

ECE202 Circuit Theory Applications

Course Syllabus for Spring 2021

Class time: TH 2:00-3:15 via Zoom

Office hours: via Zoom, listed on Canvas, or as individually arranged

Instructor: Olivera Notaros, olivera@colostate.edu
Lab TAs: John Crowell, jcrow83@rams.colostate.edu
Kailee Mitsuyasu, kaimits@rams.colostate.edu
Class Assistant: Nick Daly, nickdaly@rams.colostate.edu

- Please send questions to instructor, TAs and CA via email; do not send messages through Canvas, as replying to Canvas messages is tedious.

Recitations (optional): Fri 5:00 – 6:15 (+/-); Zoom link is posted on Canvas

Math Foundations lectures (optional): Mon 12:00-12:50

Textbook: C. K. Alexander and M. N. O. Sadiku, *Fundamentals of Electric Circuits*, 6th edition, McGraw Hill, 2017

Connect for 6th edition of the textbook: recommended for your personal learning, but not required

Rough outline of the topics taught and most important dates:

1/19 First class

First-order circuits and step response (ch.7), LSM1

Second-order circuits and step response (ch.8), LSM1

Sinusoids and phasors (ch.9), LSM2

Sinusoidal steady-state analysis (ch.10), LSM2

AC power analysis (ch.11), LSM3A

Three-phase circuits (ch.12), LSM3B

Magnetically coupled circuits (ch.13), LSM4

Frequency response (ch.14), LSM5

Filters (ch.14), LSM6

Laplace transform and convolution (ch.15), LSM7

Use of Laplace transform and convolution to solve circuits (ch.16), LSM7

asap, by 1/31 Team members' names and project title, if known, due (e-mail instructor)

Subject of an email: ECE202: Team members info

1/31 Preliminary project proposal due (one upload to Canvas per team)

2/1-2/14 Meet w/ assigned EIR Mentor

3/7 Mid-project report due (one upload to Canvas per team)

3/11 Attend KI-1 lecture in ECE202 2:00-3:15

3/11 Attend KI-1 lecture in ECE303 3:30-4:45

4/19-4/25 Meet w/ assigned EIR Mentor

4/28 Virtual course project demos, time tbd

4/29 Course project report due (one upload to Canvas per team)

5/4 Attend KI-2 lecture in ECE202 2:00-3:15

5/4 Attend KI-2 lecture in ECE303 3:30-4:45

Dates of LSM quizzes: 2/11, 2/25, 3/16, 3/25, 4/6, 4/22 (monitor Canvas for potential changes)

Final exam: 5/11, 9:40-11:40, extended (based on CSU exam schedule)

79.99 C+

Grading policy:

- 20% Lab
- 10% Homework
- 35% LSM quizzes
- 20% Final exam
- 10% Course project
- 5% Knowledge Integration (KI)
- 2% course bonus for Math Foundation (extra credit)

Late work policy:

- One day late: -50%
- More than one day late: no credit

Passing ECE202 laboratory is mandatory! You must *attend* all labs, *turn-in* all lab assignments, and get an *overall-passing* grade.

Labwork grading policy:

- 30% Preparedness for lab sessions and participation (lab work)
- 70% Lab report

Homework:

Homework must be submitted to Canvas on time and in presentable condition. Solutions with no work shown will be assumed wild guesses and therefore receive *no credit*. Late homework may be submitted within 24 hours from the assigned due time for (-50%) of the earned grade. Please use highlighter or colored pencil to color-in/mark numbers of problems you have worked on.

Homework grading policy:

- 50% will be based on the number of questions attempted; shown work must make sense
- 50% will be based on the correctness of the questions chosen by instructor for grading

Course project should be completed in groups of two or three students. It will be discussed in detail during first lecture and more info will be posted on Canvas before second lecture.

Course project grading policy:

- 20% Proposal and Mid-project report
 - 15% Creativity and design
 - 15% Meetings w/EIR Mantor
 - 25% Final report
 - 30% Demo
- Project grade total: 105%*

Knowledge integration (KI)

KI grade consists of three components: pre-work, video presentation, and self-reflection. Video presentations are peer-assessed. The KIs are performed with ECE 303.

Math foundation

Math foundation extra credit consists of two components: attending lectures and solving problem sets.

- 1% extra credit for any student who attends at least seven math foundation lectures,
- 1% extra credit for any student who receives an average grade of 85% or more on math foundation problem sets.

CSU Student Conduct Code and the Academic Integrity Policy should be followed. Working with the group of classmates is highly encouraged in our course. In order to avoid any misunderstandings, always

list names of colleagues you have worked with, and any resources you may have used to complete the assignment (write this information below your name on the first page of the assignment).

Use of solution manual is strictly forbidden. If cheating or plagiarism is found on exams or assignments, a zero will be given to the exams or assignments.

Quizzes will be executed through Canvas. Calculators are allowed.

Our course topics are divided into seven Learning Studio Modules (LSM). Demonstrating competency in each LSM is required. Competency is assessed through LSM-quizzes. Students who do not demonstrate competency in an LSM will be notified after the corresponding exam and will be given the opportunity to gain competency by completing remedial course-related work, assigned by the instructor. Completing the remedial work in a satisfactory fashion establishes student's competency in the corresponding LSM, but does not affect student's grade. However, if the remedial work is not completed in a satisfactory fashion, student will automatically receive grade F in the course.

Grades will be assigned from A through F, with plus or minus categories (no C-, D+, and D-)

F: 0-60; **D:** 60-70; **C:** 70-77; **C+:** 77-80; **B-:** 80-83; **B:** 83-87; **B+:** 87-90; **A-:** 90-93; **A:** 93-97; **A+:** 97 and up

ECE202, Spring 2021

Lab Procedures and Expectations

Spring 2021 will have two modalities of Lab offering: face-to-face and online.

All students will be working on the same lab assignments, regardless whether they are face-to-face or online.

All students are expected to show-up for that week's face-to-face or online session. Anyone missing a lab session due to justified reasons, must email TA and arrange for alternate plans and submission dates.

Face-to-face lab sessions are offered on:

- Mon 2:00-4:50
- Tue 8:00-10:50
- Wed 9:00-11:50
- Wed 5:00-7:50
- Thu 8:00-10:50

Online lab sessions will be held on Friday, via Zoom.

As of now, proposed times are:

- Fri 10am – 12, noon MST
- Fri 7pm – 9pm, MST

In order to avoid confusion, all students should attend session they have registered for.

Any student registered for face-to-face session that can not show-up due to health or other reasons, need to reach out to their TA at the earliest convenience.

Timeline for each lab:

- Lab assignment will be posted well in advance.
- Students need to download the assignment and finish Pre-lab section before coming to the Lab. This is important, to prepare students for lab work
- Read lab assignment and steps before lab session
- You may choose to work on parts of the lab even before session starts, and come to your lab session to collaborate with other students and get help from TA
- Showing TA your connected circuit and results is mandatory. Students that do not show for lab session will be marked as absent, and receive no credit, even if they submit report.
- Lab report will be due on Thursday of the following week, midnight.

Below is one example of the calendar representing a random lab:

Students must attend one of the Mon-Fri lab sessions

Lab report is due on Canvas the following Thursday at midnight

Last-minute TA help Thursday 5-6pm

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Face-to-face 2:00-4:50	Face-to-face 8:00-10:50	Face-to-face 9:00-11:50 5:00-7:50	Face-to-face 8:00-10:50	Online 10-12 7-9pm	
				Last-minute help 5-6pm Lab due at 12, midnight		

Office hours:

Instructor (Olivera):

Instructor will be available during Tuesday and Thursday class time to answer questions. Any students wishing to talk to the Instructor during other times should send an email to arrange a different meeting time.

Class Assistant (Nick):

Nick's primary goal is to help students follow academic content of the course: help with understanding material taught in class, help with homework assignments and preparation for the exam.

Any homework and class-related questions should be emailed to Olivera and Nick, in a single email.

Teaching Assistants (Kailee, John):

TAs are primarily responsible for Labs. If you have any lab-related questions, please email your TA.

Virtual BC-Infill Hours:

In the past, before-covid times, students used to gather in the BC-Infill area to meet other class mates and work on the assignments.

Given these covid-times, we have decided to create a *Virtual BC-Infill* for our class.

Virtual BC-Infill is a Zoom link that will allow students to log-in, even if Instructor, CA and TAs are not present. The purpose of this link is that students join, meet classmates, work on homework assignments together, and help each other learn.

Instructor, CA and TAs may join you during these times. Exact schedule of Instructor, CA and TAs joining *Virtual BC-Infill* will be announced in class and posted on Canvas.