# INTRODUCTION TO ELECTRICITY & MAGNETISM

## MEETING TIME:
9:00 am - 9:50 am MWF

## ROOM:
332 Miller Science building

## INSTRUCTOR:
Walter L. Trikosko

## CONTACT:
wtrikosko@sfasu.edu  tel: 468-3001

## OFFICE:
322-A Miller Science Building

## OFFICE HOURS:
10:00 - 11:00 a.m. and 1:30 - 2:30 p.m. M-F, or by appointment.

## TEXT:
*Introduction to Electrodynamics, (4th edition)* By David J. Griffiths

## PREREQUISITES:
MTH 233 & PHY 132 or 242

## COURSE OBJECTIVES:
- To introduce the principles of electricity and magnetism
- To understand and apply the laws governing electric and magnetic behavior
- To become aware of some of the applications of electromagnetic behavior

## STUDENT LEARNING OUTCOMES:
By the end of the course, a successful student will be able to:
- Demonstrate on examination and through homework assignments, proficiency in solving problems in electrostatics, special techniques of solving electrostatic problems, electric fields in matter, magnetostatics, magnetic fields in matter, electrodynamics, and Maxwell’s Equations.
- Show problem solutions to the class from assigned homework problems.
- Associate applications of electromagnetism with global, ethical and societal issues such as hybrid electric automobiles, photovoltaics, etc.

## COURSE CONTENT:
- Vector Analysis
- Magnetostatics
- Electrostatics
- Magnetic Fields in Matter
- Special Techniques
- Electrodynamics
- Electric Fields in Matter

## COURSE ASSESSMENT:
The course assessment may use any or all of the following evaluation tools: exam scores, classroom participation, homework average, quizzes, and team projects

## ATTENDANCE:
You are expected to attend every class. If you have more than three unexcused absences, your grade will be decreased by one letter grade. If you arrive more than 10 minutes late you will be marked as tardy and three tardy marks count as an absence.

If you become ill or have a restroom emergency during the lecture, please excuse yourself quietly. If you need to study for another class, the library is available. If you need to nap, that is best done at home — not in the classroom.

## CONCEPT / READING QUIZZES (100):
- Course quizzes may be given each week or so. These quizzes will not necessarily be announced in advance. Since you should be in class every day, this will not be a problem. The average of the concept quizzes will count a maximum of 100 points toward the final grade.

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½ March 10, 2016: Midterm
♫ March 23, 2016: Last day to drop without WP or WF
♫ April 26, 2016: Last day to withdraw
♫ May 9, 2016: Final Exam 8:00 – 10:00 a.m.
**HOMEWORK (100):** "Problems worthy of attack prove their worth by hitting back." Piet Hein (1905-1996).

Throughout the semester problems will be assigned which are intended to illustrate some of the principles covered in the lecture. These problems represent the minimum number that the student should work in order to obtain some understanding of the concepts. All of the assigned problems will professionally presented and kept in a portfolio ready for grading upon request. It is your responsibility to make sure that you know how to work these problems correctly before the examination dates.

**EXAMS (600):** There will be three exams as indicated on the calendar. These exams will consist of several problems taken from the problems at the end of the chapter, from the examples worked out in the text or from other sources. These exams will be given in room 323 on the dates indicated. The student is expected to know and understand the equations required for the exams. These exams will count a maximum of 100 points each toward the final grade. Students will have one week after an exam is returned to discuss any possible errors made in the grading thereafter no changes will be made in the grade. The student is expected to be present for all exams.

**FINAL EXAM (150):** The Final Exam will be comprehensive with emphasis on the material covered since the last exam. The Final will be worth a maximum of 100 points toward the final grade and will be given Monday, May 9, 2016 from 8:00-10:00 a.m.

**FINAL GRADE (800):** The maximum total points possible will be 800 and a final grade will be assigned according to the following:

- 630-700 A
- 560-629 B
- 490-559 C
- 420-489 D
- 000-419 F

**TAKE RESPONSIBILITY:**

- Show up to class on time (awake and substance-free) ready to listen, participate and learn
- Buy the book and other required materials and bring them to class.
- Perform all readings and assignments and homework on time.
- Do the homework yourself.
- Ask questions in class.
- Don’t text, browse on your computer or perform other activities which might distract other students.
- Read the syllabus and ensure that you understand what is expected of you.
- Set aside sufficient time to study, include extra time for exams. You can expect to spend three hours outside of class preparing for every hour in class.
- Inform your professor immediately if an emergency prevents the completion of an exam, paper, or other assignment as scheduled.
- Be honest and ethical in the completion of class work, do not plagiarize or participate in other forms of academic dishonesty.

**ACADEMIC INTEGRITY:** Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty:** Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one’s own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one’s paper without giving the author due credit.

Read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

**WITHHELD GRADES POLICY:** Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the required course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

**STUDENTS WITH DISABILITIES:** To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/)

**STUDENT COUNSELING CENTER:** (936) 468-2401
Rusk Building 3rd Floor  Email: counseling@sfasu.edu

The Student Counseling Center is available free of charge to students and is staffed with professional therapists to meet a variety of needs. All interactions with the Student Counseling Center are guaranteed confidential. Licensed Counselors are available from 8:00a.m.-5:00p.m. Monday-Friday. The department is closed on certain holidays, Spring Break and Winter Break when the university is closed. If you are in need of assistance after hours or on the weekend please call: University Police: (936)468-2608 or MHMR Crisis Line: (800)392-8343. If the situation is life threatening please dial 911.