MATH 313: APPLIED ANALYSIS, FALL 2022

The first part of the course is on vector calculus: vector fields, ∇ operator, line/surface/volume integrals, the Green's/Stokes'/Divergence theorems. The second part of the course is on complex analysis: complex numbers, functions of a complex variable, Cauchy's integral formula, series, residues. These topics have beautiful applications in mathematics, science, and engineering, some of which we will touch on.

Time. Mondays and Wednesdays 4:30–5:45 in Innovation Hall 208

Instructor. Yiannis Loizides (you can call me 'Yianni' or 'Professor L' if you wish).

E-mail. `yloizide@gmu.edu`. Please use your Mason e-mail.

Office hours. Mondays and Tuesdays 10:20–11:50 (tentative) in Exploratory Hall 2218, or by appointment.

Textbook. The book we will follow is Advanced Engineering Mathematics (10-th ed.) by Kreyszig. This is the book that has been used in the past for this course. An older edition of the book should be fine as well.

Grading. The grades will be based on:

- 25% Homework (8 total)
- 20% Test 1 (Wed Sept 28, in class)
- 20% Test 2 (Wed Oct 26, in class)
- 35% Final exam (Wed Dec 7, 4:30–7:15).

Grades will be assigned according to the following scale:

A+	A	A-	B+	B	B-	C+	C	C-	D	F
100-97	96-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-60	59-0

Make-up test. If you are unable to be in class on the day of a test, you must notify me in advance (in person or by e-mail) to make arrangements for a make-up test. The make-up test will be different and more difficult than the in-class test. Make-up exams will only be given to students with an acceptable, documented excuse such as religious holy day, family emergency, school-sponsored event, or sickness.

Blackboard. Course materials, grades, and course announcements will be available through the Blackboard page for the course. You should receive Blackboard announcements through your GMU email, so be sure to check this regularly.

Homework. Homework assignments will be posted on Blackboard. They will be due on Wednesdays **i**n class. Solutions should be well-organized and neatly written or typed, with key steps, ideas and arguments explained in complete sentences.

Late/missed homework policy. Your lowest homework grade will be dropped. In addition, a maximum of two times total over the semester, you may submit homework up to 48 hours late (the idea here is to give you a little extra flexibility at those times in the semester when you might be extra busy).

Students with Disabilities. If you have a documented learning disability or other condition that may affect academic performance you should:

(1) Make sure this documentation is on file with George Mason's office for Disability Services (located in SUB I) to determine the accommodations that you need.
(2) Inform me so that we can discuss your accommodations.

Academic integrity. As always, you are expected to abide by the GMU honor code (available at oai.gmu.edu). The principle of academic integrity is taken very seriously. At a minimum, violations will result in a 0 on the exam/test and the incident reported to the Honor committee. A student's submission of work for academic credit indicates that the work is the student's own. It is the responsibility of each student to ensure that other persons are not permitted access to answers to exams/tests which are required to be the sole work of each student. **Regarding homework**: It is not okay to copy someone else's homework and will result in a penalty. That being said, I encourage you to talk about the homework with your classmates, and share your ideas and understanding. A good general rule is that it is okay to talk about the homework together and share ideas, but then make sure that you **write up your solutions on your own**, writing explanations and organizing calculations in your own way.

Obtaining help. Besides office hours, there is a Math Tutoring Center located in the Johnson Center room 344 which offers free tutoring (a schedule can be found online)–note however that it is not guaranteed that there will be tutors there at all times who will be able to assist with a 300-level course such as this one.