

Department of Electrical and Computer Engineering  
The Johns Hopkins University

# 520.137 Introduction to Electrical and Computer Engineering

Fall 2017

**Instructor** Prof. Trac D. Tran  
Office: Barton 215. Phone: 410-516-7416  
Email: [trac@jhu.edu](mailto:trac@jhu.edu)  
Web: <http://thanglong.ece.jhu.edu/>  
Office Hour: Monday 2-4 or by appointment.

**Teaching and Lab Assistants** Dung N. Tran and Akshay Rangamani  
Office: Barton 322. Phone: 410-516-4587  
Email: {[dung.n.tran](mailto:dung.n.tran@jhu.edu), [rangamani.akshay](mailto:rangamani.akshay@jhu.edu)}@jhu.edu  
Office Hour: Tuesday 10-12 or Thurs 12:30-2:30 or by appointment.

**Course Web Page** <http://thanglong.ece.jhu.edu/Course/137/>

**Lectures** Monday Wednesday Friday 12:00 - 12:50 PM, Shaffer 100.  
Lab Sessions, TBA, Hackerman 224.

## Textbooks

- R. Kuc, *The Digital Information Age: An Introduction to Electrical Engineering*, CL Engineering, 2014. ISBN: 1305077717. (Required).
- D. V. Kerns and J. D. Irwin, *Essentials of Electrical and Computer Engineering*, Prentice Hall, 2004. ISBN: 0139239707. (Required).

## Course Description

- An introductory course covering the principles of electrical and computer engineering including sinusoidal wave forms, electrical measurements, digital circuits, and applications of electrical and computer engineering. Laboratory exercises and a final design project are included in the course. Open to freshman Engineering majors and any Arts and Sciences majors. 3 credits. Computer Usage: Matlab for data analysis, plotting, and simulations.
- Prerequisites: high-school mathematics and physics; familiarity with Calculus will be very helpful. Corequisites: none.

## Exams

- Exam I: Wednesday, 10/04/2017, Shaffer 100.  
One 8.5" × 11" cheat sheet allowed.
- Exam II: Wednesday, 11/01/2017, Shaffer 100.  
One 8.5" × 11" cheat sheet allowed.
- Final Exam: comprehensive, 9-12, 12/22/2017, Shaffer 100.  
Three 8.5" × 11" cheat sheets allowed.

## Homework and Lab Assignments

- Nine homework assignments.
- Six lab assignments, approximately once every two weeks, held in Hackerman 224.

## Final Project

- Last week of class.
- Students are expected to work in teams of 3-4 on a specific topic that will be announced later.
- A final project report is required from each team.

## Grading

- Exam I: 20%
- Exam II: 20%
- Final Exam: 30%
- Laboratory Assignments: 10%
- Homework Assignments: 10%
- Final Project: 10%