

This intensive course, which is more correctly titled “Advanced Organic Chemistry for Medicinal Chemists” is designed for students beginning their first year in the Medicinal Chemistry graduate program and assumes that students have completed two semesters of undergraduate organic chemistry with the associated laboratory components.

The first part is devoted to a discussion of orbitals and bonding, stereochemistry, conformational analysis, acid/base theory, thermodynamics and kinetics, and substituent effects. As organic synthesis is best understood from a mechanistic viewpoint the second portion of the course covers all major reaction mechanisms, including organometallics. The final section deals with practical aspects of synthetic organic chemistry including the use of on-line databases for literature searching, laboratory safety, record keeping, and basic aspects of performing laboratory synthesis.