

ECE 2214: Physical Electronics (Spring 2026)
Course Outline & Tentative Course Schedule

Week	Class	Date	Topics	Assignment
1		1/19	No class	
	1	1/21	Course introduction	Neamen_Ch1.1-1.3
	2	1/23	Semiconductor materials and diodes	Neamen_Ch1.1-1.3
2	3	1/26	Semiconductor materials and diodes	HW1, Neamen_Ch1.1-1.3
	4	1/28	Semiconductor materials and diodes	Neamen_Ch1.1-1.3
	5	1/30	Semiconductor materials and diodes	Neamen_Ch1.1-1.3
3	6	2/2	Semiconductor materials and diodes	Neamen_Ch3.1-3.2
	7	2/4	Field-effect transistor (FET)	Neamen_Ch3.1-3.2
	8	2/6	Field-effect transistor (FET)	HW2, Neamen_Ch3.1-3.2
4	8	2/9	Field-effect transistor (FET)	Neamen_Ch3.1-3.2
	9	2/11	Field-effect transistor (FET)	Neamen_Ch3.1-3.2 up to P.160
		2/13	Basic FET amplifier	Lab 1, Neamen_Ch4.1-4.3
5	10	2/16	Exam 1	
	11	2/18	Basic FET amplifier	HW3, Neamen_Ch4.1-4.3
	12	2/20	Basic FET amplifier	Neamen_Ch4.1-4.3
6	13	2/23	Basic FET amplifier	Neamen_Ch4.1-4.3
	14	2/25	MOSFET Digital Circuits	Neamen_Ch16.1 & 16.3
	15	2/27	MOSFET Digital Circuits	HW4, Neamen_Ch16.1 & 16.3
7	16	3/2	MOSFET Digital Circuits	Neamen_Ch16.1 & 16.3
	17	3/4	MOSFET Digital Circuits	Neamen_Ch16.1 & 16.3
	18	3/6	Vector analysis	Lab 2, Ellingson_Ch4
8	19	3/9	Spring Break (No Class)	
	20	3/11	Spring Break (No Class)	
	21	3/13	Spring Break (No Class)	
9	22	3/16	Vector analysis & Electrostatics	Ellingson_Ch4
		3/18	Exam 2	
	23	3/20	Electrostatics	HW5, Ellingson_Ch5.1-5.11
10	24	3/23	Electrostatics	Ellingson_Ch5.12-5.14
	25	3/25	Electrostatics	Ellingson_Ch5.12-5.14
	26	3/27	Electrostatics	Lab 3, Ellingson_Ch5.12-5.24
11	27	3/30	Electrostatics	Ellingson_Ch5.22-5.24
	28	4/1	Magnetostatics	HW6, Ellingson_Ch7.1-7.9
	29	4/3	Magnetostatics	Ellingson_Ch7.12-7.14
12	30	4/6	Magnetostatics	Ellingson_Ch7.12-7.14
	31	4/8	Transmission line	Ellingson_Ch3.1-3.10
	32	4/10	Exam 3	
13		4/13	Transmission line	HW7, Ellingson_Ch3.12-3.15
	33	4/15	Transmission line	Ellingson_Ch3.20
	34	4/17	Transmission line	Ellingson_Ch3.20
14	35	4/20	Transmission line	Ellingson_Ch3.20
	36	4/22	Time-varying fields	Ellingson_Ch8.1-8.9
	37	4/24	Time-varying fields	HW8, Ellingson_Ch8.1-8.9
15	38	4/27	Time-varying fields	Ellingson_Ch8.1-8.9
	39	4/29	Time-varying fields	Ellingson_Ch8.1-8.9 & Ch9.1-9.2
	40	5/1	EM waves	Ellingson_Ch9.1-9.5
16	41	5/4	EM waves	Ellingson_Ch9.1-9.5
	42	5/6	Exam 4, last day of classes	In class, 50 mins exam as usual

- D. A. Neamen, Microelectronics Circuit Analysis and Design, 4th edition
- Steven W. Ellingson, Electromagnetics, volume 1