Physics 431: Electricity and Magnetism
Fall 2011: Section 431001

Instructor: Witold Nazarewicz Office: 104 South College
Phone: 974-4375 (or 574-4580 at ORNL)
E-mail: witek@utk.edu

John Cooke Office: 209 South College
Phone: 974-0771
E-mail: jcooke1@utk.edu

Class: 8:10 - 9:25 TR in Nielsen Physics 306
Office Hrs: 9:30 - 10:30 TR (or by appointment, if this does not work for you)

Text: Introduction to Electrodynamics, 3rd Ed by David J. Griffiths

Tests and Grades:
- Attendance 10%
- Quizzes 10%
- Mid-term exam 20%
- Final Exam 35%
- Homework 25%

- Class preparation and protocol: It is extremely important to keep up with the work in the class, since the material builds on itself. Each day, you should preview the topics for the next class; after the class, you then study the topics in detail, working the assigned exercises and problems, etc. You can help make the class more productive by thoughtful questions and careful attention. Please check immediately that you understand all credits earned on exams, homework, etc.

- Disabilities: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the instructors privately to discuss your specific needs. Contact the Office of Disability Services at 974-6087 in Hoskins Library to coordinate reasonable accommodations for students with documented disabilities.

- Cheating: Cheating will not be tolerated – every person should have an equal chance to do well. No outside materials are permitted on any test or exam, except as stated explicitly by the instructor.

Tests:
- Mid-term Exam: 6 October 2011
- Final Exam: 6 December 2011 (Tuesday) at 8:00 - 10:00 AM

Ch: § Topic Exercises and Problems Due

1 Vector Analysis set 1: # 2, 3, 6, 10, 13, 15, 16, 18, 25
set 2: # 30, 32, 35, 40, 42, 45, 55, 58, 61
Aug. 25

2 Electrostatics set 3: # 1, 8, 10, 15, 24, 26, 32, 33
set 4: # 34, 37, 40, 45, 46, 50, 52
Sep. 15

3 Special Techniques set 5: # 7, 10, 12, 18, 21, 24, 25
set 6: # 27, 29, 34, 38, 42, 46, 49
Oct. 11

4 Electric Fields in Matter set 7: # 4, 6, 8, 11, 12, 13, 14
set 8: # 15, 16, 20, 23, 27, 30, 37
Oct. 27

5 Magnetostatics set 9: # 3, 6, 9, 12, 15, 17, 19, 21
set 10: # 22, 24, 26, 32, 33, 38, 40
Nov. 3

Grading scale: A = 100-90; B = 80-90; C = 70-80; D = 60-70; F < 60
OUR OBJECTIVES in this COURSE

• Gain deeper understanding of Electricity and Magnetism.
• Develop a more generalized approach, summarized in Maxwell’s Equations.
• Advance your skills and capability for formulating and solving problems.
• Hone your math skills.
• Expand and exercise your physical intuition and instincts.