POLYMER SCIENCE (9871)

9871:401. Introduction to Elastomers. (3 Credits)
Prerequisites: 3150:314 (or equivalent) or permission. An introduction to the science and technology of elastomeric materials and gels, including hydrogels. Lecture and laboratory.

9871:402. Introduction to Plastics. (3 Credits)
Prerequisite: 3150:314 (or equivalent) or permission. An introduction to the science and technology of plastic materials. Lecture and laboratory.

9871:403. Polymer Chemistry. (3 Credits)
Prerequisites: 3150:263 and 3150:313 or permission. Mechanisms of polymerization reactions of monomers and molecular mass distributions of products; principles of molecular mass determination; relationship of physical properties/applications to structure and composition.

9871:404. Polymer Physics. (3 Credits)
Prerequisites: 4200:408 or 9821:301 or [3150:313 and 3450:223]. Advanced overview of polymer physics including scaling theories, chain dynamics, rubber elasticity, glassy polymers and crystallization.

9871:405. Polymer Science Laboratory. (3 Credits)
Prerequisites: 4200:408 or 9821:301 or 9871:403 or permission. Laboratory course with experiments on the synthesis and characterization of polymers.

9871:407. Polymer Science. (4 Credits)
Prerequisite: 3150:314 or 3650:301 or permission. Principles of polymerization processes and relationships between molecular structures and physical behavior of polymers. Molecular weight distributions of macromolecules discussed and methods of determining molecular weights utilized.

9871:497. Honors Project in Polymer Science. (1-3 Credits)
Prerequisites: Sophomore, junior, or senior standing in Honors College and permission of honors preceptor in the home department. Independent research leading to completion of honors thesis under guidance of project adviser. May be repeated for a total of 10 credits.

9871:499. Research Problems in Polymer Science. (1-3 Credits)
Prerequisite: Permission. Faculty-supervised undergraduate research problems in polymer science, culminating in a written report.