Physics 373 – Mathematical Methods for Physics II
Syllabus for Fall 2016

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

Prerequisite
PHYS 273 and PHYS 274 (or equivalent)

Instructor
Prof. Ki Yong Kim
Department of Physics
Institute for Research in Electronics and Applied Physics
Energy Research Facility (Bldg 223), Rm 1201L
Email: kykim at umd.edu,   Phone: (301)-405-4993
Office hours : Tue at 3-4 pm, Thu at 2-4 pm, also w/ appointment

TA
Wen-Chen Lin,   Email: wclin317 at umd.edu,
Office hours: Mon at 2-3 pm, PHYS 3103B
                  Wed at 2-3 pm, PHYS 3103B

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 **Thursdays** (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	Aug 30	(I) Ordinary Differential Equations	8	
	Sep 1			
2	Sep 6			
	Sep 8			HW 1
3	Sep 13			
	Sep 15	(II) Power Series Solutions of Differential Equations; Special Functions	12, 11	HW 2
4	Sep 20			
	Sep 22			HW 3
5	Sep 27			
	Sep 29			HW 4
6	Oct 4			
	Oct 6	**Exam Review**		HW 5
7	**Oct 11**	**Exam I**	**8, 11, 12**	
	Oct 13	(III) Partial Differential Equations	13	
8	Oct 18			
	Oct 20			HW 6
9	Oct 25			
	Oct 27			HW 7
10	Nov 1			
	Nov 3	(IV) Complex Analysis	14	HW 8
11	Nov 8			
	Nov 10			HW 9
12	Nov 15			
	Nov 17			HW 10
13	Nov 22			
	Nov 24	**Thanksgiving Recess**		
14	Nov 29	**Exam Review**		
	Dec 1	**Exam II**	**13, 14**	
15	Dec 6	(IV) Complex Analysis		
	Dec 8	**Final Exam Review**		HW 11
16	**Dec 14, 8-10 am**	**Final Exam**	All of the above	