

ECE 341. FALL 2023. COURSE SYLLABUS

(1) Course Details:

Instructor: Mario Marconi, Professor,

Office: Eng C103G, Phone: (970) 491-0620/8299

E-mail: marconi@engr.colostate.edu.

Cell phone: (970) 481-4487

Office hours: Virtual meetings on demand. If you have questions, send Prof. Marconi a meeting request. Your email will be answered with the link to a virtual meeting. Office hours are *open agenda* at any time upon request.

TA: **Stephen Kasdorf**

Email: Stephen.Kasdorf@colostate.edu

Textbook: Electromagnetics, Branislav M. Notaros, PEARSON Prentice Hall

(2) Course Description:

Concepts: Electrostatic fields in free space, Dielectrics, Capacitance and Electric Energy, Steady Electric Currents, Magnetostatic Field in Free Space, Magnetostatic Fields in Material Media, Slow Time-varying Electromagnetic Fields, Inductance and Magnetic Energy

(3) Grading:

- Homework (20%)
- Knowledge Integrators (KI) Participation and report (10%)
- Quizzes (on line) (20%)
- Assessment 1- First Midterm (15%)
- Assessment 2- Second Midterm (15%)
- Assessment 3- Final Exam (20%)
- Math Foundation: Extra credit (2%)

(4) Organization of Course Topics:

Tentative schedule

- 1 Electrostatic field in free space: 2 weeks
- 2 Electrostatic field in Material Media: 2 weeks
- 3 Steady electric currents: 2 weeks
- 4 Magnetostatic field: 2.5 weeks
- 5 Low frequency electromagnetic field: 3 weeks

Week			LECTURE SCHEDULE	Sections in the book
8/21/23	to	8/25/23	LSM1	1.1-1.10
8/28/23	to	9/1/23	LSM1	1.12-1.19, 1.21

9/4/23	to	9/8/23	LSM2	2.1-2.10
9/11/23	to	9/15/23	LSM2	2.12-2.17
9/18/23	to	9/22/23	LSM2/ KI1	2.12-2.17
9/25/23	to	9/29/23	Midt1 /LSM3	3.1, 3.2
10/2/23	to	10/6/23	LSM3	3.3-3.5, 3.8
10/9/23	to	10/13/23	LSM3	3.9, 3.11
10/16/23	to	10/20/23	LSM4	4.1-4.8
10/23/23	to	10/27/23	LSM4	5.1-5.6
10/30/23	to	11/3/23	LSM4/ KI2	5.9, 5.10
11/6/23	to	11/10/23	LSM5	6.1-6.3
11/13/23	to	11/17/23	Midt2 /LSM5	6.5-6.7
11/20/23	to	11/24/23	Fall break	
11/27/23	to	12/1/23	LSM5	7.1-3
12/4/23	to	12/8/23	LSM5/ KI3	7.5, 7.5
12/11/23	to	12/15/23	Finals	

(5) Assessments:

- **Midterms:** Two tests are planned during the semester. Exams are open notes. Each exam will last one class period.
- **Final:** In addition a final comprehensive exam will include all the topics reviewed during the semester.
- **On line quizzes:** There will be assigned periodically. The conceptual questions quizzes must be answered on line before the deadline. No extensions will be granted.

(6) Homework:

- Homework will be assigned during the semester. Homework assignments will be posted on the course website. The deadline will be indicated in each case and strictly enforced.
- Late submissions will be accepted with 20% deduction for each hour late
- All homework will be completed on line.
- Solutions to the problems will be available 48 hours after the deadline
- **To get full credit all homeworks must be accompanied by a file with your work. Every student is required to upload a file with the work that justified the answers in a detailed manner [must include a clear explanation how the problem was solved]. The file must be uploaded in the last question of each**

homework. Failing to do so, or uploading a deficient explanation will incur a penalty of 50% in the homework score

VERY IMPORTANT: You are responsible to submit the homework. If you forget to submit the homework on time there is no possibility to remove the tardiness penalty

(7) Lectures

- All lecture notes will be posted in CANVAS, in pdf format, in the “Modules” folder.
- If necessary, additional pre-recorded videos will be posted in the same folder.
- Lecture notes and videos will be posted with sufficient time for you to solve the homeworks and prepare for the exams.

(8) Office hours

- Office hours will be held as virtual meetings by request. For office hours consulting please send an e-mail to Prof. Marconi (Mario.marconi@colostate.edu) to arrange a virtual conference. We will use mainly the video conference platform Zoom.
- When help is needed please use the following procedure:
 - a. If the questions can be answered by emails, that will be the first option. Emails will be answered within 24 hours.
 - b. If you need more detailed help, request a videoconference (send an email to the professor) and you will receive an email with the invitation to join a virtual meeting

Video conference platforms information

- a- Microsoft Teams [<https://teams.microsoft.com/downloads>] and
- b- Zoom [<https://zoom.us/download>].

Both are free softwares, please download them in your devices

VERY IMPORTANT!

Read the announcements in CANVAS. All news, deadlines, dates and times of the exams, etc. will be posted in Announcements and in this Syllabus. If you cannot find the answer to your question, please send professor Marconi an email.

(9) Knowledge Integration:

There will be three knowledge integration (KI) modules. Each KI will address a set of anchoring concepts taught in ECE312, ECE332, and ECE342 and will show how these basic concepts are integrated in a practical design. A set of questions related to the concepts used in each KI will be distributed before each KI module begins. Students are required to complete the pre-work in the form of a report by working through the questions and to understand how individual concepts are integrated in the practical

design. Online presentations by each student to demonstrate his/her understanding of the materials in the first two KIs are required. Participation in the KI activity is mandatory. The KI modules will count for 5% of the final grade.

Note 1: Regular attendance to online lectures is required.

Note 2: KI grade consists of two components: pre-work and video presentation. Video presentations are peer-assessed.

Note 3: Late homework submissions will not receive full credit.

Note 4: Demonstrating competency in each Learning Studio Module (LSM) of the course is required. Competency is assessed through Assessment 1 (for LSM 1 and 2), Assessment 2 (for LSM 3 and 4), and Assessment 3 (for LSM 5). Students who do not demonstrate competency in an LSM will be notified after the corresponding assessment 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 the student's competency in the corresponding LSM, but does not affect the student's grade. However, if the remedial work is not completed in a satisfactory fashion the student will automatically receive the grade F in the course.

Note 5: Math foundation extra credit consists of two components: attending lectures and solving problems 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

(10) Grading scale

The following grading scale will be applied in the course

Grading scale:

95+	A+	75-79.99	B	40-54.99	D
90-94.99	A	70-74.99	B-	<40	F
85-89.99	A-	65-69.99	C+		
80-84.99	B+	55-64.99	C		

(11) Important dates

Knowledge integrator 1	September 21
Midterm 1	September 26
Knowledge integrator 2	November 2
Midterm 2	November 14
Knowledge integrator 3	December 7
Final	December 13 2:00 to 4:00 PM

(12) Academic integrity

The online “homework helper” sites including, but not limited to, Chegg, NoteHall, Quizlet and Koofers, is meant as study resources to help students better understand basic concepts covered in this course. They are NOT intended to do homework/exams from this course for you. The use of these online sites to ask them to do homework/exams for you is not permitted in this course.

(13) Important information for students on COVID-19:

All students are required to follow public health guidelines in any university space, and are encouraged to continue these practices when off-campus(es). Students also are required to report any COVID-19 symptoms to the university immediately, as well as if they have potentially been exposed or have tested positive at a non-CSU testing location. If you suspect you have symptoms, please fill out the COVID Reporter (<https://covid.colostate.edu/reporter/>). If you have COVID symptoms or know or believe you have been exposed, 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 report to your instructor that you will not attend class due to symptoms or a potential exposure, you are required to also submit those concerns through the COVID Reporter. If you do not have access to the internet to fill out the online COVID-19 Reporter, please call (970)491-4600.

If you report symptoms or a positive test, your report is submitted to CSU’s Public Health Office. You will receive immediate, initial instructions on what to do and then you will also be contacted by phone by a public health official. Based on your specific circumstances, the public health official may:

- choose to recommend that you be tested and help arrange for a test
- conduct contact tracing
- initiate any necessary public health requirements or recommendations and notify you if you need to take any steps

If you report a potential exposure, the public health official will help you determine if you are at risk of contracting COVID.

For the latest information about the University’s COVID resources and information, please visit the **CSU COVID-19 site** (<https://covidrecovery.colostate.edu/>).