McLennan COMMUNITY COLLEGE

WACO, TEXAS

COURSE SYLLABUS
AND
INSTRUCTOR PLAN

ELECTRICAL CIRCUITS I LAB
ENGR 2105.01 & ENGR 2105.02

Laura Wright & Dr. Bernard Smith

NOTE: This is an 16-week course.

We reserve the right to change any term on this syllabus at any time during the semester.

Course Description: Laboratory experiments supporting theoretical principles presented in ENGR 2305 involving DC and AC circuit theory, network theorems, time, and frequency domain circuit analysis. Introduction to principles and operation of basic laboratory equipment and introduction to laboratory report preparation.

Prerequisites and/or Corequisites:
Prerequisite: PHYS 2426. Corequisite: ENGR 2305. Semester Hour 1 (3 lab)

Instructor Information:
Instructor Name: Laura Wright
MCC E-mail: lwright@mclennan.edu
Office Phone Number: (254) 299-8419
Office Location: HP 230
Office Hours: MW 2 – 3 PM, T 2 – 3:30 PM, Th 11 AM – 1 PM. Other times by appointment.

Instructor Name: Dr. Bernard Smith
MCC E-mail: bsmith@mclennan.edu
Office Phone Number: 254-299-8196
Office Location: SB 210
Office Hours: T,Th 11:30 AM – 2:20 PM. Other times by appointment.

Required Text & Materials: MCC Bookstore Website

- Circuits Lab Kit
- Research notebook
- Five AA batteries and one 9V battery.
- No additional textbook required, but must bring the textbook used in Electrical Circuits lecture section.

Student Support/Resources: MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at http://www.mclennan.edu/campus-resource-guide/

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources, we encourage you to contact a success coach by calling (254) 299-8226. Students can visit the Completion Center Monday-Friday from 8:00 AM - 5:00 PM to meet with a success coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) is open 12:00 PM - 1:00 PM, Monday-Friday, without an appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

Minimum Technical Skills: Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology: In the event MCC's technology systems are down, you will be contacted/notified through your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Click Here for the Minimum System Requirements to Utilize MCC's D2L|Brightspace
(**www.mclennan.edu/center-for-teaching-and-learning/teaching-commons/requirements**)
Click on the link above for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Additional requirements: Students must have a reliable computer and internet connection. Students may need access to MATLAB to complete assignments, which is available in the Learning Lab (SB 135) and SB 131. Students may also need access to PSpice and Waveforms, which are available for download online and can be found on the computers in SB 131.

Methods of Teaching and Learning: Students will learn through lecture and reading, as well as through work on lab experiments involving software and hands-on components, their lab notebook, and lab reports. Additional methods may be used as opportunities present themselves.

Course Objectives:

- Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
- Conduct basic laboratory experiments involving electrical circuits using laboratory test equipment such as multimeters, power supplies, signal generators, and oscilloscopes.
- Explain the concepts of Thevenin-equivalent circuits and linear superposition and apply them to laboratory measurements.
- Predict and measure the transient and sinusoidal steady-state responses of simple RC and RLC circuits.
- Predict the behavior and make measurements of simple operational-amplifier circuits.
- Relate physical observations and measurements involving electrical circuits to theoretical principles.
- Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.

Course Outline or Schedule: The following class calendar marks only the beginning of labs and their due date. However, students are expected to come to lab twice a week and work on each of these lab. Each lab will take several weeks to complete. Any changes will be announced on Brightspace.

Lab	Start date:	Report due:
Lab 1	Mon, Jan 27th	Sun, Feb 9th, 11:59 pm
Lab 2	Mon, Feb 10th	Sun, Mar 1st, 11:59 pm
Lab 3	Mon, Mar 2nd	Sun, Mar 29th, 11:59 pm
Lab 4	Mon, Mar 30th	Sun, Apr 12th, 11:59 pm
Lab 5	Mon, Apr 20th	Sun, May 3rd, 11:59 pm

Course Grading Information:

Category	Percentage
Daily notebook grade	20%
Lab reports	80%
Total	100%

A: 90%+ B: 80% – 89% C: 70% – 79% D: 60% – 69% F: 0% – 59%

Lab Reports. Students will work with a lab partner for each lab. Each pair of lab partners will have to submit a lab report over each of the labs. Lab reports are due on Sunday at 11:59 pm on the date marked on the course calendar above. One lab may take two or three lab meetings to complete. Lab reports must be typed and follow proper lab format. Also, if a student did not work on their fair share of the lab (both the work and the report), points will be deducted on an individual basis. More information about lab format, expectations, and grading can be found on Brightspace.

Lab notebook. Students must use a lab notebook during lab meetings to take notes and write down calculations and data. The lab notebook must be written in pen. It must contain all relevant information about the lab experiment, since the lab report will be written from the information in the notebook. All lab work, including pSpice and Waveform parts, must be completed during lab. Lab notebooks must be completed during lab time and will be checked and graded at the end of each lab meeting for completeness. You will receive TWO lab notebook grades per week. If a student misses a lab day, he/she will receive a zero for that day's lab notebook grade. Further information about the lab notebook expectations and grading standards can be found on Brightspace.

Learning Lab. The Learning Lab in the Science Building, room 135, has many reference books available, and you may find some success studying there. There are also five computers that have MATLAB and other useful software installed, which you can use to work on your homework.

Academic Dishonesty. Any student that is found guilty of academic dishonesty such as cheating, plagiarism, or collusion, will receive a zero grade on every test or assignment involved. For repeated violations, a guilty student can be assigned a failing grade in this course and can be recommended for suspension from the McLennan Community College District.

Late Work, Attendance, and Make-Up Work Policies:
Late lab reports will not be accepted. If you have to miss one of the lab meetings when a lab is due, you must turn in the lab report early. If you are legitimately ill during an in-class assignment, you must provide a doctor's note the first day you are back in class in order to receive consideration for makeup work.

Attendance is mandatory. *Per MCC policy, you may be automatically dropped after missing 25% of class meetings, or 8 labs*. For this purpose, arriving late and leaving early both count as half an absence. If you are dropped before the official drop date, you will receive a grade of W. If you are dropped after the official drop date, you will receive a grade of F, unless there are highly unusual circumstances.

MCC allows for "excused" absences caused by (1) authorized participation in official College functions, (2) personal illness, (3) an illness or a death in the immediate family, or (4) the observance of a religious holy day. It is your responsibility to let me know the reason for an absence the day you return to campus and provide sufficient documentation (doctor's note, email from coach, etc.).

Student Conduct Policy:
Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of this educational opportunity.

Click Here for the MCC Academic Integrity Statement
(**www.mclennan.edu/academic-integrity**)
The link above will provide you with information about academic integrity, dishonesty, and cheating.

Click Here for the MCC Attendance/Absences Policy
(www.mclennan.edu/highlander-guide/policies)
Click on the link above for the college policies on attendance and absences. Your instructor may have guidelines specific to this course.

Accommodations/ADA Statement: Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. Instructors should not provide accommodations unless approved by the Accommodations Coordinator. For additional information, please visit mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu
254-299-8122
Room 319, Student Services Center

Click Here for more information about Title IX (**www.mclennan.edu/titleix**)
We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinators at titleix@mclennan.edu or to call Dr. Drew Canham (Vice President for Student Success) at 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or Counseling Services at MCC by calling 299-8210. The MCC Student Counseling Center is a confidential resource for students.

McLennan's Title IX webpage (http://www.mclennan.edu/titleix/) contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence.

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