

ECE 341. FALL 2019. COURSE SYLLABUS

(1) Course Details:

Instructor: Mario Marconi, Professor,

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Office hours: Tuesdays and Thursdays 1:00 to 3:00

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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 (10%)
- Knowledge Integrators (KI) Participation and report (5%)
- Quizzes (in class) (15%)
- Quizzes (on line) (15%)
- Assessment 1- First Midterm (15%)
- Assessment 2- Second Midterm(15%)
- Assessment 3- Final Exam (25%)
- 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

(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.
- **In class quizzes:** There will be in class quizzes that will be announced in the course website. The in class quizzes will be short (15 minutes) exams covering topics pre-assigned.
- **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 strictly enforced.

(7) Knowledge Integration:

There will be three knowledge integration (KI) modules. Each KI will address a set of anchoring concepts taught in ECE311, ECE331, and ECE341 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 in class 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 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.

(8) Grading scale

The following grading scale will be applied in the course

Grading scale:

95+ A+	75-79 B	40-54 D
90-94 A	70-74 B-	<40 F
85-89 A-	65-69 C+	
80-84 B+	55-64 C	

(9) Important dates

Knowledge integrator 1	September 26
Midterm 1	October 10
Knowledge integrator 2	November 7
Midterm 2	November 19
Knowledge integrator 3	December 12
Final	December 18: 9:40 to 11:40 AM