

ECE202 Circuits II

Fall 2017

S.K. Islam, 504 Min Kao Building, 974-8531, sislam@utk.edu

Office Hours: TTh 10:00-11:00 am, 1:00-2:00 pm

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Textbook and Other Supplemental Material:

Engineering Circuit Analysis, W.H. Hayt, J.E. Kemmerly and S.M. Durbin, 8th Edition, 2012, ISBN 978-0-07-352957-8

Laboratory Manual

SPICE Notes

Grading:	Midtem Exams	40%
	Final	25%
	Homework	10%
	Quizzes	5%
	Laboratory	<u>20%</u>
	Total	100%

Grading Scale:

A(>90%), A- (88 to 89%), B+(85 to 87%), B(80 to 84%), B-(78 to 79%), C+(75 to 77%), C(70 to 74%), C- (68 to 69%), D+ (65 to 67%), D(60 to 64%), D- (58-59%), F(<59%)

Classes will meet in MK 404 from 11:10 am-12:25 pm TTh.

Specific Course Information

- Catalog Description:** Operational amplifiers, average, complex, imaginary and real power; effective values of voltage and currents, three phase circuits, delta and wye connections. Complex frequency; sinusoidal forcing functions and natural response. Resonance: general case, special cases in series and parallel circuits. Scaling: magnitude and frequency. Mutual inductance, transformers as circuit elements; linear and ideal transformers. Admittance, impedance and hybrid parameters. Trigonometric and complex Fourier series. Includes laboratory exercises..
- Prerequisites** and/or **Co-requisites:** ECE201

Topics Covered

Operational amplifiers, Sinusoidal Frequency, amplitude and Phase and Phase Lead or Lag, Phasor analysis, Power Concepts: Instantaneous, average Real, apparent, Complex and Reactive, Magnetic Coupling, Mutual inductance, Linear and ideal transformers, Resonance: general case, special cases in series and parallel circuits, Scaling: magnitude and frequency, Laplace Transform, Two-port network, Fourier series.

Academic Dishonesty: Will *NOT* be tolerated and **NO WARNINGS** will be given. It is the responsibility of the student to review UT policy and procedures in this area since they will be strictly adhered to. Cheating will result in an F in the course, and possible university sanctions.

Cell phones, texting, should be turned off during class, (b) all HW will be **stapled** and neatly done; grader or instructor reserves the right to not grade unacceptable HW, (c) students will

come to class on time and will not leave early, unless prior arrangements have been made, (d) quizzes without names will not be accepted, (d) **using a laptop or other portable electronic devices for reasons other than class use will not be tolerated.** Students having to miss a class when HW is due can hand in the HW early.

Because at least 1 of the lowest quiz grades will be dropped, **there will be no make-up quizzes for any reason.** Therefore, students should attend every class, so that in the event of an emergency, or something else unexpected, and have to miss a class when a quiz was given, it will not adversely affect their grade.