

**University of Maryland
Department of Physics**

Physics 373

Spring 2016

GENERAL INFORMATION

Title: Mathematical Methods for Physics II

Instructor: Dr. James F. Drake

Office: A. V. Williams Bldg. (3311)

Phone: 405-1471

e-mail: drake@umd.edu

Office Hours: by appointment or random access.

Rooms and Time: TuTh 2:00-3:15 – Rm 1204 Physics

Grader: ????

Office: ????

email: ???@umd.edu

Text: Mary L. Boas, *Mathematical Methods in the Physical Sciences*,
3rd Edition, Wiley

Web site: All of the course materials, including the syllabus,
homework assignments and solutions, and exams and solutions
will be put on a web site for this class. The URL is:
<http://www.terpconnect.umd.edu/~drake/classes/physics373>

Course

Description: The course is intended to provide a strong mathematical background for solving equations in physics. Topics to be covered are generally found in Chapters 7, 8, 12, 13 and 14 of Boas. The topics include Fourier series and Fourier and Laplace transforms, ordinary and partial differential equations, special functions and eigenfunction expansions, and complex variables including the properties of analytic functions and complex integration. The emphasis will be on techniques which are useful to the practicing physicist.

Homework: Assignments will be made on each Thursday and will be due the following Thursday. All homework problems, including due dates, will be posted on the course web site. Homework will be due at the beginning of class on Thursday. There will be approximately 13 homework assignments. Students turning in homework on Friday their scores reduced by 20%. No homework will be accepted past the Friday after it was due. The lowest three homework scores will be discarded so missing an assignment will not hurt your grade.

Exams: There will be two midterm exams and a final exam. Before each exam I will post a set of sample problems. Prior to each exam we will also hold a review session on the material to be covered in the exam (time to be determined). My students typically find these review sessions very valuable so make every effort to attend. Don't worry about memorizing formulae. I will put together a sheet with relevant formulae for each exam.

Grading: Your course grade will be computed on the basis of 500 points awarded as follows:

Homework (best 10)	100
1st midterm	100
2nd midterm	100
Final Exam	200

To ensure that one bad day will not control your grade I will eliminate your lowest score above (either the homework, a midterm score or half of the final).

General

Comments:

Physics is a cumulative subject. The knowledge learned at each stage builds upon previous knowledge.

Do not fall behind! If you find yourself in trouble, seek help. Ask questions.

Come to see me in my office (send an e-mail to make sure that I am available). Don't wait until just before the exam!