



## Circuit Analysis II

ELT 126.H60

Winter 2020

**Number of Credits:** 4

**Office:** JW

**Days Class Meets:** Tuesdays, Thursdays

**Contact Phone:** (734) 883-4557

**Meeting Times:** 5:00 pm, scheduled online

**Contact Email:** BurkheaEdwardL@jccmi.edu

**Location:** Online

**Office Hours:** Online by appointment

**Instructor:** Eddie Burkhead

**Online:**

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COVID-19 Revised 3/21/2020: Due to the COVID-19 outbreak, this course will be delivered in an online format for the Winter 2020 semester. This syllabus has been revised to reflect those changes. All weekly course expectations will be posted on Monday of each week, and online resources including JetNet, instructor created videos, and Big Blue Button

### Course Description

A study of alternating electrical current is presented. Topics include AC measurements, resistance, inductance and capacitance in AC circuits.

Prerequisite(s)

ELT 120

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### Course Objectives

- Measure AC current using an oscilloscope and other test equipment
- Describe the difference between resistance, reactance, and impedance
- Calculate Real and Reactive Power in a circuit
- Describe how single and polyphaser circuits work
- Describe the effect a capacitor, inductor, and transformer will have on a circuit
- Describe the basics of magnetism, and how it is used in generators and motors

## Textbook

*Grob's Basic Electronics*. Schultz, Mitchel E. with accompanying Lab Manual

**Text Book Zero!** This text is available in a digital format. Please see the links posted on our class Jet Net site. This text is available to rent or purchase in digital format through the JC Bookstore.

## Grading Procedure

### Assessments

Quizzes (10): 100 points

Online Modules (Tooling U): 35 points

Math Quizzes (online): 65 points

All Lab activities will be completed via online simulation

**TOTAL: 200 points**

### Grading Scale

GPA	GRADE RANGE
4.0	92-100%
3.5	85-91%
3.0	80-84%
2.5	75-79%
2.0	70-74%
1.5	65-69%
1.0	60-64%
0.5	55-59%
0.0	0-54%

### Failure

Any grade under 2.0 will result in failure

## Academic Honesty Policy

Academic Honesty is defined as ethical behavior that includes student production of their own work and not representing others' work as their own, by cheating or by helping others to do so.

**Plagiarism is defined as the failure to give credit for the use of material from outside sources.**

**Plagiarism includes but is not limited to:**

- Submitting other's work as your own
- Using data, illustrations, pictures, quotations, or paraphrases from other sources without adequate documentation
- Reusing significant, identical or nearly identical portions of one's own prior work without acknowledging that one is doing so or without citing this original work (self-plagiarism)

**Cheating is defined as obtaining answers/material from an outside source without authorization.**

**Cheating includes, but is not limited to:**

- Plagiarizing in any form
- Using notes/books/electronic material without authorization
- Copying
- Submitting others' work as your own or submitting your work for others
- Altering graded work
- Falsifying data
- Exhibiting other behaviors generally considered unethical
- Allowing your work to be submitted by others

## Makeup Policy

This course is based on the Competency Based Education model. All work may be completed on a flexible schedule, and may be retaken until mastery has been achieved.

## Help

Available learning services or opportunities for students seeking help with their course work. May include information about tutors, learning centers, reserved library materials, open labs, counseling services.

It is important to contact a Center for Student Success professional prior to the start of the semester in order to receive accommodations in a timely manner. While we will make every effort to coordinate accommodations in a timely manner, failure to self-identify prior to the start of the semester may delay notification to instructors and timeliness of acquiring accommodations. Accommodations do not automatically carry over to the next semester.

<https://www.jccmi.edu/center-for-student-success/accommodations-for-students-with-disabilities/>

## Calendar

*Calendar timelines and assignments are an approximation and could be changed.*

Week 1: Magnetism, Electromagnetism, Generators, and Alternating Current

Week 2: Capacitors

Week 3: Capacitive Reactance

Week 4: Inductors and Inductive Reactance

Week 5: RLC Circuits

Week 6: Transformers

Week 7: Polyphase Circuits and Motor Basics

## Important Dates: Fall 2019

DATE	EVENT
SEPT. 3, 2019	DAY AND EVENING CLASSES BEGIN
SEPT. 3 – DEC. 19, 2019	SEMESTER DATES
SEPT. 17, 2019	IN-SERVICE DAY. NO CLASSES
OCT. 4, 2019	PATHWAY SHOWCASES DAY. NO CLASSES
NOV. 27 – DEC. 1, 2019	THANKSGIVING BREAK. NO CLASSES
DEC. 19, 2019	END OF FALL SEMESTER
DEC. 21, 2019	GRADES DUE

## Attendance Policy

In compliance with Federal Title IV funding requirements, as well as college initiatives, reporting of student participation in classes will occur at three designated times each semester. Instructors will assign one of three non-transcripted letter symbols to each student during each reporting period (see below). Students identified as no longer participating will be dropped or administratively withdrawn from the class, and students identified as needing academic assistance will be contacted.

## Participation/Progress Symbols

- H – The student is not doing acceptable work and needs **Help** to be successful.

- Q – The student has not participated and the instructor believes they have unofficially withdrawn (**Q**uit). These students will be dropped/withdrawn from the class.
- V – The instructor **V**erifies that the student is participating and doing acceptable work.

### **Caveat**

Some changes may be necessary to this syllabus. School closings, illness, and other unexpected circumstances could result in a change the assignments and schedule. These changes will be promptly communicated to the student.