Boston University – Department of Electrical and Computer Engineering
ENG EC410 – Introduction to Electronics

Overview

- The labs for EC410 emphasize discovery and design, rather than simply taking and recording data. The approach in this course will be similar to that initiated in EK307-Electric Circuit Theory. If you have taken a circuit theory course at another school (for example, as part of sophomore-year study abroad), or if you are a transfer student, you will have no difficulty with the EC410 labs as long has you've a good introduction to basic instrumentation, laboratory practices, and circuit construction.

- Each lab assignment in EC410 will consist of three levels, with each level associated with a goal, a learning objective, and some suggested tools:

Component	**Explanation**
Laboratory Goal:	The end product(s) of the assignment
Learning Objectives:	The educational concepts embedded in the assignment
Suggested Tools:	Circuits, methods, instruments, and equipment suggested for use in accomplishing the laboratory goal.

- Your objective in EC410 lab is to complete as many levels as possible in the time allotted for the assignment (usually one to two weeks). Each problem statement will have multiple paths to success, hence there are no "right" answers to any lab assignment. Part of your job will be to choose the pathway that works for you and also accomplishes the lab's goals.

- A lab assignment may require you to find relevant information that is readily available in the public domain but is not provided in the handout. This omission is intentional so that you can learn how such information is found in the real world. References may include datasheets available over the Internet, technical papers, your course textbook, or the lab manual previously used in SC410 [1].

- Details of your solution to each lab assignment are to be kept in a laboratory notebook. Your lab book should be a working document that's of use to *you.* Its main purpose will be to help you retain and recall information for future use, especially during the laboratory portion of the final exam. The EC410 lab teaching staff will assess the efficacy of your lab notebook based on visual observations in the lab as well as your performance on the laboratory exam.

- Points will be awarded on a cumulative scale. Each assignment will have easy, moderate, and difficult levels worth 1, 2, and 3 points, respectively. To get credit for a lab, you must complete at least Level 1. Each level must be verified and recorded for points by a GTF.

- For each assignment, you may work alone or in teams of up to three. Students in a given team will receive the same number of total points for the assignment. You may change teams between lab assignments, but not midway into a given lab.

- The suggested parts for use in the lab are those found in your EK307 lab kit. If you don't have a parts kit, you should purchase one at the counter in PHO105 ($40).

- No. 1 Rule of EC410 lab: Have Fun!