

# Math 522-Spring 2018

## Topics in complex variables II

### General information

Location: TBA  
Time: MWF 10-11am  
Professor: Greg Knese  
Office location: Cupples I room 211A  
Office hours: TBA, by appointment, or just drop by.  
Email: geknese at wustl dot edu

---

### Course topics:

- Introduction to several complex variables
- Introduction to multiple Fourier series and Hardy spaces on the polydisk
- Prediction theory for multiple Fourier series
- Factorization of positive trigonometric polynomials
- Bounded analytic functions on the polydisk
- Stable polynomials, hyperbolic polynomials, and determinantal representations

### Additional topics depending on time and interest:

- Linear maps preserving stable polynomials
- The Bohr radius of the polydisk
- Interlacing polynomials and the Kadison-Singer problem

---

### Prerequisites:

Math 5021, Math 5051-52 (or Math 5052 concurrently).

---

### Grades

Depending on class size, there will be some mix of homework assignments and student presentations.