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MAA 6406 (Section 1B44)

Time and Location

MWF Period 8 (15:00-15:50) LIT 205

Office hours

TBA

Text

No specific text will be required; a list of suggested references will be provided during the first week of classes.

Topics

The first semester of this two-semester sequence will cover essentials of complex analysis. These will include, but not be limited to, the following: holomorphic functions; biholomorphic mappings; locally uniform, compact, and normal convergence; power series; exponentials and logarithms; path integrals and primitives; the Cauchy integral formula and immediate consequences; the identity theorem, the Cauchy estimates, the so-called Liouville theorem, the open mapping theorem and the maximum principle; the Schwarz lemma and immediate consequences; singularities and Laurent expansions; and the residue calculus. This list of topics is (unashamedly) modified from Remmert's "Theory of Complex Functions", which excellent reference will provide a sound framework for the semester. It will be assumed that students taking the course have a background in analysis equivalent to that provided by MAA 5228/5229; moreover, a working knowledge of complex numbers will be assumed.

Policies

Homework problems will be frequently assigned and discussed in class; some of these problems will be collected and graded. In addition, there will be a midterm and a final, partly designed to guide students who may be interested in taking a written qualifying examination in this subject. Assignment of grades will be determined by performance in three equally-weighted units: the graded homework assignments, the midterm and the final. For other matters of policy, please consult Policies plus' at the Files page.

