

Class Schedule of Applied Electromagnetics (2021F)

Week	Date	Chapters	Content
1	9/17	Syllabus & Transmission Line	Syllabus, transmission line, lumped-element model, transmission line equations
2	9/24	Transmission Line	wave propagation on a TL, lossless TL, wave impedance, power flow on a lossless TL
3	10/1		Smith chart, impedance matching
4	10/8	Electrostatics	charge/current distributions, Coulomb's/Gauss's laws, electric scalar potentials
5	10/15		conductors, dielectrics, electric boundary conditions (BCs), electrostatic potential energy
6	10/22	Midterm #1	
7	10/29	Magnetostatics	magnetic force, Biot-Savart law, Gauss's & Ampere's laws, vector magnetic potential
8	11/5		magnetic BCs, inductance, magnetic energy, dynamic fields
9	11/12	Maxwell's equations for time-varying fields	electromagnetic potentials, time harmonic fields, wave equations
10	11/19		wave polarizations
11	11/26	Plane-Wave Propagation	wave propagation in lossless/lossy media
12	12/3	Midterm #2	
13	12/10	Plane-Wave Propagation	Electromagnetic power density, complex permittivity and Drude-Lorentz model
14	12/17	Wave Reflection and Transmission	Snell's law (also Fermat's principle), Fiber optics, Fresnel equations, Brewster angles
15	12/24	Wave Guides	wave guides, conducting tubes (WG), short dipole antenna
16	12/31	Holiday	
17	1/7	Radiation and Antennas	antenna radiation characteristics, half-wavelength antenna
18	1/11	Final	

This schedule is subject to being adjusted upon actual instruction progress and students' feedback.