



Graduate Evening Courses in Chemistry, Spring 2020:

INORGANIC • ORGANIC • SPECTROSCOPY

- The Chemistry Department at Rutgers Newark (<http://chemistry.rutgers.edu/>) will offer Graduate Courses in Organic, Inorganic and Physical Chemistry in Spring 2020.
- **When/where:** All courses will be held from 6:00 PM to 9:00 PM, once a week at the Rutgers-Newark campus in Smith Hall Rm. 240 (SMT-240), 101 Warren Street, Newark.
- Register [HERE](#) or scan the code



Main Group Metal Chemistry (26:160:577)

MONDAYS 6:00 - 9:00 PM

Smith Hall Room 240

Instructor: Prof. Frieder Jäkle

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This inorganic chemistry course will cover the basics as well as recent advances and developments in main group chemistry. Special emphasis will be given to the synthesis, properties, and reactivity of main group organometallic compounds. Several topics of intense current research such as the development of powerful Lewis acids, the stabilization of low-valent metal complexes, the realization of multiple bonding in main group chemistry, the synthesis of inorganic/organometallic polymers and luminescent materials, and applications of main group organometallic species in homogeneous catalysis will be discussed.

Advanced Organic Chemistry (26:160:511)

TUESDAYS 6:00 - 9:00 PM

Smith Hall Room 240

Instructor: Prof. Stacey Brenner-Moyer

SEB244@NEWARK.RUTGERS.EDU

This physical organic chemistry course builds upon the basic organic reaction mechanisms taught in undergraduate and introductory graduate coursework. We will learn about the experimental tools employed to derive the fundamental organic reaction mechanisms that have come to be accepted as fact, and we will evolve our understanding of organic reaction mechanisms beyond the simplified versions presented in undergraduate textbooks. Specifically, the physical chemistry experimental tools to be emphasized include molecular orbital theory, kinetic data, linear free-energy relationships, and isotope effects. We will learn how these data are integrated to provide comprehensive, self-consistent, and sophisticated models for the reactivity of organic molecules.

Spectroscopy in Inorganic Chemistry (26:160:579)

THURSDAYS 6:00 - 9:00 PM

Smith Hall Room 240

Instructor: Prof. Jenny Lockard

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This physical inorganic course will cover a range of spectroscopy methods and their applications to inorganic (primarily metal-based) complexes and materials. Following a review of several fundamental concepts such as theory of spectroscopy, molecular symmetry and ligand field theory, applications of specific spectroscopy methods that target different types of transitions (valence, core, vibrational, spin etc.) in inorganic systems will be covered. The course will have a mix of quantitative and descriptive aspects. Recommended pre-requisite courses include undergraduate Inorganic Chemistry, Physical Chemistry, Multivariable Calculus and Linear Algebra.