Course Objectives:
Successful students will be able to:
1. Analyze a AC circuit using Phasor Analysis.
2. Analyze a Circuit Using a systems approach using Fourier series, Fourier Transforms, or Laplace Transforms.
3. Analyze circuit that include circuit components that induce mutual coupling.
4. Use an oscilloscope to measure amplitude, frequency, and phase in the lab environment.
5. Program in Matlab.

Software:
1. LTSpice, This is available on the network in the labs and can be downloaded for personal use from http://www.linear.com/designtools/software/ltspice.jsp
2. Matlab V.7.11.0 Release 2010b. This is available on the network in the labs as the professional edition. If you want to use this on a home computer a student version is available for about $100 dollars.

Credit Hour Policy:
This Course meets the federal requirements of 15 in-class hours plus an expected 30 hours of out-of-class work per credit hour;

Lab Kits:
Each student is required to purchase a tool kit consisting of breadboard, oscilloscope probes, meter leads, etc. The kit is available from the Electrical Engineering Department Office. See Mrs. Vicky Hasenour in KC 266.

Course Structure:
This course meets from 8 to 9:50am on Monday, Wednesday, and Friday mornings. The course is taught in an integrated lab/lecture format. The lab portion of the course will be done in teams of two.

Notebooks:
Each lab team will keep a notebook in which all lab activity is recorded. This notebook will be periodically collected and graded. Notebooks are available in the department office.

Exams:
All exams are open book and open notes. Students may not share notes, books, or calculators during exams. Notes should be hand written, no printed or copied material will be allowed. During the test you may be asked to place your phone on the corner of the desk face down to ensure they are not being used. ANYONE CAUGHT USING A CELL PHONE DURING AND EXAM WILL RECEIVE A
FAILING GRADE ON THE EXAM. This include checking the time, answering a
text from mom…

Reading Assignments:
Reading assignments for each class session are printed on the attached schedule.
Each student is expected to have read the assigned material before attending class.

Grading:
This class has four hour exams, graded homework, graded projects, a graded
notebook, and a two-hour comprehensive final exam. Unannounced quizzes over
lab projects will be counted as part of the homework grade. The four exams will
count 56%, the graded homework and the projects will count 20%, the notebook
grade will count 5%, and the final exam will count 19%. Some of the design
projects will be done in multidisciplinary teams.

Contact Information:
Email: randall@evansville.edu
Phone: 812-488-2498
Office; KC 247

Office Hours:
MW 10AM-11AM
TTH 9AM-11PM
I can be contacted by email anytime between 8:00 AM and 8:00 PM M-F
I will respond to email and weekend but only on a limited basis and if I have time
and resources to do so.

Disability Policy:
It is the policy and practice of the University of Evansville to make reasonable
accommodations for students with properly documented disabilities. Students
should contact the Office of counseling and Health Education at 488-2663 to seek
services or accommodations for disabilities. Written notification to faculty from
the Office of Counseling and Health Education is required for academic
accommodations.

Honor Code:
All students at the University of Evansville agree to the University honor code: I
will neither give nor receive unauthorized aid, nor will I tolerate an environment
that condones the use of unauthorized aid.

Final exam is Monday, May 4th at 8:00AM
<table>
<thead>
<tr>
<th>Week Of</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>Jan. 12</td>
<td>CH 10 413-420 Phasors (Review) AC Analysis</td>
<td>CH 10 421-432 AC Analysis</td>
<td>Matlab</td>
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<tr>
<td></td>
<td>Jan 19Th MLKJ Day</td>
<td>CH 11 458-467 Instantaneous and Average Power</td>
<td>CH 11 473-483 RMS Power Apparent Power</td>
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<td>Jan 26</td>
<td>CH 11 481-490 Complex Power Power Factor Correction</td>
<td>CH 13 556-566 Applications</td>
<td>CH 13 574-580 Mutual Inductance</td>
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<tr>
<td>Feb 2</td>
<td>CH 12 519-524 Ideal Transformers</td>
<td>Exam 1 Review</td>
<td>Exam 1</td>
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<td>Feb 9</td>
<td>CH 14 613-619 Transfer Function Decibel Scale</td>
<td>CH 14 619-629 Bode Plot</td>
<td>CH 14 629-637 Series Resonance Parallel Resonance</td>
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<tr>
<td>Feb 16</td>
<td>CH 14 637-648 Passive Filters Active Filters</td>
<td>CH 15 676-679 Laplace Transforms</td>
<td>CH 15 679-690 Properties of Laplace Transforms</td>
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<tr>
<td>Feb 23</td>
<td>CH 15 690-696 Partial Fraction Expansion</td>
<td>Inverse Laplace Transform</td>
<td>CH 15 697-705 Convolution</td>
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<td>March 2</td>
<td>Matlab</td>
<td>Exam 2 Review</td>
<td>Exam 2</td>
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<td>March 9</td>
<td>Spring Break</td>
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<tr>
<td>March 16</td>
<td>CH16 715-725 Circuit Element Models Circuit Analysis</td>
<td>CH 16 726-730 State Variables Transfer Functions</td>
<td>Fourier Series</td>
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<tr>
<td>March 23</td>
<td>CH 17 755-764 Symmetry Consideration</td>
<td>CH 17 764-774 Circuit Applications</td>
<td>NO Class Instructor Out of Town</td>
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<tr>
<td>March 30</td>
<td>CH 17 774-778 Average and RMS Power Exponential Fourier Series</td>
<td>CH 17 778-787 Matlab</td>
<td>EASTER</td>
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<td>April 6</td>
<td>Exam 3 Review</td>
<td>Exam 3</td>
<td>NO Class Instructor Out of Town</td>
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<td>April 13</td>
<td>CH 18 829-835 Fourier Transform</td>
<td>CH 18 809-816 Properties of Fourier Transform</td>
<td>CH 18 816-829 Circuit Applications Parseval’s Theorem</td>
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<tr>
<td>April 20</td>
<td>CH 18 835-836 Comparing Fourier and Laplace</td>
<td>Review Exam 4</td>
<td>Exam 4</td>
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<tr>
<td>April 27</td>
<td>Final Exam Review</td>
<td>Reading Study Day</td>
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