Course Syllabus For ENGR 228 – Circuit Analysis
Walla Walla University - Seventh-day Adventist Higher Education
Spring Term 2020
Updated 5/18/2020

Course Information

- Class: 2pm MWF
- Lab: T (2-5) or W (3-6) but moving to asynchronous by week 3 of the quarter.

Instructor Information

- Instructor: Dr. Curtis Nelson
- Office: 263 Chan Shun Pavilion
- Phone: 509-527-2076
- Email: curt.nelson@wallawalla.edu
  The default communication method between the instructor and students is through email via *mywwu* at your *standard WWU email address*. Please monitor this email address daily for any class updates.
- Web page: https://people.wallawalla.edu/~curt.nelson/engr228/index spring 2020.html
- Office Hours*: Instructor – T,Th,F 9-11am; MTWF 1pm
  TA's – Evenings and as time allows. Note – communicate via Teams by typing **@ta**

* **Due to the distance learning circumstances, office hours are to be interpreted as times that we will make ourselves available to communicate with you in a timely fashion. This may include video conferences, phone calls, or just faster response times to emails.**

Course Description

Study of circuit variables and parameters; Kirchhoff's laws and network solution; equivalent circuits, network theorems; natural and complete response; sinusoidal steady-state, phasors, and impedance; frequency characteristics; power and power factor. Laboratory work required. Co-requisite: MATH312 or permission of the instructor. PHYS 252 strongly recommended.

Learning Objectives

- Gain an ability to formulate and solve engineering problems involving circuits and their applications;
- Gain an ability to apply appropriate mathematical techniques to solve circuit problems;
- Understand linear, first-order, and second-order circuits;
- Understand principles of DC and AC Power.

Required Materials

- Textbook: *zyBook online text,* **WALLAWALLAENGR228Spring2020**
- Calculator: Must be able to do complex math and solve simultaneous systems of equations.

Course Schedule

A daily schedule of course topics, reading assignments, and exercises is presented in a separate document that can be found on the course web page. This is a live document. Refer to it daily:
https://people.wallawalla.edu/~curt.nelson/engr228/common/outline spring 2020.pdf

Course Evaluation

Your instructor would appreciate constructive feedback regarding this course. Near the end of the quarter, you will be emailed a notice reminding you to submit a course evaluation for this class by going to your ***mywwu*** account and clicking on the *Campus Labs – Course Evaluation* option. Your responses are

confidential and will be collected by the university via a third-party provider, Campus Labs. All student responses will be summarized and reported to instructor of record, their chair/dean, and academic vice president, after the term is over and the grades posted. You can also reach the course evaluation here:
http://wallawalla.campuslabs.com/courseeval

Course Grade **Updated 5/18/2020**

- Your final grade will be composed of the following four parts (although these percentages may shift due to changing online issues):

Homework and attendance:	35%
Lab work:	30%
Mid-term exams (2):	30%
Final Quiz:	5%

- It is safe for you to assume that your minimum final grade, based on raw scores, will be computed as:

≥ 90%	A of some sort (A, A-)
≥ 80%	B of some sort (B+, B, B-)
≥ 70%	C of some sort (C+, C, C-)
≥ 60%	D of some sort (D+, D, D-)
< 60%	F

- Your current grade in the class can be found anytime in D2L.

Course Requirements

Homework

Homework will be comprised of 3 portions:

- **Participation Activities**
  These are exercises found in the assigned reading portions of your textbook. They are self-paced, and you can work them until you get the correct answer. You must do all the assigned participation activities to receive credit.
- **Challenge Activities**
  These are exercises also found in the assigned reading portion of the homework assignments. These assignments are often multi-part and will guide you through to completion. You must do all the assigned challenge activities to receive credit.
- **Exercises**
  These are problems that may come from the Zybooks reading or separately from the instructor. Your solutions to these exercises will be done individually by hand and submitted to a D2L drop box. For these problems, you must adhere to the guidelines presented by the Walla Walla University School of Engineering. These guidelines are posted on the course web page here:
  http://people.wallawalla.edu/~curt.nelson/hw/hwk_standards_2011.pdf
- **Additional requirements:**
  - Participation, challenge, and supplemental exercises are all due at the start of class on the due date.
  - Late homework will not be accepted unless prior arrangements have been made. It is better to just move on to the next assignment.

Tests **Updated 5/18/2020**

There will be two mid-term tests in addition to a final quiz. The final quiz will only cover material from Zybooks, Chapter 8 on AC Power. Tests and quizzes will be closed book with cheat sheets allowed and will be done individually. You will have a fixed amount of time to complete each test or quiz.

Laboratory

- This class has a scheduled lab. I am making every effort possible to provide you a meaningful lab experience via distance learning.
- You can expect to receive a box of laboratory parts via UPS during the first part of the quarter.

- Lab reports are due as indicated on the lab handout.
- For reports that require the submission of graphs, the School of Engineering Graphic Standards document can be found here: http://people.wallawalla.edu/~curt.nelson/hw/graphStandard2013.pdf

Course Grading

Materials submitted by a student will be evaluated in a timely manner, typically within 2 weeks.

Progress Reports

Progress reports will be submitted for students identified at risk, or for students who are performing poorly.

Class Attendance

- Class attendance is a good indication of your commitment to learning the material and as such provides the instructor with feedback as to your learning and comprehension.
- I intend to record the class sessions and post links to the recording for those who miss class or wish to review what was done during class.

Academic Integrity

- See the Walla Walla University Academic Integrity Policy here: https://wallawalla.edu/academics/academic-administration/academic-policies/academic-integrity-policy/
- All work done in this class is to represent the understanding and work of the person submitting the work. While discussing the methods and principles relating to homework and lab work with your fellow students is strongly encouraged, it is unethical to copy another person's work, to copy from a solutions manual, or to read another person's work and follow it as an outline in completing your own. This constitutes cheating and is unfair to your career, profession, and most of all, your fellow students. **CHEATING IS REWARDED**. With an F. For the quarter. At the teacher's discretion.
- Remember – you are not just taking a class and earning a grade. You are training for a profession that holds the highest regard for the ethics of its members.

Accommodations for a Disability

- https://wallawalla.edu/dss
- If you have a physical or learning disability and need accommodations please contact Sue Huett in the Teaching Learning Center, Village Hall, or call 509-527-2366. Accommodations for documented disabilities are arranged through the Disability Support Services (DSS) office. This syllabus and course materials are available in alternate format as appropriate to the disability. Accommodations are not retroactive. If you do not declare the disability to the DSS office, you may not receive appropriate accommodations.

University Core Themes/Values

University Core Theme	How The Core Theme is Actualized in this Course
Excellence in Thought	Students learn basic principles of electrical systems through thoughtful homework and laboratory experiments.
Generosity in Service	This course has no service learning component or course requirements for service other than passion about such topics expressed by the instructor.
Beauty in Expression	Students document their learning through homework and laboratory exercises.
Faith in God	This course has no faith component other than passion about such topics expressed by the instructor.