EE 486: Power Electronics Simulation Project

Spring 2025

Project Due Date: 30 April 2025

Recall Grading Scheme: Final Exam (35%) – Midterm Exam#1 (15%) – Midterm Exam#2 (15%) – Midterm Exam#3 (10%) – Assignments (15%) – **Project (10%)**

Topics: There are 11 topics for your project to choose from as listed below. Some topics have between 2–7 points extra bonus points (i.e., you can almost double your project points, which is normally based on 10 points!).

Objective: For each topic, you must choose the parameters of the system (it can vary from student to student, but they have to be reasonable), supported by calculations. The objective is to control the power delivered to the load over a range of interest through a feedback loop by controlling (the duty cycle or firing angle) of the converter.

Deliverables: A comprehensive report (typed, not handwritten!) including your derivations, calculations, and simulation results; together with the simulation file. After submitting your report, you will need to sit with the TA (~ 30 mins) to go over your simulations and he may ask questions about the report and simulations.