VALENCIA

Division of Architecture, Engineering, & Technology

Department of Electronics Engineering Technology
West Campus Building 9, Room 140, (407)582-1902/1903
http://www.valenciacc.edu/west/engineering/

Course: EET1036C Fundamentals of DC & AC Circuits

Textbook: Principles of Electric Circuits, Conventional Current Version, Floyd, 9th edition

Lab Manual: Fundamentals of DC & AC Circuits Laboratory Manual, Hedayat, 2009

Professor's Information:

Dr. Hall

Office Location: 11-254
(office hours posted online and outside my office door)
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Catalog Course Description: Prerequisites: MTB 1329C and EET 1214C
Fundamental course in DC and AC circuits designed to prepare students for advanced courses in electrical and electronics circuits. A study of electrical laws, theorems, components, and networks used in DC and AC circuit applications. (Special Fee: $70)

Student Performance Assessment:

Textbook Exercises……..…	10 %	**A**	90 -100 %
Pre-Labs (Multisim)……..…	10 %	**B**	80 – 89 %
Lab Experiments (Bench).....	40 %	**C**	70 – 79 %
Midterm (Theory/Multisim/Bench).....	15 %	**D**	60 – 69 %
Final Exam (Theory/Multisim/Bench ….....	20 %	**F**	< 60 %
Attendance and In class Participation……..…	5 %		

Class Notes:

- Students are strongly encouraged to read the Valencia policy Manual *Student Code of Conduct* and *Computer Acceptable Usage* found at: **http://valencia.cc.fl.us/policies/policydetail2.cfm?PolicyCatID=10&PolicyID=3**

- You are expected to be in class **on time.** You are responsible for all information and/or assignments given during class, whether you are present or not.

- **NO LATE WORK** will be accepted (no exceptions).

- **NO MAKE UPS** on missed lab assignments or missed exams (no exceptions).

- Use pencil **ONLY** and **erase all errors** when recording data within your lab manual. **Five points will be deducted** on each lab report grade if pen is used in your lab manual or for scratch outs done with any type of writing instrument.

- All laboratory experiments must be conducted during the scheduled lab time. Your experimental results must have the instructor or lab assistance signature for each individual circuit within the required experiment.

Student Core Competencies:

The faculty of Valencia Community College has established four Core Competencies that describe the learning outcomes for a Valencia graduate. They are: THINK, VALUE, COMMUNICATE, and ACT. These general competencies can be applied in many contexts and must be developed over a lifetime. They specify how learning can be expressed and assessed in practice. They enable students and faculty to set learning goals and assess learning within and across the many disciplines of human inquiry. Use the descriptions and examples of academic work for each to measure your own learning outcomes. Samples of the academic work are great additions to your Learning Portfolio. For further information on student core competencies please go to: www.valenciacc.edu/competencies.

Expected Student Conduct:

Valencia Community College is dedicated not only to the advancement of knowledge and learning but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia Community College, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct. The primary responsibility for managing the classroom environment rests with the faculty. Students who engage in any prohibited or unlawful acts that result in the disruption of a class may be directed by the faculty member to leave the class. Violation of any classroom or Valencia's rules may lead to disciplinary action up to and including expulsion from Valencia. Disciplinary action could include being withdrawn from class, disciplinary warning, probation, suspension, expulsion, or other appropriate and authorized actions. You will find the Student Code of Conduct in the current Valencia Student Handbook

Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably

during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext. 1523).

Weekly Activities			
Week	**Topic**	**Lab Experiment**	**Textbook Exercise Fun**
1 **(1-11)**	Course Syllabus Review CH 1: Quantities and Units CH 2: Voltage, current, and Resistance CH 3: Ohm's Law		CH 1: 1, 3, 7, 15, 17 CH 2: 23, 26, 32, 37, 39 CH 3: 5, 7, 10, 17, 26, 30, 32
(1-13)	An Overview of Voltage, Current, and Resistance Measurement Ohm's Law	➢ Complete Pre-Lab 1 ➢ Conduct Experiment 1 ➢ Complete Pre-Lab 2 ➢ Conduct Experiment 2	
2 **(1-18)**	CH 5: Series Circuits **What's Due?** ➢ Chapters 1 - 3 Textbook Exercise Fun [submit in class]		CH 5: 5, 12, 14, 15, 18, 24, 29, 32, 34, 40
(1-20)	DC Series Circuit **What's Due?** ➢ Pre-Lab 1 [submit online] ➢ Pre-Lab 2 [submit online] ➢ Experiment 1/2 Lab Report [submit online]	➢ Complete Pre-Lab 3 ➢ Conduct Experiment 3	

3 **(1-25)**	CH 6: Parallel Circuits **What's Due?** ➢ Chapter 5 Textbook Exercise Fun [submit in class]		CH 6: 8, 10, 11, 20, 21, 26, 28, 29
(1-27)	DC Parallel Circuits **What's Due?** ➢ Pre-Lab 3 [submit online] ➢ Experiment 3 Lab Report [submit online] ➢ Pre-Lab 4 [submit online]	Conduct Experiment 4	
4 **(2-1)**	CH 7: Series - Parallel Circuits **What's Due?** ➢ Chapter 6 Textbook Exercise Fun [submit in class]		CH 7: 13, 17, 21, 30, 32, 42
(2-3)	DC Series and Parallel Combination Circuits **What's Due?** ➢ Experiment 4 Lab Report [submit online] ➢ Pre-Lab 5 [submit online]	Conduct Experiment 5	

5 **(2-8)**	CH 8: Circuit Theorems and Conversions; Superposition, Thevenin's, Norton's, & Maximum Power Transfer Theorems **What's Due?** ➢ Chapter 7 Textbook Exercise Fun [submit in class]		CH 8: 2, 8, 13, 16, 20, 22, 31
(2-10)	Superposition Theorem Applied to DC Circuits **What's Due?** ➢ Experiment 5 Lab Report [submit online] ➢ Pre-Lab 6 [submit online]	Conduct Experiment 6	
6 **(2-15)**	CH 9: Branch, Loop, and Node Analyses **What's Due?** ➢ Chapter 8 Textbook Exercise Fun [submit in class]		CH 9: 13, 19, 22, 25
(2-17)	Thevenin & Norton Theorem **What's Due?** ➢ Experiment 6 Lab Report [submit online] ➢ Pre-Lab 7 [submit online]	Conduct Experiment 7	
7 **(2-22)**	Midterm Exam (Theory)		
(2-24)	Midterm Exam (Multisim/Bench)		

8 **(3-1)**	CH 11: Introduction to AC Voltage **What's Due?** ➢ Chapter 9 Textbook Exercise Fun [submit in class]		CH 11: 10, 13, 17,18, 22, 23, 28,32, 38
(3-3)	The Sine Wave **What's Due?** ➢ Experiment 7 Lab Report [submit online]	Conduct Experiment 8	
9 **(3-8)**	**College Closed**		
(3-10)	**College Closed**		
10 **(3-15)**	CH 12: Capacitors **What's Due?** ➢ Chapter 11 Textbook Exercise Fun [submit in class]		CH 12: 23, 24, 29, 36, 39, 41, 44, 48
(3-17)	CH 13: Inductors **What's Due?** ➢ Pre-Lab 8 [submit online]		CH 13: 21, 22, 28, 35

11 **(3-22)**	CH 15: RC Circuits *THEE* Complex Number System… **What's Due?** ➢ Chapter 12 Textbook Exercise Fun [submit in class]		CH 15: 13, 15, 21, 22, 33, 43, 44
(3-24)	Series and Parallel RC Circuits **What's Due?** ➢ Experiment 8 Lab Report [submit online] ➢ Pre-Lab 10 [submit online]	Conduct Experiment 10	
12 **(3-29)**	CH 16: RL Circuits **What's Due?** ➢ Chapter 13 Textbook Exercise Fun [submit in class]		CH 16: 3, 5, 15, 23, 30
(3-31)	Series and Parallel RL Circuits **What's Due?** ➢ Experiment 10 Lab Report [submit online] ➢ Pre-Lab 11 [submit online]	Conduct Experiment 11	
13 **(4-5)**	CH 17: RLC Circuits and Resonance **What's Due?** ➢ Chapter 15 Textbook Exercise Fun [submit in class]		CH 17: 7, 10, 26, 29
(4-7)	Series RLC Resonance Circuit **What's Due?** ➢ Experiment 11 Lab Report [submit online] ➢ Pre-Lab 12 [submit online]	Conduct Experiment 12	

14 **(4-12)**	CH 17 (continued…) **What's Due?** ➢ Chapter 16 Textbook Exercise Fun [submit in class]		
(4-14)	Passive Filters – Part A **What's Due?** ➢ Experiment 12 Lab Report [submit online]	Conduct Experiment 13	
15 **(4-19)**	CH 17 (continued…)		
(4-21)	Passive Filters – Part B **What's Due?** ➢ Experiment 13 Lab Report [submit online] ➢ Pre-Lab 14 [submit online]	Conduct Experiment 14	

16 **(4-26)**	**Final Exam (Theory)** **<u>What's Due?</u>** Chapter 17 Textbook Exercise Fun [submit in class]
(4-28)	**Final Exam (Multisim/Bench)** **<u>What's Due?</u>** ➢ Experiment 14 Lab Report [submit online] ➢ Extra Credit Assignments (Not Required): ✓ Chapter 10 Textbook Exercises 1- 29 (odd numbered problems) [submit in class] ✓ Chapter 14 Textbook Exercises 1-33 (odd numbered problems) [submit in class] ✓ Chapter 18 Textbook Exercises 1-29 (odd numbered problems) [submit in class] ✓ Edison & Tesla Comparative Commentary Paper [submit online] ✓ Experiment 9 Lab Report [submit online] ✓ Give Kids the World April 23rd Technical Service Learning Opportunity [submit online]