

MATH 763: Several Complex Variables

Course Syllabus for the Spring 2022

Instructor: Prof. Flavia Colonna

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Office Hours: TR 2:00 p.m. - 2:50 p.m. or by appointment.

Prerequisite: Math 762 (Complex Analysis II) or permission of instructor.

Textbook: Volker Scheidemann, *Introduction to Complex Analysis in Several Variables*, Birkhäuser Verlag, Basel, 2005. A PDF copy is posted on Blackboard. Other supplemental material may be provided during the semester.

Main Topics: Geometry in C^n , holomorphic functions in several complex variables, the Cauchy Integral Formula, power series and Taylor series, holomorphic continuation, Hartogs' phenomenon, biholomorphic maps, the Riemann mapping problem, analytic sets, harmonic functions, (and, if time allows) applications to operator theory.

Course Format: I plan to make use of Blackboard (BB). Please, follow the recommendations below:

- Check frequently your email and any announcements posted on Blackboard.
- To be awarded participation points, please, consider submitting work in class or using the BB discussion board.
- I will post my class notes regularly.

Homework: There will be five homework assignments. Good writing complete with details is required. Please, edit your work before submitting it. **Typed work is expected.**

Presentations: Each student will prepare an **oral presentation** on a course topic and be prepared to answer questions on that topic.

Exams: There will be a take-home final exam assigned on the last day of classes. The due date will be announced several weeks in advance.

Make-Up policy: allowed if a student is seriously ill or under quarantine.

Attendance: Each student is expected to come to class regularly and participate actively in class discussions or posting your work on the discussion board on BB. I will keep records of students' attendance and use these and class participation to decide grades at the end of the semester.

Percentages of final grade:	Homework:	50%
	Presentation:	20%
	Final exam:	20%
	Attendance and class participation:	10%