

EL6693 Electronic Power Supplies 3.0

Fall 2018

Self-contained course on PWM power converters for graduate students.

Outline: Basic concepts and steady-state analysis of switching cells (4 weeks). Isolated PWM dc-dc switching cells (2-3 weeks). Steady-state modeling and switches (1 week). Midterm (1 week). Control of PWM converters (4-5 weeks). Resonant and soft-switching converters (1 weeks). Applications to computer equipment, distributed power systems, uninterruptible power supplies, and electric drives (1 week).

Text: M. Kazimierczuk *Pulse-width Modulated DC-DC Power Converters*, 2nd ed., Wiley, 2015.

Lecture: Monday 12:25-2:55 pm in 6 Metrotech, room RH325

Instructor: Dariusz Czarkowski

Contact: LC 200H, x73256, dc1677@nyu.edu

Office hours: Wednesday 12:30 – 1:30 pm, by appointment, or whenever you can find the office door open.

Web pages:

Course page - login to NYUClasses

Some handouts will be provided by the instructor.

Exams: 1 midterm (Oct. 29), comprehensive final. All exams are open-book and open-notes.

Homework: Several sets of problems and/or simulations will be assigned as a homework. Solutions will be distributed after a submission deadline. Homework submission is a part of the final grade.

Grading:

homework 10%

midterm 30%

final 60%