

Course Policies and Information

Objective The primary objective of this course is to introduce students to the fundamental circuit analysis techniques that are applied in all areas of electrical engineering. This includes the study of basic circuit elements such as resistors, capacitors, inductors, and operational amplifiers, and their response to both DC and time-varying sources. An introduction to sinusoidal steady-state analysis is included (Outcome *a*). Another goal is to introduce students to the mathematical analysis software package Matlab (Outcome *k*). This course also serves as preparation for the subsequent course ELEC 226.

The outcomes specified above refer to ABET Criterion 3, Student Outcomes, for accrediting college/university engineering programs:

(*a*) an ability to apply knowledge of mathematics, science, and engineering.

(*k*) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Textbooks F. T. Ulaby and M. M. Maharbiz, *Circuits*, 2nd ed., National Technology and Science Press, Allendale, NJ, 2012. ISBN-13: 9781934891193

Web Site <http://www.facstaff.bucknell.edu/dkelley/elec225/>

Prerequisite ELEC 120 or equivalent; corequisite: MATH 211 or equivalent

Instructor Prof. David Kelley, Breakiron 368, 577-1313, dkelley@bucknell.edu; office hours TBA

Communication Check your e-mail and visit 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 site or Moodle. E-mail will be used occasionally to distribute time-sensitive announcements. You are responsible for knowing and adhering to any policies posted at the 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. Lab or 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 this is not clear.

Grading Policy Your final course grade will be computed as shown below, although your weighted exam average must be greater than 50 out of 100 points in order for you to pass the course. Significant extra credit opportunities will rarely 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%	
Laboratory	15%	
Homework	15%	Assignments weighted equally; lowest score dropped
Exams #1, #2	30%	Lowest of two scores dropped
Final Exam	35%	

Exam and lab grades will not be discussed until a 24-hour "cooling off" period has passed, except in cases where points have been totaled incorrectly in obtaining an overall score. An absolute scale with the following distribution will be used to determine your final course grade.

93-100 A	87-89.9 B+	77-79.9 C+	60-69.9 D
90-92.9 A-	83-86.9 B	73-76.9 C	< 60 F
	80-82.9 B-	70-72.9 C-	

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, unless extenuating circumstances apply. Official university commitments such as recitals, field trips, 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 sudden 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 225), 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 Moodle. **It is your responsibility to obtain each homework assignment.**

A 20% grade penalty will be imposed for homework submitted up to 18 hours after the deadline, a 50% penalty 18-48 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 18 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.

Laboratory Policies Policies and requirements for the laboratory portion of the course will be distributed in the first meetings of the laboratory sections.

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, web surfing, texting messages, disruptive eating, excessive talking, chronic tardiness, and other inappropriate behavior. Smart/cell phones, laptops, and other electronic devices other than calculators may not be used in class without prior permission. 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 notify me as soon as possible.

Recipe for Success Circuit theory is a foundational subject for electrical and computer engineers, so you should plan to devote a large amount of time and energy to this course. 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 plus one hour to account for a lab (3 hours total). Some weeks the work load could be more, some weeks less, but it should average 6-9 hours per week beyond class and lab time.

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 you obtain an answer that 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.

Homework assignments will sometimes cover material discussed in class as little as 2-3 days before the due date, since I will assume you have completed the reading assignments before coming to class.

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" page at the course web site. These resources have been prepared by professional counselors and educators and comprise a rich collection of advice for managing test anxiety.