

# ECE202 Circuit Theory Applications

Course Syllabus for Spring 2020

TH 2:00-3:15 Engineering 100

**Instructor:** Olivera Notaros, [olivera@colostate.edu](mailto:olivera@colostate.edu)  
**Office:** Engineering Building, C201F  
**Office hours:** Monday 3:30-4:30 and Thursday 10:30-11:30, Engr C201F

**Lab TAs:** Yingheng Li [yhli@rams.colostate.edu](mailto:yhli@rams.colostate.edu)  
Samantha Williams [Samantha.Williams@colostate.edu](mailto:Samantha.Williams@colostate.edu)  
**Office hours:** Monday, 12:00-1:30, Engr. B106 (Infill)

**Assistant:** Amanda Merkley [amanda88@rams.colostate.edu](mailto:amanda88@rams.colostate.edu)  
**Office hours:** Mon 1:30-3:00 and Fri 10-11, Engr. B106 (Infill)

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

**Recitations (optional):** Fri 3:45-5:15 (+/-), Engr B101, exact time will be decided during first lecture

**Math Foundations lectures (optional):** Mon 12:00-12:50 in Clark A202 (to be confirmed)

**Textbook:** C. K. Alexander and M. N. O. Sadiku, *Fundamentals of Electric Circuits*, 6<sup>th</sup> edition, Mc Graw Hill, 2017

**Connect for 6<sup>th</sup> edition of the textbook:**

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## Rough outline of the topics taught and most important dates:

**1/21** *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

**2/5** *Course project title, summary and team members' names due (e-mail instructor)*

**2/25** *Exam #1 (2:00-3:15)*

**3/11** *Mid-project report due (e-mail)*

**3/12** *Attend KI-1 lecture in ECE202 2:00-3:45*

**3/12** *Attend KI-1 lecture in ECE303 4:00-5:15 in Clark A103*  
AC power analysis (ch.11), LSM3A  
Three-phase circuits (ch.12), LSM3B  
Magnetically coupled circuits (ch.13), LSM4

**4/15** *Course project demos, 9-11 and/or 12-2 in B106 (Infill)*

**4/17** *Course project report due (e-mail)*

**4/21** *Exam #2 (2:00-3:15)*  
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

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

**5/5** *Attend KI-2 lecture in ECE303 4:00-5:15 in Clark A103*

**5/12** *Final Exam 2:00-4:00 in Engr 100*

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**Grading policy:**

20% Lab  
30% Midterm exams (2 x 15%)  
10% Homework  
25% 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.

Pre-labs are individual effort and should be handed to TA at the beginning of lab session. Students without pre-lab assignment will not be allowed to start working on the lab.

Lab reports are team effort and should be handed to TA at the beginning of next week's lab session.

**Labwork grading policy:**

10% Pre-lab homework  
10% Preparedness for the lab session and participation  
80% Lab report

**Homework:**

Homework will be due in the box in front of Instructor's office, Engr C201F, usually on Monday at 5 pm. It must be turned in 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 in the box within 24 hours from the assigned due time.

Please staple your assignment and 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 second lecture and more info will be posted on Canvas before second lecture.

**Course project grading policy:**

25% Proposal and Mid-project report	30% Final report
15% Creativity and design	30% Demo

**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.

**Exams** will be closed book, closed notes; students may bring one page of *hand-written* notes/formulas to mid-year exams and two pages (one letter-size paper, both sides) to final exam. 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 Midterm 1 (for LSM 1 and 2), Midterm 2 (for LSM 3 - 6), and Final exam (LSM 1 - 7). 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