EK307 Electric Circuits Syllabus

Spring 2024 – A1 section, Carruthers

Boston University College of Engineering

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1 Administration

1.1 Times/Places
The lecture is Tuesday and Thursday 1:30pm-3:15pm in CDS B64.

1.2 Contact Information
Outside of class, the best way to contact Dr. Carruthers is via slack.
You can also text him: 617-264-7939.
Please always include “ek307” at the start of the text.
1.3 Course website
Everything is at https://curl.bu.edu/ek307/spring2024

2 Academic Content

2.1 Textbook

This text is available for rent at the publisher’s website at a reasonable price ($55). Earlier editions are also okay, but you may have to map Section numbers from Edition 7 to your edition.

There is also a free textbook available, with material organized in a similar fashion: https://services.publishing.umich.edu/publications/ee/#circuit-analysis

2.2 Homework
In addition to the graded homeworks, students should be completing and attempting more problems to properly learn the material and prepare for the exams. The two primary sources for these problems are:

- The Problem Workbook (about one hundred of these). These are problems Prof. Carruthers has written either as exam problems or review problems. The solutions will be made available after you have some time to try the problems without looking at the solution.

- problems from “the” book. Completing the homeworks and the problem workbook is generally not a sufficient amount of problem solving experience to perform well in the class. Unassigned problems from the textbook should also be attempted.

2.3 Lecture
In-person attendance at lecture is expected. Lectures will focus on connecting concepts to problem solving. The lectures will include material not covered in the textbook, but important for exams and homework.
2.4 Discussion Sections

Discussion sessions are offered throughout the week, as follows:

- Mon 6:30pm-8:15pm, EPC 205
- Tue 6:30pm-8:15pm, EPC 205
- Wed 6:30pm-8:15pm, EPC 205
- Thu 6:30pm-8:15pm, EPC 205

You are welcome to attend any session that fits your schedule. The TA staff will be available for the first hour of each session and will stay longer if you arrive within that time or otherwise notify the TA ahead of time. The discussions sections are problem solving sessions, where you will have the opportunity to work with the TAs and your classmates on homework and lecture problems, and discuss course concepts.

2.5 Laboratory

Lab information will be posted on a separate dedicated Blackboard site (learn.bu.edu).

The labs are a required part of EK307. You are required to complete all labs by the assigned deadlines in order to receive a passing grade in this course, regardless of performance on exams and homeworks.

2.6 Topic Outline

The course is about the design and analysis of electric circuits, and related general methods and tools of problem solving and thinking about how the world works. More specifically, we cover:

3 Grading and Assessment

3.1 Numerical Grade Weights

The numerical grade for the course is out of 1000, and will be calculated as follows:

Labs 200  
Homework and Participation 150  
Mid-term Exam I 150  
Mid-term Exam II 200  
Final Exam 300

3.2 Letter Grade Conversion

The conversion from your numerical score to a letter grade will use the following conversion process:

\[
\begin{align*}
[950, 1000] & \quad A \\
[900, 950) & \quad A- \\
[867, 900) & \quad B+ \\
[833, 867) & \quad B \\
[800, 833) & \quad B- \\
[767, 800) & \quad C+ \\
[733, 767) & \quad C \\
[700, 733) & \quad C- \\
[600, 700) & \quad D \\
[0, 600) & \quad F
\end{align*}
\]

In addition, you are required to complete all labs by the assigned deadlines in order to receive a passing grade in this course, regardless of performance on exams and homeworks.

3.3 Collaboration policy

Homeworks: In this class, you are permitted to collaborate as much as you wish with your classmates on homeworks.

Labs: please refer to the lab instructional staff and the lab documentation for collaboration policy.

Exams: the midterms and the final exam can be done as partnerships– two people complete the exam together and submit one combined exam. You may not partner with the same person on more than one of the three exams. Each exam may have additional questions or requirements for those completing the exam as partners instead of individuals.
3.4 Academic Conduct

The University has very clear policies regarding academic honesty. It considers plagiarism and other forms of cheating serious offenses and will enforce serious penalties when they occur. All students are required to abide by all applicable policies and regulations on academic honesty.

Here is the academic conduct code for Boston University

4 Inclusion

I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.