

UNC DEPARTMENT OF MATHEMATICAL SCIENCES

# FUNCTIONS AND EQUATIONS

## MATH 520

3 CREDIT HOURS

July 1 - July 30 MTWR

9:25 - 11:05

- Algebra Connections
  - Remainder and factor theorems
  - Rational roots of polynomials
  - Reciprocal polynomials
  - Cubic and quartic equations
  - Discriminant
  - Determinants
  
- Trigonometry and Calculus Connections
  - Groups and the  $n$ -th roots of unity
  - Complex numbers
  - Multiple roots and the derivative

This six week course may run four weeks together with a flexible distance component. The opportunity to reflect on problems and projects over a longer time period, communicating via e-mail with the instructor and other participants and consulting with a THEORY OF EQUATIONS WEBSITE will provide an alternative learning environment.

INSTRUCTOR: Richard Grassl