Course Syllabus For ENGR 228 – Circuit Analysis
Walla Walla University - Seventh-day Adventist Higher Education
Spring Term 2018

Course Information
• Class: 2pm MWF (CSP154)
• Lab: T (2-5) or W (3-6) (CSP317)

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: http://people.wallawalla.edu/~curt.nelson/engr228/index spring 2018.html
• Office Hours: 1 – 2pm MTWF, 10 – 11am Th. Other times by appointment

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.

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
• Calculator: Must be able to do complex math and solve simultaneous systems of equations.

Course Schedule
A daily schedule of course topics are presented in a separate document that can be found on the course web page. This schedule also contains a list of homework assignments for the entire quarter. The homework assignments are listed on the date they are due. The schedule may change based on the professional judgment of the instructor (with appropriate notice to the students.)
http://people.wallawalla.edu/~curt.nelson/engr228/common/outline spring 2018.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

- Your final grade will be composed of the following four parts:
  - Homework and attendance: 20%
  - Lab work: 25%
  - Mid-term exams (2): 35%
  - Final exam: 20%

- It is safe for you to assume that your minimum final grade, based on raw scores, will be computed as:
  - \( \geq 90\% \) A of some sort (A, A-)
  - \( \geq 80\% \) B of some sort (B+, B, B-)
  - \( \geq 70\% \) C of some sort (C+, C, C-)
  - \( \geq 60\% \) D of some sort (D+, D, D-)
  - < 60\% F

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

Course Requirements

Homework

The value of a solution to any problem is directly related to how well the solution is documented. To promote good problem-solving technique and assist those grading the assignments, I require that the guidelines presented by the Walla Walla University School of Engineering be followed. These guidelines are posted on the course web page here: [http://people.wallawalla.edu/~curt.nelson/hw/hwk_standards_2011.pdf](http://people.wallawalla.edu/~curt.nelson/hw/hwk_standards_2011.pdf)

Additional requirements:
- Homework is due at the beginning of the class period (plus five minutes);
- Late homework will not be accepted unless prior arrangements have been made;
- The day-by-day outline lists all required homework problems on the date that they are due.

Tests

There will be 2 mid-term tests in addition to the final test. The final test will cover the material from the entire quarter. Tests will be closed book with the exception of your calculator, pencil and eraser, and minimal private reference.

Laboratory

- This class has a lab that meets in CSP317;
- Each lab period will have a prelab assignment that must be turned in at the beginning of the lab session. These will be graded and turned back to you during the lab session;
- Lab reports are due at the end of the lab session;
- 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](http://people.wallawalla.edu/~curt.nelson/hw/graphStandard2013.pdf)
- More information on labs will be given to you during the first lab session.

Returned Materials

All materials submitted by a student will be evaluated in a timely manner, typically within 1 week.

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 visual feedback as to your learning and comprehension;
- Attendance may be used to form a part of your grade;
- Assistance to students can only be guaranteed during class, lab, and office hours;
• Students are responsible for all material presented and handed out in class or in the laboratory.

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 extension x2366. 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.

Emergency Procedures
An emergency procedures flip chart and evacuation routes are posted in classrooms near the door. Additionally, emergency procedures can be found here: https://wallawalla.edu/security

University Core Themes/Values

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