Physics 373 – Mathematical Methods for Physics II
Syllabus for Fall 2015

Course description The second of a two-semester series in mathematical methods for physics. The course is a continuation of PHYS 274, and covers Fourier Analysis, Power Series Solution of Differential Equations, Partial Differential Equations, and Complex Analysis.

Prerequisite PHYS 273 and PHYS 274 (or equivalent)

Instructor
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TA
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Office hours: Mon at 3-4 pm, PHYS 3101
Wed at 12-1 pm, PHYS 1304

Website http://elms.umd.edu
The syllabus and schedule can be also found at:
http://www.physics.umd.edu/courses/Phys373/index.html

Books
- Mary L. Boas, *Mathematical Methods in the Physical Sciences*, 3rd edition (required)
- Roel Snieder, *A Guided Tour of Mathematical Methods for the Physical Sciences* (recommended)

Lectures **Physics 1201, TuTh 11:00 am – 12:15 pm**
Students are required to attend lectures, where the course material will be presented and homework assignments and exams will be announced, given and collected. Students are responsible for reading and understanding all material in assigned chapters, whether or not this material is explicitly treated in the lectures.

Homework Homework assignments will be assigned in class on **Tuesdays** (and posted on ELMS) and should be handed in class by the **following week Thursdays**. Solution keys will be posted on ELMS.

Late homework is accepted only in exceptional circumstances (i.e. illness, a religious observance, or some other compelling reason). If you do not have a valid excuse, you can still turn in late homework with penalty.

Exams

There will be **two** mid-term exams and **one** final exam. All exams are closed book. The exam sheets will contain all useful formulae that you will need. Exams must be taken on the scheduled days unless you have a valid excuse. Make-up exams will be given only under extraordinary circumstances (medical problem, religious holiday, or serious family crisis).

Grade

The final grade will be based on the components below.

Homework	20%
1st mid-term exam	25%
2nd mid-term exam	25%
Final exam	30%

The final grade will be set at the end of the semester after all work is completed. The final grade will be determined by the University of Maryland grading policy.

Tutoring and Help

Your instructor and TA have office hours, both scheduled and by appointment, and are happy to help you outside of class. Don't be shy! We really are happy to work with you!

Course Evaluation

Your participation in the evaluation of courses through CourseEvalUM is a responsibility you hold as a student member of our academic community. Your feedback is confidential and important to the improvement of teaching and learning at the University as well as to the tenure and promotion process. You can go to the CourseEvalUM website (www.courseevalum.umd.edu) to evaluate the course.

University Closure

In the event of a University Closure the department will do its best to accommodate students by scheduling make-up sessions.

Students with disabilities

Students with disabilities should meet with the instructor at the beginning of the semester so that appropriate arrangements can be made to accommodate the student's needs.

Academic Integrity

You must work by yourself on exams and homework. You are allowed to work with other students, your TA and your instructor on your homework. However, you should not just directly copy from them. Doing so is not only dishonest, but will hurt your ability to do the problems on the exams.

Tentative Course Schedule

Physics 1201, TuTh 11:00 am – 12:15 pm

Week	Dates	Lecture Topic	Chapter in Boas	Homework due Thu 11:00 am
1	Sep 1	(I) Fourier Analysis; Review of Linear Algebra (as needed)	7, 3	
	Sep 3			
2	Sep 8			
	Sep 10			HW 1
3	Sep 15	Review of Ordinary Differential Equations and Special Functions (as needed); (II) Power Series Solutions of Differential Equations	8, 11	
	Sep 17			HW 2
4	Sep 22		12	
	Sep 24			HW 3
5	Sep 29			
	Oct 1			HW 4
6	Oct 6	(III) Partial Differential Equations	13	
	Oct 8	**Exam Review**	-	HW 5
7	**Oct 13**	**Exam I**	7, 12	
	Oct 15	(III) Partial Differential Equations	13	HW 6
8	Oct 20			
	Oct 22			HW 7
9	Oct 27			
	Oct 29			HW 8
10	Nov 3	(IV) Complex Analysis	14	
	Nov 5			HW 9
11	Nov 10			
	Nov 12			HW 10
12	Nov 17	**Exam Review**	-	
	Nov 19	**Exam II**	13, 14	
13	Nov 24	(IV) Complex Analysis	14	
	Nov 26	**Thanksgiving Recess**		
14	Dec 1	(IV) Complex Analysis	14	
	Dec 3			HW 11
15	Dec 8			
	Dec 10	**Final Exam Review**	-	HW 12
16	**Dec 14, 8-10 am**	**Final Exam**	All of the above	