

ECE 107: Electromagnetism

Instructor: Prof. Vitaliy Lomakin
Department of Electrical and Computer Engineering
University of California, San Diego

Contact Information

Instructor: Prof. Vitaliy Lomakin

- Office: EBU 1, room 3201
- E-mail: vlomakin@eng.ucsd.edu
- Office hours: Tue & Thu 10-11am

TA: Iana Volvach

- Office: EBU 1, room TBD
- E-mail: iana.volvach@gmail.com
- Office hours: 2-3pm, EBU1 3507

Course webpage: <http://cem.ucsd.edu/courses/ece107>

Textbook & Reference Books

Text Book:

F.T. Ulaby, *Fundamentals of Applied Electromagnetics*, Prentice Hall, 5th, 6th, or 7th Edition.

References:

1. M. N. O. Sadiku, *Elements of Electromagnetics*, Oxford University Press, 2001
2. H. H. Skilling, *Fundamentals of Electric Waves*, Wiley, 1948
3. R. Ramo, J.R. Whinnery and T. Van Duzer, *Fields and Waves in Communication Electronics*, Third Edition, Wiley, 1994
4. S. Schwarz, *Electromagnetics for Engineers*, Saunders 1990
5. J.A. Stratton, *Electromagnetic Theory*, Wiley, 2007

Exams & Homework

- Midterm: Tue, Feb 11, 8-9:20am (tentative), WLH 2111
- Final exam: Thu, March 19, 8-10:59am, TBD
- Weekly homework

Basis for grade:

• Homework	15%
• Project	5%
• Midterm	35%
• Final exam	45%
• TOTAL	100%

About Homework (HW)

- HW assignments are given each Tuesday and are due on the following Tuesday. 7 best homework assignments are counted for the grade (out of 9 or 10). No late homework will be accepted.
- Write down only relevant equations.
- BOX your final answers.
- Simplify your results as much as possible.

Checklist

- Solve all homework assignments
- Attend lectures
- Attend discussion sessions
- Use the office hours

Layout

- Introduction
- Transmission Lines
- Vector analysis
- Maxwell's equations
- Electrostatics
- Magnetostatics
- Dynamic fields
- Plane wave propagation
- Electromagnetic waves at boundaries
- Radiation