

EECE 451 - POWER ELECTRONICS

Instructor: Dr. Martin Ordonez

Tentative list of topics

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| Diodes (class notes, sections 2.1 and 2.2): | <input type="checkbox"/> |
| Review of basic electric circuits (class notes, section 3.1 and 3.2): | <input type="checkbox"/> |
| Line frequency rectification (class notes, sections 5.1, 5.2, 5.3 (except 5.3.2 and 5.3.4.1), and including section 5.4) | <input type="checkbox"/> |
| Three-phase rectifier (5.6.1) | <input type="checkbox"/> |
| Heat transfer by conduction (class notes, section 29.2.1) | <input type="checkbox"/> |
| Inductor design (class notes) | <input type="checkbox"/> |
| Buck, boost, and buck-boost converters (class notes, sections 7.1 to 7.5) | <input type="checkbox"/> |
| Full bridge converter, bipolar and unipolar operation (class notes, section 7.7) | <input type="checkbox"/> |
| Inverters, Chapter 8 (class notes, 8.1, 8.2, and 8.3 until page 218) | <input type="checkbox"/> |
| Losses and Power Switches (class notes, sections 2.3, 2.4, 2.5, 2.6, 2.8): | <input type="checkbox"/> |
| Full-bridge isolated converter (10.4.6) | <input type="checkbox"/> |
| Three-phase inverters (8.4, 8.4.1, and 8.4.1.1) | <input type="checkbox"/> |
| Half-bridge isolated converter (10.4.5) | <input type="checkbox"/> |
| Power MOSFET basic characteristics (class notes, sections 22.3, 22.5 and 22.6): | <input type="checkbox"/> |