

**Problem 3.1 (50 points)**

Do Textbook (Fundamentals of Power Electronics 2<sup>nd</sup> Edition) Problem 4.1 (pg. 104). In addition to parts (a) through (e) (see pg. 103), also draw the converter circuit, including your realization of the switch elements using MOSFETs and diodes.

**Problem 3.2 (50 points)**

Do Textbook (Fundamentals of Power Electronics 2<sup>nd</sup> Edition) Problem 4.3 (pg. 104). In addition to parts (a) through (e) (see pg. 103), also draw the converter circuit, including your realization of the switch elements using MOSFETs and diodes.

**Problem 3.3 (50 points) [Additional problem only for ECEN 5797 students]**

Do Textbook (Fundamentals of Power Electronics 2<sup>nd</sup> Edition) Problem 4.2 (pg. 104). In addition to parts (a) through (e) (see pg. 103), also draw the converter circuit, including your realization of the switch elements using MOSFETs and diodes.