

ECE 3600 Exam 2 Study Guide

The 2nd Exam will be on Wednesday 10/22/25 In the lab (MEB 2365) from 3:00 - 4:20+

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. Auto-transformers

2. 3-phase transformers

3. One-Line Diagrams, variations and Per-Unit analysis

Base Values S_{base} V_{base} I_{base} Z_{base}

Basic per-unit modeling and calculations

4. Motor Basics

5. Synchronous generators and motors

Know the phasor diagram!
Problems like Hw SG1 & SG2

6. 3-phase induction motors

Torque - speed curves

Know the model!
Problems like Hw Ind1 & Ind2

7. Homeworks 8 - Ind2

8. Labs 1 - 2

9. Field Trip

Possible questions

In closed-all part of exam
Wiring New rating

Y or Δ

Common symbols, why PU

Bases, why and when do they change

Why per-unit?

Terms, Stator, Rotor, etc.
Armature, Field, back EMF
Torque, Speed, Power
Friction, Windage
Slip rings, brushes

losses, construction,
limits, operation

poles - speed

Bringing a generator on line

Operation

Slip and frequencies

Poles - speed

Questions from homework Ind1

Typ torque-speed curves

Transformer modeling

Basic questions

Download old exams from HW page on class web site. Also look at Exam 3s and Finals and pick out problems that cover the subjects above.