

Homework Due Dates

Set	Released	Due
1	Aug. 24	Sept. 2
2	Sept. 7	Sept. 16
3	Sept. 21	Sept. 30
4	Oct. 12	Oct. 21
5	Oct. 26	Nov. 4
6	Nov. 16	Dec. 2

Exams

There will be three in-class examinations in this class; the final exam will be comprehensive. Exam problems will be based on the material discussed in lecture, the textbook, and homework. No make-up exams will be given, except possibly under severe extenuating circumstances. If unable to make a deadline or comply with a time constraint for any reason, contact the instructor at least five days beforehand.

Exam Dates

Exam 1	Oct. 7
Exam 2	Nov. 11
Final exam:	Dec. 7

Computer Simulations

Course homework may include simulations using MATLAB/Simulink (Simscape Electrical library). The purpose of these simulations is to give you more experience applying the analysis techniques introduced in class and ECE 462 laboratories.

Software

MATLAB installation <https://www.engr.colostate.edu/ets/matlab/>

Course Grading Weights

Homework:	30%
Exam 1	20%
Exam 2	20%
Final exam:	30%

Regrades

Regrading can only be accommodated under two circumstances: (1) incorrect calculation of scores or (2) incorrect assignment of scores. **All requests for regrading must be turned in within 5 days of the return of the graded homework/exam.** When requesting a regrade, contact the course instructor. Note that your solution to the entire problem as well as the regrade request form will be scrutinized and the allocation of partial credit is at the discretion of the grader. In some cases, regrade requests may result in a reduced score.

Lecture Topics by Week:[†]

Week	Dates	Topic
1	8/24, 8/26	Course introduction; phasors, real and reactive power, energy
2	8/31, 9/2	Harmonic content and power quality; intro to magnetic materials
3	9/7, 9/9	Magnetic equivalent circuits; single-phase transformers
4	9/14, 9/16	Single-phase transformers (cont.); force and torque from magnetic fields
5	9/21, 9/23	DC motors, torque and basic shaft mechanics
6	9/28, 9/30	DC motor drives and speed control
7	10/5, 10/7*	3-phase power analysis, per unit system; Exam 1 (10/7)
8	10/12, 10/14	Three-phase transformer model; induction machine model
9	10/19, 10/21	Synchronous machine model, transmission line models
10	10/26, 10/28	Admittance and impedance models
11	11/2, 11/4	The power flow problem and its solution
12	11/9, 11/11*	DC/DC converters; Exam 2 (11/11)
13	11/16, 11/18	AC/DC converters (“rectifiers”)
14	11/23, 11/25	Fall recess (no class sessions)
15	11/30, 12/2	DC/AC converters (“inverters”)
16	12/7* , 12/9	Final exam (no class on 12/9)

*Exam date.

Lecture Material and Text

Knowledge in this course is cumulative, so it's important to attend the lectures and complete all homework assignments. If you do not attend a lecture, or need to review prerequisite technical concepts or use of MATLAB/Simulink, you are responsible for reviewing the material on your own time.

Working Together

Studying together in this class is encouraged. However, any individual assignment (homework, exams) *must be solely your own work*. Homework solutions will be checked to ensure academic honesty. Academic misconduct has serious consequences (see below).

[†]Session topics and dates may change based on added/deleted material and observed progress of students. In the event that the instructor is on business-related travel or personal (sick or emergency) leave the respective class may be canceled or taught by the teaching assistant.

Final Grade Assignments

Grade	Score
A+	96.67–100.00
A	93.33–96.66
A–	90.00–93.32
B+	86.67–89.99
B	83.33–86.66
B–	80.00–83.32
C+	76.67–79.99
C	70.00–76.66
D	60.00–69.99
F	0.00–59.99

Academic Integrity

The faculty expects every member of the CSU community to practice honorable and ethical behavior both inside and outside the classroom. Any actions that might unfairly improve a student's score on homework or examinations will be considered academic misconduct and will not be tolerated. Examples of academic misconduct include (but are not limited to):

- Sharing results or other information during homework or examination.
- Bringing forbidden material or devices to an examination.
- Working on an exam before or after the official time allowed.
- Requesting a regrade of answers or work that has been altered.
- Submitting homework that is not your own work or engaging in forbidden homework collaborations.
- Representing as your own work anything that is the result of the work of someone else. This includes solutions obtained via solution manuals, the Internet and/or other services.

At the professor's discretion, academic misconduct on an assignment or examination/report will result in a reduced score, a zero score, or a failing grade for the course. All occurrences of academic misconduct will be reported to the Vice President for Student Affairs and copied to the ECE Department Head. If there is any question as to whether a given action might be construed as academic misconduct, please see the professor before you engage in any such action. For more information, please see CSU's page on Practicing Academic Integrity.* For information on the Honor Pledge, see the Honor Pledge.†

*<http://learning.colostate.edu/integrity/>

†<http://tilt.colostate.edu/integrity/honorpledge/>

Sexual Harassment-Free & Environment

Colorado State University strives to create and maintain a work and study environment that is fair, humane, and responsible so that each member of the University community is treated with dignity and rewarded for such relevant considerations as ability and performance. Abusive treatment of individuals on a personal or stereotyped basis is contrary to the concepts of academic freedom and equal opportunity. Sexual harassment is one form of such abuse and cannot be tolerated.

For more information, please see the CSU Office of Equal Opportunity's Sexual Harassment Policy[‡] and Principles of Community[§].

COVID-19 University Policy

Important information for students: All students are expected and required to report any COVID-19 symptoms to the university immediately, as well as exposures or positive tests from a non-CSU testing location.

If you suspect you have symptoms, or if you know you have been exposed to a positive person or have tested positive for COVID, you are required to fill out the COVID Reporter (<https://covid.colostate.edu/reporter/>). If you know or believe you have been exposed, including living with someone known to be COVID positive, or are symptomatic, it is important for the health of yourself and others that you complete the online COVID Reporter. Do not ask your instructor to report for you. If you do not have internet access to fill out the online COVID-19 Reporter, please call (970) 491-4600. You may also report concerns in your academic or living spaces regarding COVID exposures through the COVID Reporter. You will not be penalized in any way for reporting. When you complete the COVID Reporter for any reason, the CSU Public Health office is notified. Once notified, that office will contact you and, depending upon each situation, will conduct contact tracing, initiate any necessary public health requirements and notify you if you need to take any steps.

For the latest information about the University's COVID resources and information, please visit the CSU COVID-19 site: <https://covid.colostate.edu/>.

Additional Resources and Policies

For additional information on university resources and policies, see the "Resources and Policies" document posted under Canvas > Modules > Organizational.

© James Cale, 2021. Colorado State University. This CSU course was originally conceived and designed by Prof. G. Collins (emeritus). The content and format of this course was substantially redesigned by Prof. James Cale, beginning Fall semester, 2021.

[‡]<http://oeo.colostate.edu/sexual-harassment-policy>

[§]<http://oeo.colostate.edu/colorado-state-university-principles-of-community/>