

ECEG 201 - Introduction to Electrical and Computer Engineering Design

Spring 2020 Syllabus

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Office hours Regular hours are posted on my www.eg.bucknell.edu/~kjh016 web page. Feel free to drop in whenever my office door is open, or email me to set up an appointment.

Prerequisites Permission of the instructor

Web Sites Homework assignments, lecture notes, and other course materials will be available on the instructor's course web page:
www.eg.bucknell.edu/~kjh016/courses/eceg201s20/
Grades will be posted on the course Moodle page:
moodle.bucknell.edu/course/view.php?id=36485

Email Time-sensitive announcements may be sent via email, so check your Bucknell email account at least daily. Email messages to me should be sent from your Bucknell account and should include the text "ECEG 201" in the subject to prevent them from being discarded as spam.

Purpose of the Course

This introductory ECE design course covers basics of electronic design focusing particularly on fabrication, measurement, and professional communication. Students will design, fabricate, and test electronic circuits and learn standards for manufacturability and professional communication.

Course Outcomes

At the conclusion of this course, you should be able to:

- Use modern techniques and equipment to design, fabricate, populate, and troubleshoot a functioning printed circuit board.
- Design a test protocol and conduct appropriate experiments to determine the level of functionality and performance of an electronic device.
- Effectively communicate the details and results of an experiment in a manner that would be appropriate for practice in electrical or computer engineering.

Important Policies

I am happy to accommodate special student needs, but such accommodations must be approved in advance, and in writing. If you have a disability that may have some impact on your work in this class and for which you may require accommodations, please feel free to talk to me as well as submit the Disability Accommodation Request Form or contact the Office of Accessibility Resources at OAR@bucknell.edu, 570-577-1188 or in room 107 Carnegie Building so that such accommodations may be arranged.

Absences due to illness or personal emergency must be approved by the Dean's office. Absences due to required participation in scheduled academic or athletic events are generally excused when documented by another professor or coach. Homework missed due to brief excused absences must be completed within two weeks of your return or a grade of zero will be given. Exams and laboratory sessions missed because of excused absences must be completed within one week.

Although I don't record attendance, important material will be discussed in the lecture sessions. On occasion short homework assignments will be given and completed during a lecture session, and if you are absent you will not receive any credit for that homework. If you miss a lecture, be sure to get the lecture notes from another student. If you miss a laboratory session it is your responsibility to make arrangements with me to complete the procedure at another time.

As a general rule, anything that you submit for grading must be your own original work. You must properly cite the source of *any* material that you copy, quote, or paraphrase from *any* other source. This includes, but is not limited to, text, data, code, or graphic material from another student, the instructor's lecture notes, a textbook, or the internet. Failure to do so will be cause for referral to the [Board of Review on Academic Responsibility](#). You should take some time to review the information about plagiarism and collaboration on the [Resources for Students](#) page.

When homework is done outside of the lecture period you may discuss it with other students but each student must complete the homework assignment on their own and turn in their own work. Homework done as part of a lecture period may or may not allow collaboration, as specified by the instructor.

Committee on Instruction Statements

At the College of Arts and Sciences Meeting on December 5, 2012, the Committee on Instruction recommended to the faculty that they add the following two texts to their syllabi:

Bucknell University Honor Code

As a student and citizen of the Bucknell University community:

- I will not lie, cheat or steal in my academic endeavors.
- I will forthrightly oppose each and every instance of academic dishonesty.
- I will let my conscience guide my decision to communicate directly with any person or persons I believe to have been dishonest in academic work.
- I will let my conscience guide my decision on reporting breaches of academic integrity to the appropriate faculty or deans.

Bucknell University expectations for academic engagement

"Courses at Bucknell that receive one unit of academic credit have a minimum expectation of 12 hours per week of student academic engagement. Student academic engagement includes both the hours of direct faculty instruction (or its equivalent) and the hours spent on out of class student work. Half and quarter unit courses at Bucknell should have proportionate expectations for student engagement."

Course Grades

Your final course grade will be based on your exam scores, homework grades, and laboratory work. The relative weight of each component of your final grade is given below. Please note that there will be no opportunities for individual extra credit... that's not fair to the other students.

I reserve the right to deduct up to 3 points from your final score for disruptive or distracting behavior in class, or for violations of the posted laboratory policies. This would include using a cell phone, laptop or similar device during class or allowing your phone to ring. Arriving late to class or leaving your seat during a lecture should be avoided. If you eat or drink during lectures, do so quietly.

In order to receive full credit for your homework, lab reports, and exams you should follow the guidelines in [Getting Full Credit](#).

- Homework and Lab Reports
 - Homework **may not** be submitted electronically without specific prior approval. **Do not** take a photograph of your homework and send it to me.
 - In-class homework assignments may or may not allow collaboration, as specified by the instructor. You may collaborate on homework done outside of class.

- After-class homework assignments may be downloaded from the course web page after each lecture and before the end of the day. You will typically have at least four days to complete the assignment.
- After-class homework is due *at the beginning* of the class on the day that it is due. Homework turned in after the scheduled starting time of the lecture on the due date is **late**. Late homework turned in by 4:00 pm on the due date will be penalized by 10% of the assignment's value. Homework turned in after 4:00 pm on the due date will be penalized by 20%.

No credit will be given for homework turned after the beginning of the class meeting after the class meeting when the homework was due without prior written permission from the instructor.

- Homework should be handwritten and legible, unless you are explicitly instructed otherwise.
- All homework **must** be on 8.5-by-11 inch (i.e. US Letter) paper, with all pages stapled together. In most cases you will be able to print the homework assignment and do your work directly on those pages, but if you use your own paper then it is not necessary to attach the printed homework.

Pages torn from a three-ring or bound notebook **must** have ragged edges trimmed. Points will be deducted from your homework score if you do not follow these guidelines.

- If you are explicitly required to submit code by email it *must* be attached as a plain text file with the appropriate extension (e.g. .py, .m). Don't even think about putting your code into a Word document.

- Laboratory sessions

- You will not be allowed to work in the laboratory, and will not receive credit for laboratory work, unless you have formally agreed to the [Electrical and Computer Engineering Laboratories Safety and Access](#) policies **before** the laboratory session begins.
- You **may not** eat or drink anything while sitting at or standing near the laboratory benches. Having food or beverages at a lab bench during a lab session will result in a grade penalty of **at least** 10% for that lab session. If you bring food or beverages to the lab they must be stored in closed containers away from the lab benches.
- Your work **must not** be publicly accessible either during or after a laboratory session. Your programming for this class should be created and maintained in your private netpace folder. Making your code available to another student, either directly or indirectly, will be considered academic misconduct.
- Students arriving ten minutes after the laboratory session begins, or later, will be penalized by 10% of the value of the laboratory exercise.

- Examinations and Quizzes

- Assume that exams are closed-book, closed-notes. Some equations or similar material may be provided.
- No electronic devices may be used during an exam unless the instructor specifically indicates otherwise. If needed, non-programmable scientific calculators will be provided.
- All exams must be taken and completed withing the assigned time unless the instructor has granted an exception *in writing* or received specific accommodation instructions from the Dean's office.
- In general, bathroom breaks will not be allowed for exams that are scheduled to last one hour or less. Contact me **in writing** if this is a problem for you.

If you choose to leave the room during an exam you will be penalized by 10% of the value of the exam.

- Students who have an accommodation regarding examinations are nevertheless expected to complete the examination on the same day that it is scheduled, and to contact the instructor in advance to make suitable arrangements.
- Exams that are not completed within the assigned time are penalized a minimum of 20% of the exam's value, if completed within 24 hours of the assigned time.

- Final course grades

- Homework: 20%
- Laboratory Exercises and Reports: 30%
- Quizzes: 30%
- Final Exam/Report/Project: 20%

- Converting numerical scores to letter grades

		B+	≥ 86.6%	C+	≥ 76.6%		
A	≥ 93.3%	B	≥ 83.3%	C	≥ 73.3%	D	≥ 60.0%
A-	≥ 90.0%	B-	≥ 80.0%	C-	≥ 70.0%	F	< 60%