

Course Syllabus: APPM 4360/5360 Spring 2018

Methods in Applied Mathematics– Complex Variables and Applications

Instructor: M.J. Ablowitz: <mark.ablowitz@colorado.edu>; off. ECCR 255;

Classroom: MWF ECCR 1B51 MJA: Office hours 2:00–3:00 MWF or by appointment

Teaching support:

I. Rumanov: email: <igor.rumanov@colorado.edu>; off. ECCR 251; Rumanov will be available for HW help; office hours: 2:00-3:00PM MWF or by appointment.

S. Hovistal will have office hours Tu & Thurs 1-2PM in ECCR 251

G. Baker will have help sessions: Thurs eve 7-8PM in KOBL 220

I Rumanov will have help sessions *the evening before each exam*: 7-8PM: Monday Feb 19, Monday March 19 and Wednesday April 25 in BESC 185

Text: *Introduction and Applications of Complex Variables* by M.J. Ablowitz and A.S. Fokas, Cambridge University Press, second edition, 2003. Check Errata for typos/corrections on MJA website: <www.markablowitz.com>; the errata is a subsection under the Publications, Books Section.

- Generally, homework will be assigned biweekly
- Three exams (evening) will be held exam dates/rooms:
Exam #1 Tuesday Feb 20: 5:30–7:30PM, DUANE G1B30;
Exam #2 Tuesday March 20; 5:30–7:30PM, DUANE G1B30
Exam #3 Thursday April 26 5:30–7:30PM, FLMG 155

For each exam please bring two blue books

There will not be a final exam during finals week in this course.

There will be:

- A project will be required on a topic relevant to the course. The project will consist of a written report and a talk of approximately 30 minutes plus 5 minutes for questions. The project will be due and scheduled during last week in the course: April 30-May 3.

At a midpoint of the semester a one page description of the topic you propose to study will be required. The topic must be approved by instructor. Undergraduates will be able to work together in groups of three; graduate students can work in groups of two. More details will be provided at a later date.

Expected grade weighting: Exams: 55%: Exam #1:17%; Exam #2: 18%; Exam #3: 20 %;
Homework: 25%; Project report and lecture: 20%

Approximate outline of topics and dates:

- Chapter 1: 1.1–1.3 2 weeks
- Chapter 2: 2.1–2.6 4 weeks
- Chapter 3: 3.1–3.3, 3.5 4 weeks
- Chapter 4: 4.1–4.6 4 weeks
- Miscellaneous topics: 1 week
- Project reports and presentations during last week of classes