

Department of Electrical & Computer Engineering
The University of Kansas

EECS 611- Electromagnetic Compatibility

Spring 2023

Description: A study of the sources of noise in electronic systems and how the effects of the noise can be reduced. Topics include: external and intrinsic noise sources, shielding, grounding, bypassing, filtering, contact protection, and active device noise. Prerequisites: EECS 312, EECS 221. Three hours credit.

Objective: To develop design rules that allow electronic systems to operate without interfering with themselves, or other systems.

Text: **Introduction to Electromagnetic Compatibility**, by Clayton R. Paul. Published by John Wiley & Sons, 2006.

Grading: The following percentages will be used to arrive at the final grade scores

Exam I	20
Exam	20
Final	20
Class Participation	5
Project	25
Homework	10

Final letter grades are determined from the above grade scores according to a scale that is dependent on the instructor's perception of the overall class performance vs. the difficulty of the exams, but letter grade cutoffs are similar to the typical 90-100 A, 80-90 B, etc.. A passing cumulative exam score must be maintained in order to pass this course. Unless otherwise announced, EECS 611 does *not* use the +/- grading system.

Homework: Homework will be collected at the beginning of class on a weekly basis. Late homework is not accepted, except for unusual circumstances. Collaboration with classmates is permitted. Copying and using outside sources on exams is *not* permitted.

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Office Hours: 2:00 - 3:30 MWF
9:30-11:00 and 1:30-3:00 Tu,Th

Zoom: Meeting ID: 955 1144 2187 Passcode: 411316 (arrange with email)

Tentative Schedule

Week #	Topic
1-2	Introduction, decibel scale, governmental regulations
3	Signal Spectra
3	Transmission lines
4-6	Non-ideal component behavior
7	Conducted emissions
	Exam I
9	Antennas
9	Radiated emissions
10-11	Crosstalk
12	Shielding and grounding
	Exam II
13	System Configuration and PCB layout
14	Reports
15	Final Exam: Monday, May 8, 10:30 am – 1:00 pm