**EEE117L NETWORK ANALYSIS LABORATORY SPRING 2015**

Instructor : Mike (Maghsoud) Saghaimaroof

[http://www.ecs.csus.edu/wcm/eee/faculty and staff/preetham kumar.html](http://www.ecs.csus.edu/wcm/eee/faculty%20and%20staff/preetham%20kumar.html) (For Info Purpose)

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Prescribed Text :  **'Electric Circuits' by J.W. Nilsson & S.A. Riedel, 9th Edition, 2010**

ISBN: 0-13-198925-1

**Lab Material: https://cloud.ecs.csus.edu/public.php?service=files&t=5f9cbe95923339de0b14db7d4e56b508**

**References:** [\\voyager\Lab\EEE\Tatro\EEE\_117\_Circuits\_Lab](about:blank)

Additional Lab Materials Link will be provided by instructor.

**Lab location:** Riverside Hall 3017

**Lab schedule:**

#### **Equipment Manuals**

Various user guides for the test/measurement equipment in room 3017

[Tektronix DPO 3014 Oscilloscope](http://www.csus.edu/indiv/t/tatror/EEE_117_Lab/3017_Test_Equipment/DPO3014%20User%20Guide.pdf)

[Tektronix P6139A Oscilloscope Probe](http://www.csus.edu/indiv/t/tatror/EEE_117_Lab/3017_Test_Equipment/Tektronix%20P6139A%20Probe.pdf)

[Agilent 34401A Digital Multimeter](http://www.csus.edu/indiv/t/tatror/EEE_117_Lab/3017_Test_Equipment/34401_DMM.pdf)

[Agilent 33120A Function Generator](http://www.csus.edu/indiv/t/tatror/EEE_117_Lab/3017_Test_Equipment/33120A_Fct_Gen.pdf)

[Agilent E3631A Power Supply](http://www.csus.edu/indiv/t/tatror/EEE_117_Lab/3017_Test_Equipment/E3631A_Power_Supply.pdf)

[XYZs of the Oscilloscope from Trektronix](http://www.tek.com/Measurement/App_Notes/XYZs/)

#### **Multisim User Guide**

Multisim is available in Riverside Hall rooms 3017 and 3013 and through the ECS Rhea Remote Desktop server.

[Multisim User Guide](http://www.csus.edu/indiv/t/tatror/EEE_117_Lab/EEE_117_Device_Reference/Multisim%2010%20User%20Guide.pdf)

[Multisim Tutorial](http://www.csus.edu/indiv/t/tatror/Engr_1A/Engr_1A_Lab/MultiSim_Tutorial.pdf)

[How to connect to the ECS Rhea Remote Desktop](http://www.csus.edu/indiv/t/tatror/EEE_117_Lab/EEE_117_Device_Reference/Remote%20Desktop%20How%20To.pdf)

**Course Grading**

The pre-lab assignments, laboratory reports and attendance are the basis for the grade in

this lab. See the course syllabus (next page) for assignment due dates.

**Course Content:** Review of sinusoidal steady state, phasors, Bode plots, three phase power, introduction to application of Laplace transforms in network analysis, transfer functions, passive filters, Fourier Series,

two-port circuits.

**Attendance:** On-time lab attendance is mandatory. Unexcused tardiness or absence will result in score reductions for the lab reports. Attendance will be noted for every lab session.

Late: 15 minutes = - 5 points

30 minutes or more but still attended the lab = -20 points

Unexcused absence: One week long lab = -90% for each occurrence

Two week long lab = -45% for each occurrence

**Grading Policy:** Grades may be curved at the instructor’s discretion. The class average will be in the C+ range. Typical grades ranges are:

A(A-) - 90 and above

B(B-) - 80 – 89

C - 70 - 79

D - 69 – 60

F – Below 60

**Lab Schedule for Spring 2015**

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**WEEK Lab TOPICS**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 Lab 1 Elect Measurements (R,V,I), DMM

2 Lab 2 Internal Resistance of Meters

3,4 Lab 3 Scope, Function Generator

5 Lab 4 Passive LPF, RC-Circuit

6 Lab 5 Operational Amp, Inverting, Summing

& Non-Inverting

7 Lab 6 Op Amp Active LPF

8 Lab 7 Spice Cadence Simulation

(Pre-Watch SimVideo, Heedley Perry)

9 Lab 8 PSpice and RC Circuit

10 Lab 9 Rise/Fall Times, Simulation

11,12 Lab 10 Resonance, RLC Ckt, Sim

13 Lab 11 Times Ten Attenuator, Sim

14 Lab 12 Bode Plot, Sim

15 Lab 13 Fourier, Sim

**16 Finals Week – No lab**

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