ECEN 2632 *YOUNGSTOWN STATE UNIVERSITY* **Fall 2013**

DEPT OF ELECTRICAL & COMPUTER ENGINEERING

Syllabus for ECEN 2632

2632. ***Basic Circuit Theory 1.*** Basic principles of linear circuits. Circuits concepts and laws, methods of analysis, network theorems. Source-resistor circuits. Inductors and capacitors. Analysis of AC circuits using phasors; impedance and admittance. Power calculations in DC and AC circuits. Prereq. or concurrent: MATH 1572. **3 s.h.**

Textbook: *Electric circuits, 9th ed*, by J.W.Nilsson and S.A.Riedel, Pearson Prentice Hall, 2011.
Time: MWF 9 am / 10 am **Room**: MOSH 3040 **CRN**: 42659 / 42660

Wk	Day	Date	Chapter/Title/Topic	Problems/Notes
1	WF	8/21-	Course intro; Assessment review. Chps. 1, 2, 3. Circuit variable; Circuit elements; Resistive circuits	
2	MWF	8/26-		
3	**M**	**9/02**	***Holiday-Labor Day***	
	WF	9/04-		
4	MW	9/09-		
	F	9/13	**TEST #1**	
5	MWF	9/16-	4, 5. Techniques of Circuit Analysis; Op amps	
6	MWF	9/23-		
7	MWF	9/30-		
8	MW	10/07-		
	F	10/11	**TEST #2**	
9	MWF	10/14-	6, 9. Inductance & capacitance; AC circuit analysis.	
10	MWF	10/21-		
11	MWF	10/28-		
12	M	11/04	**TEST #3**	
	WF	11/06-	Chps 9, 10. AC steady-state analysis; Power analysis	
13	**M**	**11/11**	***Holiday-Veterans Day***	
	WF	11/13-		
14	MWF	11/18-		
15	M	11/25		
	WF	**11/27-**	***Holiday-Thanksgiving Break***	
16	M	12/02	**TEST #4**	
	WF	12/04-		
Fin	**T**	**12/10**	**Final Exam Time: 8:00 am one exam for both CRN sections**	

General Information: This course is required in the Electrical and Computer Engineering major. You should be taking ECEN 2611 also, or already have credit for it.

Your Instructor: Your instructor will be either P.Munro (for CRN 42659, 9am) or J.Zapka (for CRN 42660, 10am). Listen carefully and take notes since **each may have some different policies.** For example, short quizzes, homework, office hours, etc., may be scheduled and handled differently. Open- or closed-book policies on testing and quizzes may be different.

Computer Simulation: There may be some demonstrations and some use of OrCAD PSpice for computer-aided analysis and design. Using it can be a helpful learning tool for you. The ECEN 2611 lab will give more exposure to this.

ECEN 2632 course grades will be based on the following point total:

Tests 1, 2, 3, 4	400
Final Exam	150
Quizzes and home work	150
TOTAL	700

Please see us anytime for help or contact us by email or phone.

Dr. Phil Munro
Moser Hall room 2035
330-941-1748
pcmunro@ysu.edu

Mr. Jason Zapka
... 3030/3040 (back room)
330-360-8187 (cell)
jazapka@ysu.edu

Final course letter grades will follow this schedule (approx.):

85 ≤ A ≤ 100%	50 ≤ D < 60
70 ≤ B < 85	00 ≤ F < 50
60 ≤ C < 70	

You must have your own working calculator, pencils, etc.

Cell phones and other communication devices must be **turned off** or quiet vibrate in class. Better yet, set to Air-Plane mode, especially if you use an electronic book.

Add your instructor's preferences here: (Zapka's)

Office hours by appointment:

MWF 8 am – 10 am and TTh 3:15 pm – 4:15 pm

Tests are to be closed notes & book (a formula sheet will be attached to the test)

In class quizzes will be given periodically

Internet info: You will be able to look at postings relevant to this class. I will post things like the current syllabus, homework assignments, and other helpful notes on my faculty web site.

Department Web Site: Please be aware of our department web site. It contains information which can be helpful and interesting to you. http://web.ysu.edu/stem/eleccompeng/

Instructor web sites: P.Munro: http://people.ysu.edu/~pcmunro/Class/ (CRN 42659 9 am)
J.Zapka http://people.ysu.edu/~jazapka/ECEN2632.html (CRN 42660 10 am)

Pictures: Photos of the class at work and individual photos may be taken to aid our memory. Also, we do not include any personal identification with class web pictures. You may go to the site for examples!

Course Goals: When you gain credit in this course, you should be able to:

1. Analyze DC and AC circuits in order to determine values of voltages and currents by applying principles of mathematics and physics;
2. Understand energy storage components (capacitors and inductors) and the transient responses associated with them;
3. Calculate powers supplied and absorbed in DC circuits;
4. Calculate apparent, real, and reactive powers in AC circuits;
5. Design simple circuits, e.g., to produce a specified voltage, to transfer maximum power, to correct a power factor;
6. Develop and present thoughtful, systematic, clear, and concise solutions to engineering circuit problems.

Attendance and Test Dates: The material shown in the schedule may be shifted as needed, but test dates will not change. Class attendance is essential for good performance and the student is responsible for all material covered in the class. **Attendance is required** on all tests. No make-ups will be given and no late assignments accepted unless prior arrangements are made with the instructor. There will be **no make-ups** for short quizzes and in-class work.

Homework: To succeed in this course, timely completion of all homework assignments will be critical. Homework assignments will be collected periodically and graded. By completing the assignments one will gain the knowledge essential for mastering the course. ***If you have access to*** solution manuals, ***do not look at them until you wrestle with problems yourself.***

Academic Honesty is essential to the educational process and serves to protect the integrity of the University community. All work that is turned in must be your own, unless specified otherwise. Refer to the YSU Undergraduate Bulletin for additional information on consequences of academic misconduct and other university policies

Disability Information: If you have a documented disability and require accommodations to obtain equal access in this course, please contact us privately to discuss your needs. Also, you must be registered with CSP Disability Services and provide us with a letter to verify your eligibility (http://web.ysu.edu/gen/ysu/Disability_Services_m695.html).

Do Not Get Lost in this class. Send e-mail or see us for help. We will answer questions, but you probably know that learning is a funny thing. It takes time, effort, and practice on the learner's (your) part.

Course Assessment: Expect a questionnaire near the end of the term concerning the course goals listed above. Your responses help our department measure how well this course accomplished those things for you. The purpose of assessment is *to improve* the engineering education we provide.

Thank you for your comments and evaluations of this course.

Thanks for reading. --P.Munro & J.Zapka 21-Aug-2013 11.58 am