#### GENERAL COURSE INFORMATION:

## ELECTROMAGNETICS I

Fall semester of 2017

### EE 330 - Lec 30463R

Welcome to ELECTROMAGNETICS I, an introductory course in electromagnetism. This course has 29 lectures, 14 discussion sessions, 12 homeworks, several surprise quizzes, 2 midterm exams, and one final exam. Below is relevant information concerning this course; feel free to clarify any additional questions that you may have directly with the professor.

Prerequisites: EE 202L, Math 445, and Phys 152L;

Credit: 3 units;

Professor: Aluizio Prata, Jr. [PHE 618,

Tel. (213) 740-4704, email: prata@usc.edu];

Teaching Assistant: Yihang Liu [RTH B105,

Tel. (213) 740-0377, email: yihangl@usc.edu];

Teaching Assistant: Matin Barekatain [PHE 530,

Tel. (213) 740-9753, email: barekata@usc.edu];

**Text:** David K. Cheng, *Field and Wave Electromagnetics*, second edition;

ISBN: 0-201-12819-5

Lectures: Tuesdays and Thursdays 14:00 – 15:20 PM in THH 212;

**Discussion Sessions:** Dis 30464R (12:00 – 13:50, Friday, KAP 165),

Dis 30465R (14:00 – 15:50, Friday, KAP 165), Dis 30466R (10:00 – 11:50, Friday, KAP 165),

You must register for one of these;

Professor's Office Hours: Tuesdays and Thursdays from 09:30 to 11:30

Liu's Office Hours: Wednesdays from 16:00–18:00;

Barekatain's Office Hours: Thursdays from 16:00–18:00;

## Class Schedule:

| WEEK $\#$ | Date              | Material Covered  |
|-----------|-------------------|---|
| 1         | Aug. 21 — Aug. 25 | All Chap. 1<br>Pages 11–20 of Chap. 2                         |
| 2         | Aug. 28 — Sep. 01 | Pages 20–42 of Chap. 2  |
| 3         | Sep. 04 — Sep. 08 | Pages 42–66 of Chap. 2  |
| 4         | Sep. 11 — Sep. 15 | Pages 72–100 of Chap. 3                                       |
| 5         | Sep. 18 — Sep. 22 | Pages 100–109 of Chap. 3                                      |
| 6         | Sep. 25 — Oct. 29 | Pages 109–128 of Chap. 3 (Midterm I)                          |
| 7         | Oct. 02 — Oct. 06 | Pages 128–143 of Chap. 3<br>Skip sections 3-10.2 and 3-10.3   |
| 8         | Oct. 09 — Oct. 13 | Pages 152–182 of Chap. 4<br>Skip pages 166–169 and sec. 4-4.4 |
| 9         | Oct. 16 — Oct. 20 | Pages 198–219 of Chap. 5                                      |
| 10        | Oct. 23 — Oct. 27 | Pages 225–243 of Chap. 6                                      |
| 11        | Oct. 30 — Nov. 03 | Pages 243–266 of Chap. 6 (Midterm II)                         |
| 12        | Nov. 06 — Nov. 10 | Pages 266–294 of Chap. 6                                      |
| 13        | Nov. 13 — Nov. 17 | Pages 307–326 of Chap. 7                                      |
| 14        | Nov. 20 — Nov. 24 | Pages 326–345 of Chap. 7                                      |
| 15        | Nov. 27 — Dec. 01 | Pages 354–364 of Chap. 8<br>Skip section 8-3.3                |

# Assignment schedule:

| HMWK # | Due Date          |
|--------|-------------------|
| 1      | Aug. 31, Thursday |
| 2      | Sep. 07, Thursday |
| 3      | Sep. 14, Thursday |
| 4      | Sep. 21, Thursday |
| 5      | Oct. 05, Thursday |
| 6      | Oct. 12, Thursday |
| 7      | Oct. 19, Thursday |
| 8      | Oct. 26, Thursday |
| 9      | Nov. 09, Thursday |
| 10     | Nov. 16, Thursday |
| 11     | Nov. 21, Tuesday  |
| 12     | Nov. 30, Thursday |

The homework is due at the **beginning** of the corresponding lecture, on the due date. No late homeworks are accepted.

### Exam schedule:

| Exam       | Date          | Time        | Location | Material Covered    |
|------------|---------------|-------------|----------|---------------------|
| Midterm I  | Thu., Sep. 28 | 14:00-15:20 | THH 212  | Assignments 1–4     |
| Midterm II | Thu., Nov. 02 | 14:00-15:20 | THH 212  | Assignments 5–8     |
| Final      | Thu., Dec. 07 | 14:00-16:00 | THH 212  | All course material |

All exams are of the closed-book type. For the Midterm exams you may use a calculator and notes written on both sides of a *single* 3x5 inch card. For the Final exam you may use a calculator and notes written on both sides of *two* 3x5 inch cards. You will be tested on all material covered in class and discussions, on the assigned readings, and on the homework problems. Please bring your USC ID card to each exam; it may be checked during the exam.

You must take the exams at the scheduled times. If you are absent during an exam, you will receive a grade of zero unless you have a valid reason for your absence *and* you have discussed it with the professor *prior* to the exam.

The surprise quizzes are short (10 to 15 minutes in duration) and are given during the discussion sessions. They are unannounced, given randomly throughout the semester, and cover material from the preceding week's lecture.

Grading Policy: The final grade of the course will be computed using a weighted average of the midterm exams (each with 20% weight), of the final exam (25% weight), of the homework (25% weight), of the surprise quizzes (their average weighted by 10%).