

Mathematical Methods of Physics

Phys 801

Fall 2009

Instructor info:

Name: Glenn Horton-Smith; E-mail: gahs@phys.ksu.edu; Phone: 785-532-6476;
Office: CW 32B – times to be arranged by class poll.

Course texts:

Arfken and Weber, *Mathematical Methods for Physicists*. (primary)
Mathews and Walker, *Mathematical Methods of Physics*. (optional)

Grading info:

Grade based on 50% HW, 50% exams.
Three exams, with #3 given in finals week, equally weighted, cumulative in scope.
Usual grading scale (90-100% is an A, etc.).

Order of topics:

<u>Subject</u>	<u>Chapter in A&W</u>	<u>in M&W</u>
Review of basics	1, 2, 5.1, 6.1	1&2
Linear algebra: Vectors, matrices, and spaces	3	6
Series	5	2
Complex functions	6, 7	3
Differential equations	9	8
Orthogonal functions	10 (&11-13)	9 (&7)
Integral transforms	14, 15	4
Variational calculus	17	12
Introduction to groups and group representations	4	16

Nominal schedule of exams:

Exam #1	Tuesday, September 22
Exam #2	Tuesday, November 3
Exam #3 (final)	Tuesday, December 15

Schedule subject to change if instructor and class agree.

Homework policy:

You are encouraged to *help* each other with the homework, but you may not *copy* the solutions of a classmate or any other person. You must do the work yourself. This is for your own good as much as for the integrity of the course.

Disabilities:

If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined it or which will require academic accommodations, please notify me and contact the Disabled Students Office (Holton 202), in the first two weeks of the course.

Other important information required to be on this syllabus:

Plagiarism:

Plagiarism and cheating are serious offenses and may be punished by failure on the exam, paper or project; failure in the course; and/or expulsion from the University. For more information refer to the "Academic Dishonesty" policy in K-State Undergraduate Catalog and the Undergraduate Honor System Policy on the Provost's web page at <http://www.ksu.edu/honor/>.

Honor System:

Beginning the fall 1999 semester, Kansas State University initiated an Honor System based on personal integrity, which is presumed to be a sufficient assurance that, in academic matters, one's work is performed honestly and without unauthorized assistance.

Undergraduate and graduate students, when they register, acknowledge the jurisdiction of the K-State Honor System. The policies and procedures of the Honor System apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, as well as on-line. A component vital to the Honor System is the inclusion of the Honor Pledge, which applies to all assignments, examinations, and other course work undertaken by students.

The Honor Pledge is as follows:

"On my honor, as a student, I have neither given nor received unauthorized aid on this academic work."

[Note: this applies to all your academic work. I will not make you sign this statement: you are considered to be affirming it every time you submit any academic work for this course. Please contact me if you have any questions about the Pledge, the Honor System, what constitutes authorized and unauthorized aid, or any other questions.]