

ECE 3600 Exam 3 Study Guide

The 3rd Exam will be on Wednesday 11/19/25 in Lab at lab time

The first part may be a **closed everything, no calculator** questions, ~ 15 - 25 points. Rest of Exam is **closed book**, except for the note sheets handed out in class for exam 1 and exam 2. You may add to these sheets.

The exam will cover

1. Single phase induction motors

Phase shift calculations

2. DC motors

Know the model!

Powers P_{conv} P_{out} etc. η

Torques & speeds & speed control

Torque / speed curves

Series-wound & universal motors

3. Motor loads

Types

Torque / speed curves

4. Transmission Lines

Short, **Med**, Long Z_C

Series impedance Z_{series}

Shunt admittance & $\frac{Y_{shunt}}{2}$

Shunt impedance & $2 \cdot Z_{shunt}$

5 Homeworks Ind2 - TL2

6. Labs 3 & 4

Possible questions

Operation

Types

Single phase starting

Typ torque-speed curves

Commutator purpose and operation

Basic relationships

DC motor characteristics

PWM

Information in the notes

Basic relationships

Common line voltages

Short, Med, Long mi, km

Bundling, what is it & why is it used

Bringing a generator on line

DC motors

Download old exams from HW page on class web site. Also look at Exam 2s and Finals and pick out problems that cover the subjects above.