) will be handled on a case-by-case basis, usually in consultation with the Dean’s Office. If you miss all or part of an exam, you must notify me or Judy Harris as soon as possible. The mostly likely outcome is that the missed exam will be the one for which the lowest score is dropped. Students arriving late to an exam will be offered the choice of completing it in the time remaining or dropping the score for that exam. Any additional unexcused absences beyond the first one will most likely result in a grade of zero for the exam. Additional exam policies will be posted at the course web site on the “Exams” page. You are responsible for knowing and adhering to any policies posted at the web site.

**Homework Policy**

The primary purpose of homework is to help you master the concepts presented in the course. I encourage you to work on homework in groups and to help each other understand the material within the scope of the “Academic Responsibility” section above. However, the less you rely on a study group to complete your assignments, the more effectively you are likely to learn the material.

Homework must be submitted by the indicated deadline. Place your name, the course number (ELEC 390), the homework number, and the page number at the top of each page, and staple all pages together. Where appropriate, clearly mark your answers by enclosing them in boxes. Use only one side of the paper, and trim the fringe pieces if you use paper torn from a spiral notebook. Lack of compliance with one or more of these requirements could result in a grade penalty. You are not required to submit your homework on green “engineering paper.” Sloppy or unreadable homework is unacceptable and could result in a grade of zero. A subset of the problems might be selected for grading if the assignment is especially long. Assignments will be posted at the course web site, and solutions will be posted on Blackboard. It is your responsibility to obtain each homework assignment.

A 20% grade penalty will be imposed for homework submitted up to 6 hours after the deadline or a 50% penalty 6-48 hours after the deadline, and no credit will be given thereafter. No homework will be accepted, regardless of when it is submitted, after the solutions have been posted; this supersedes the 6 and 48-hr partial credit allowances. Forgotten homework will be accepted without penalty if it is submitted as soon as possible without missing other classes or labs. Other exceptions will be made only in the most extreme circumstances.

**Reading Quizzes**

Short (roughly 5-minute) quizzes will be scheduled roughly once per week and will cover the assigned reading in the textbook. Quizzes will be announced one or two lectures in advance and will typically consist of one to three questions that require short answers. One point will be earned for a correct answer. No partial credit will usually be given, but half points might be used on rare occasions. The overall Reading Quiz grade will be the percentage of points earned relative to the total available for the semester.

**Individual Investigation**

You will be required to demonstrate that you have gained special mastery of one topic relevant to the course through your own work. To earn the maximum number of points available, you will have to be proficient in the subject well beyond the scope of the course. The assessment of your work will be in the form of a 30-minute meeting with me at a mutually agreed time before the last week of the semester. Details of this assignment will be provided later.

**Professional Conduct**

I expect everyone in the classroom to act in a professional manner. Distractions that prevent your classmates from concentrating on instructional activities will not be tolerated. This includes reading newspapers or other noisy print media, surfing the web, texting messages, disruptive eating, excessive talking, chronic tardiness, and other inappropriate behavior. Smart/cell phones, laptops, and other electronic devices may not be used during class time. Since part of the educational mission of Bucknell is to prepare you for professional practice, conduct in the classroom comprises a portion of your course grade. You should act in the classroom as you would in an engineering staff meeting. If you have a valid reason for being late every day, please let me know as soon as possible.
Recipe for Success

Electromagnetics is a difficult subject, and you will be challenged in this course. You should attend all lectures and keep up with the reading. Homework assignments will sometimes cover material discussed in class as little as two days before the due date, since I will assume that you have read the appropriate sections in the textbook before coming to class. Start work on individual homework problems as soon as you understand how to solve them. According to university policy, it is reasonable to expect two or more hours of work outside of class (including reading, homework, and studying for exams) for every hour of lecture time. Some weeks the work load could be more, some weeks less, but it should average at least 8 hours beyond class time for a 4-hour course.

Homework is for your benefit. Your learning and retention will most likely suffer if you do not take advantage of the opportunity to practice solving problems on your own. Choose active studying over passive studying. Instead of simply reading the examples and derivations given in the textbook or in class, work out at least some of them yourself. My primary concern is that you understand the concepts and solution techniques presented in the course. I therefore look for valid thought processes in your solutions to problems; arrival at the correct numerical answer is of secondary importance. If an answer you obtain does not make sense physically (e.g., an answer that is orders of magnitude too large or too small), I expect you to notice it.

I encourage you to come see me if you are struggling with any aspect of the course. There might be alternative ways of approaching the course material that will make it more accessible to you. If you think that you might be dealing with test anxiety, I recommend that you review the resources available on the “Exams” and “Web Links” pages at the course web site. These resources have been prepared by professional counselors and educators and provide a treasure trove of advice for getting test anxiety under control.