MA 52800, Spring 2019

Advanced Mathematics for Engineers and Physicists II:

Vector calculus: line integrals, surface integrals, divergence and Stokes theorems.
Complex variables: Cauchy theory, power series, residues, conformal mappings, potential theory.

Instructor: Prof. Andrei Gabrielov, MATH 648, gabrielov@purdue.edu, 1-765-494-7911
Note: MA 52700 is NOT a prerequisite for enrolling in MA 52800.

In the spring semester of 2019 there are three sections: WNG, ONC and PEO; **all three sections receive exactly the same course content and have the option to watch the lectures online after the lectures have been given**:

- 12320: on-campus section (WNG) with 75 seats that meets in the WANG 2599 studio room MWF 12:30-1:20 as part of the live lecture.
- 17571: "on campus distance learning" section (ONC) that has access to the streaming videos only from computers that are physically on Purdue campus. The ONC section is for on-campus Purdue students who are taking the course as a distance course. They can view the lectures online whenever they want (starting about two hours after the lectures have been given). After the first week of classes, there may be extra free seats available in WANG 2599 for ONC students, because some of the WNG students prefer to watch the lecture online.
- 15977: true distance learning section (PEO) administered by Purdue Online Learning, with students from all over the country and the world. The PEO section can only view the lectures online after they have taken place. Students must be registered as distance students with proed.purdue.edu to enroll in this section (different tuition structure).

The WNG and ONC students can access the online video stream by logging in to [ProEd at Purdue](#) with an ID and a password that will be posted on [Blackboard](#). The PEO students should access the online video stream by logging in to their student portal at [ProEd Current Student](#).

Text: [Advanced Engineering Mathematics, 10th edition, Erwin Kreyszig](#) Note that we will use the 10th edition. If you have any other edition (including 'International 10th edition') you need to be sure that the homework problems you do are the ones from the US 10th edition. It is available in three forms:

- Wiley E-Text, ISBN: 9780470913611
- Loose-leaf, ISBN: 9780470917671
- Hardcover, ISBN: 9780470458365

Content: 9.6 - 9.9, 10.1-10.9, 13.1-13.7, 14.1-14.4, 15.1-15.4, 16.1-16.4, 17.1-17.4, 18.1-18.5
Homework exercises from the textbook will be collected weekly.
Two Midterm Exams will be given as evening exams for all on-campus students (WNG and ONC sections).

The **Final Exam** will be given as a common final exam for all on-campus students (WNG and ONC). The off-campus distance learning students (PEO section) will take all exams remotely with a proctor.

Grades are based on the two Midterms, the Final Exam, and regular homework. Each midterm exam worth 100 points, the final exam 150 points and the homework 100 points for a total of 450 points.