

EE 210 - COURSE SYLLABUS

SPRING 2016

Instructor : K. Dudeck

Office : L-104

Hours : Hours are posted, additional hours by appointment.

Text: Eriwn, Basic Engineering Circuit Analysis, 10th Edition*, Wiley Publishing, 2011.

* (11th edition as now available but problems assigned follow 10th edition)

EE 210: *Circuits and Devices* (4:3:3): Introduction to electrical circuit analysis, linear networks, electronic devices, amplifiers, and time-domain transient and steady-state responses.

Prerequisites: Phys 212, Prerequisites or concurrent: MATH250.

Policies:

1. Students are expected to read the listed text sections prior to each lecture period.
(See outline)
2. Students are expected to complete the assigned homework problems after each lecture period. *Selected homework problems from each set will be assigned to be completed in class and turned in to be graded.* (See outline)
3. At the end of each chapter students should be prepared to discuss their solutions in class.
4. Regular class attendance is expected.
5. Five quizzes will be given during duration of the course, each quiz has a in class part and a take home part. Students may elect to work together on the take home part, however excessive collaboration may affect individual performance on examinations.
6. Academic integrity is expected. Cheating will result in an issued zero for the said exam or quiz. See attached PSU policy.
7. Grading: Grading is strictly on a point system.

QUIZZES:	100 pts (5 at 20 pts each)
HOMEWORK	50 pts
LAB WORK :	50 pts
EXAM I :	100 pts
EXAM II :	100 pts
FINAL EXAM :	100 pts
TOTAL :	<hr/> 500 pts

(A=450; B+=435; B=400; C+=385; C=350; D=300)

Academic Integrity at Penn State : A Statement by the Council of Academic Deans

Academic integrity mandates the pursuit of teaching, learning, research, and creative activity in an open, honest, and responsible manner. An academic community that values integrity promotes the highest levels of personal honesty, respect for the rights, property, and dignity of others, and fosters an environment in which students and scholars can enjoy the fruits of their efforts. Academic integrity includes a commitment neither to engage in acts of falsification, misrepresentation, or deception, nor to tolerate such acts by other members of the community.

Academic integrity is a fundamental value at Penn State. It must be at the heart of all our endeavors and must guide our actions every day as students and as members of the faculty, administration, and staff. Because we expect new and continuing members of the University community to meet the high standards that are the foundation of a Penn State education, this message must be clear and reinforced frequently.

The primary responsibility for supporting and promoting academic integrity lies with the faculty and administration, but students must be active participants. A climate of integrity is created and sustained through ongoing conversations about honesty, trust, fairness, respect, and responsibility and the embodiment of these values in the life of the University. Students and faculty should contribute actively to fostering a climate of academic integrity in all their scholarly activities, through discussions in first-year seminars and in other courses, and through involvement in college Academic Integrity Committees. The University community should be continually mindful of the need to preserve academic integrity even as technology changes methods of information access and use.

Colleges will provide all faculty members and teaching assistants information about appropriate ways to promote academic integrity and handle dishonesty cases. Faculty members and graduate assistants must make clear their expectations about academic integrity in every course they teach.

As members of the Council of Academic Deans, we strongly support efforts to enhance academic integrity at Penn State. We will provide individual and collective leadership to strengthen further the University's commitment to the highest standards of academic integrity.

August 29, 2000

Period	Topic	LAB/Activity	Text Reading	Problems
1	Fundamental Units	<OPEN>	1.1	<u>1</u> .4,7,9 -SET #1
2	Power		1.2	<u>1</u> .16,20,45
3	Circuit Elements		1.3	<u>1</u> .42, <u>2</u> .3
4	Kirchoff's Laws	LAB#1	2.1,2	<u>2</u> .18,19,29
5	Basic Circuits		2.3,4	<u>2</u> .39,44,49
6	Homework			
7	Series & Parallel	LAB #1 Cont.	2.5,7	<u>2</u> .56,59,62,108 -SET #2
8	V & I Dividers - Quiz 1	HW Set #1	2.6,8	<u>2</u> .51,53,70,71,120
9	Nodal Analysis		3.1	<u>3</u> .3,5,9,13
10	(Continued)	Multi-Sim		<u>3</u> .24,25,40,50
11	Mesh Analysis		3.2	<u>3</u> .55,56,58 -SET #3
12	(Continued)		3.3	<u>3</u> .68,81,86
13	Superposition	Homework	5.1,2	<u>5</u> .7,10
14	Equivalent Sources	HW Set #2		<u>5</u> .85,89
15	Max Power		5.4	<u>5</u> .106,108,109
16	Review	EXAM 1		
17	Thevenin & Norton Theorems		5.3	<u>5</u> .53,58,59,61 -SET #4
18	(Continued) - Quiz #2			<u>5</u> .60,63,67
19	Operational Amplifiers	Lab #3	4.1,2,	<u>4</u> .8,9,14,22
20	Op Amp Circuits	HW Set #3	4.3,4,5	<u>4</u> .34,40,51
21	Homework			
22	Capacitance	Lab #5	6.1	<u>6</u> .11,13,19
23	Inductance		6.2	<u>6</u> .25,28,35 -SET #5
24	L & C Combinations - Quiz #3		6.3,4	<u>6</u> .44,50,67,69
25	Source Free RL	Lab #5 Cont	7.1	<u>7</u> .11,19
26	Source Free RC	HW Set #4	7.2	<u>7</u> .17,20
27	Homework			
28	Forced Response	<OPEN>		<u>7</u> .32,33,63
29	Complete Response			<u>7</u> .34,39,44,72,
30	Source Free Parallel RLC		7.3	<u>7</u> .89,92,95 -SET #6
31	Source Free Series RLC - Quiz #4	Multi-Sim		<u>7</u> .90,100,103
32	Complex Arithmetic	HW Set #5	Appendix	Handout
33	Homework			
34	Review	EXAM II		
35	Sinusoidal Analysis		8.1	<u>8</u> .1,2,4
36	Sinusoidal Forced Response		8.2	<u>8</u> .5
37	Phasors	LAB TBA	8.3	<u>8</u> .24
38	Phasor Relations		8.4	<u>8</u> .31,40
39	Impedance/Admittance		8.5,6	<u>8</u> .7,8,15,16 -SET #7
40	AC Circuit Analysis -Nodal	Homework	8.7	<u>8</u> .60,67
41	AC Circuit Analysis -Mesh	HW Set #6	8.8	<u>8</u> .73,74
42	Cont - Frequency Response - Quiz #5			<u>8</u> .88,105,126
43	Instantaneous and Average Power	Homework	9.1,2	<u>9</u> .2,3
44	Complex Power	HW Set #7	9.6	<u>9</u> .74,75
45	Review			FINAL EXAM

EE 210 Homework Sets: Erwin 10th Edition

Set #	Problems Assigned
1	Chapter 1: 4, 7, 9, 16, 20, 42, 45 Chapter 2: 18, 19, 29, 39, 44, 49
2	Chapter 2: 51, 53, 56, 59, 62, 70, 71, 108, 120 Chapter 3: 3, 5, 9, 13, 24, 25, 40, 50
3	Chapter 3: 55, 56, 58, 68, 81, 86 Chapter 5: 7, 10, 85, 89, 106, 108, 109
4	Chapter 4: 8, 9, 14, 22, 34, 40, 51 Chapter 5: 53, 58, 59, 60, 61, 63, 67 Chapter 6: 11, 13, 19
5	Chapter 6: 25, 28, 35, 44, 50, 67, 69 Chapter 7: 11, 17, 19, 20, 32, 33, 34, 39, 44, 63, 72
6	Chapter 7: 89, 90, 92, 95, 100, 103 Chapter 8: 1, 2, 4, 5, 24, 31, 40
7	Chapter 8: 7, 8, 15, 16, 60, 67, 73, 74, 88, 105, 126 Chapter 9: 2, 3, 74, 75

EE 210 Homework Sets: Erwin 11th Edition

Set #	Problems Assigned
1	Chapter 1: 4, 7, 9, 16, 20, 42, 45 Chapter 2: 13, <u>16</u> , <u>23</u> , <u>33</u> , 35, 49
2	Chapter 2: 56, 58, 59, <u>64</u> , <u>71</u> , <u>74</u> , 76, 110, 122 Chapter 3: 4, 6, <u>10</u> , <u>15</u> , <u>35</u> , <u>36</u> , 54, 62
3	Chapter 3: 66, 72, 73, 88, 105, 108 Chapter 5: 10, <u>8</u> , 90, 98, 112, 114, <u>113</u>
4	Chapter 4: 8, 9, 14, 22, 34, 40 Chapter 5: 55, 61, 64, 65, 67, 66, 72 Chapter 6: 8, <u>14</u> , 13
5	Chapter 6: 21, 24, 30, 38, 53, 64, 65 Chapter 7: 14, <u>20</u> , 21, 22, 25, 26, 27, 58, <u>35</u> , 71, 80
6	Chapter 7: 100, 101, 110, 105, <u>108</u> , 109 Chapter 8: 1, 2, 7, 6, <u>30</u> , <u>34</u> , 48
7	Chapter 8: 12, <u>18</u> , 20, 21, <u>81</u> , 83, 96, 101, 113, 115, <u>138</u> Chapter 9: 1, 4, <u>84</u> , 83

Home Problem Cross Reference – Irwin 10th and (11th) Editions

*Note: (*) means problem is not a direct match with 10th edition.*

Chapter 1	4 (4), 7(7), 9(9), 16(16), 20(20), 42(42), 45(45).
Chapter 2	18(13), 19(*16), 29(*23), 39(*33), 44(35), 49(49), 51(56), 53(58), 56(59), 59(*64), 62(*71), 70(*74), 71(76), 108(110), 120(122).
Chapter 3	3(4), 5(6), 9(*10), 13(*15), 24(*35), 25(*36), 40(54), 50(62), 55(66), 56(72), 58(73), 68(88), 81(105), 86(108).
Chapter 4	8(8), 9(9), 14(14), 22(22), 34(34), 40(40), 51(*).
Chapter 5	7(10), 10(*8), 53(55), 58(61), 59(64), 60(65), 61(67), 63(66), 67(72)85(90), 89(98), 106(112), 108(114), 109(*113).
Chapter 6	11(8), 13(*14), 19(13), 25(21), 28(24), 35(30), 44(38), 50(53), 67(64), 69(65).
Chapter 7	11(14), 17(*20), 19(21), 20(22), 32(25), 33(26), 34(27), 39(58), 44(*35), 63(71), 72(80), 89(100), 90(101), 92(110), 95(105), 100(*108), 103(109).
Chapter 8	1(1), 2(2), 4(7), 5(6), 24(*30), 31(*34), 40(48), 7(12), 8(*18), 15(20), 16(21), 60(*81), 67(83), 73(96), 74(101), 88(113), 105(115), 126(*138).
Chapter 9	2(1), 3(4), 74(*84), 75(83).