Math/Physics 507
Mathematical Methods of Physics
Spring 2008

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Text:	*Mathematical Physics* by E. Butkov (Addison-Wesley)
Class Meetings:	MWF 11:00-11:50 AM, CP 397 Supplemental Problem-Solving Hour TBA
Office Hours:	To be announced

This course is a second of a two-sequence. The purpose of this course is to develop a "toolkit" of mathematical methods useful in solving physical problems in fluids and mechanics, electricity and magnetism, and quantum mechanics. In this semester we will study techniques for the solution of partial differential equations (including the "big three" equations of mathematical physics–Poisson's equation, the heat equation, and the wave equation) and Green's functions. The techniques to be discussed include Fourier series, separation of variables, and Fourier integrals.

The course contents correspond roughly to chapters 4, 5 and 7-9 of the course text.

Grading

Biweekly Homework	30%
Midterm Exam	30%
Final Exam	40%

Letter grades will be assigned on a percentage basis (an "A" is 90-100%, a "B" 80-89%, etc.). Homework is an essential part of the course. You may discuss homework problems with one another, but each student is expected to write homework solutions individually. Solutions should be correct, complete, and clearly legible. Homework will be assigned at least one week in advance of the due date.

Classroom time will be spent in a mix of lectures and collaborative learning exercises.

This course is open both to undergraduate and graduate students. Appropriately differentiated grading standards will be applied to undergraduate students enrolled in this course.

Important Dates

January 8	Last day to drop a class with full refund of fees
January 15	Last day to add a class
January 21	Martin Luther King Birthday - Academic Holiday
January 30	Last day to drop a course without a "W" on transcript
January 30	Last day to change grading option to pass/fail
March 3	Midterm of Spring 2008 Semester
March 10-15	Spring Vacation - Academic Holidays
April 25	Last day of classes
April 28	Final Exam, 10:30 AM, CP 397