UTRGV COURSE SYLLABUS

UTRGV Course: Electric circuit I lab
Instructor Name: Wenjie Dong
Term: Fall 2018
Tel: 956-665 2200. Email: Wenjie.dong@utrgv.edu
Times and Location: M 4:30pm-7:10pm, ENGR 2.242
Office location: ENGR 3.242
Teaching Assistant: TBA

Textbook and/or Resource Material
No textbook. Handouts are available on-line.

Course Description and Prerequisites
This course covers fundamental circuit measurement techniques and reinforces concepts from ELEE 2305 Electrical Circuits I. Topics include: basic instrumentation; measurement of voltage, current, resistance, power, frequency and phase; analysis of experimental data; and reporting of technical results. Crosslisted with CMPE 2105. Prerequisites: Credit/registration in ELEE 2305.

Learning Objectives/Outcomes for the Course
At the end of the semester, it is expected that students should be able to:
1. Properly use multimeter functions (voltmeter, ammeter, ohmmeter) to measure DC or AC signals
2. Use an oscilloscope for quantitative measurements of time varying signals
3. Use PSpice in DC bias, transient, and AC sweep modes, with understanding of which mode is appropriate for a given problem
4. Document the results of a laboratory experiment in the form of a laboratory notebook.
5. Analyze the results of a simple experiment, including linear regression and basic error analysis
6. Assemble prototype circuits from a schematic diagram

Grading Policies
This is a project based laboratory. Your performance on the labs will be measured primarily through the laboratory notebooks that each group will turn in after the experiment, and the analysis of the data, is complete.
1. Lab Partners: You will normally work in groups of two. Unless one partner drops the course, you should work with the same partner throughout the semester.
2. Attendance: You should complete most of your lab work during the regularly scheduled lab time so that your work can be directly observed by the instructor(s). If you need additional time to complete the lab, you must ask for and receive permission to work outside the regular lab time.
3. Laboratory Notebooks: After completion of the lab and analysis of the data, each group will turn in one notebook, with the names of both members of the group. A separate handout will give instructions for the notebook content and format.
4. Examinations: During the last regularly scheduled lab period, there will be an individual final exam with written and experimental components.
5. Grading: Notebooks and performance in labs: 70%, Attendance: 10%, Final Examination: 20%.

Calendar of Activities
The UTRGV academic calendar can be found at http://my.utrgv.edu at the bottom of the screen, prior to login.

Other Course Information
Topics (tentative):
1. Syllabus, Safety Rules, CheckOut Breadboard, Select Partners
2. Voltmeters, Ammeters, Ohmmeters
3. Kirchhoff’s Laws and superposition
4. PSpice - DC circuits
5. Series-parallel circuits
6. Nodal Analysis and mesh analysis
7. Thevenin Equivalents
8. Simple Op-Amp Circuits
9. Basic oscilloscope measurements
10. Basic transient Circuits
11. PSpice - Transient Circuits
12. AC circuit analysis
13. AC impedance and power
14. Final Examination

UTRGV Policy Statements

STUDENTS WITH DISABILITIES:
If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time. Brownsville Campus: Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at accessibility@utrgv.edu. Edinburg Campus: Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at accessibility@utrgv.edu.

MANDATORY COURSE EVALUATION PERIOD:
Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Online evaluations will be available Nov. 18 – Dec. 9, 2015. Students who complete their evaluations will have priority access to their grades.

ATTENDANCE:
Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

SCHOLASTIC INTEGRITY:
As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism, and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

SEXUAL HARASSMENT, DISCRIMINATION, and VIOLENCE:
In accordance with UT System regulations, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student’s time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect in an environment free from sexual misconduct and discrimination.

COURSE DROPS:
According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.