Department of Electrical & Computer Engineering
The University of Kansas

EECS 611- Electromagnetic Compatibility Fall 2025

Description: A study of the sources of noise in electronic systems and how the effects of the noise can be reduced. Topics include: radiated and conductive emissions, shielding, grounding strategies, bypassing, filtering, PCB layout effects on EMC, and governmental regulations. Prerequisites: EECS 312, EECS 220. Three hours credit.

Instructional Mode:
In person class. Learned 3052, 9:30-10:45pm Tu Th

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

Text: **Electromagnetic Compatibility Engineering**, by Henry W. Ott. Published by John Wiley &Sons, 2009.

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

Exam I	18 1/3
Exam	18 1/3
Final	18 1/3
Class Participation	10
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 specified dates. Late homework is not accepted, except for unusual circumstances. Collaboration with classmates is permitted. Copying and using outside sources on exams is *not* permitted.

Instructor: Kenneth R. Demarest
3028 Eaton Hall 864-7395
demarest@ku.edu
people.eecs.ku.edu/~demarest

Office Hours: 9:00 - 10:30 , 3:00-4:00 MWF
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	Cabling
3	Grounding
4-6	Balencing and Filtering
7	Passive Components
	Exam I
9	Digital circuit grounding, power distribution
10	Digital circuit radiation
11	Conducted emissions
12	RF and transient immunity
	Exam II
13	System Configuration and PCB layout
14	Reports
15	**Final Exam**: Monday, December 8, 7:30 – 10:00 am

Important Resource and Policy Information

- Explanation of instructional time expected for out-of-class student work per credit: see https://policy.ku.edu/registrar/credit-hour.
- Accommodations and/or information for students with disabilities: see https://access.ku.edu/syllabus-statement.
- Sexual Harassment Policy: see https://policy.ku.edu/civil-rights/sexual-harassment.
- Nondiscrimination, Equal Opportunity, and Affirmative Action Policy: see https://policy.ku.edu/IOA/nondiscrimination.
- KU Statement on Diversity and Inclusion: see https://policy.ku.edu/provost/diversity-inclusion.
- Academic Misconduct (USRR 2.7.1): see https://policy.ku.edu/governance/USRR#art2sect6.
- Change of Grade: see https://policy.ku.edu/registrar/grade-change and https://policy.ku.edu/governance/USRR#art2sect3.
- Code of Student Rights and Responsibilities: see https://policy.ku.edu/student-affairs/student-code.
- Commercial Note-Taking: see https://policy.ku.edu/provost/commercial-note-taking.
- Mandatory Reporting: see https://policy.ku.edu/civil-rights/mandatory-reporting.
- Racial and Ethnic Harassment Policy: see https://policy.ku.edu/civil-rights/racial-ethnic-harassment-policy.