POLYMER TECHNOLOGY (2840)

2840:111. Polymer Technology I. (3 Credits)
Introduction to chemical and physical structure, properties and applications of polymers. Interaction between materials properties, product design and processing. Characterization of the major processes.

2840:112. Polymer Technology II. (3 Credits)
Prerequisite: 2840:111. This course emphasizes the processing of thermoplastics and thermosetting plastics. The laboratory introduces students to some of the major processes and equipment operation.

2840:202. Instrumental Methods. (3 Credits)
Prerequisites: 2820:111 and 2840:111. Instrumentation employed in qualitative and quantitative analysis. Theory and practice in chromatographic, spectrophotometric and other instrumental methods. Laboratory.

2840:211. Polymer Technology III. (3 Credits)
Prerequisites: 2820:131, 2840:101 and 2840:112. This course emphasizes the testing and characterization of materials used in polymer product fabrication, and the testing and analysis of finished polymer products.

2840:220. Case Studies in Polymer Design & Processing. (2 Credits)
Prerequisite: 2840:211. Combines study of polymer properties, processing, and design guidelines to analyze complete manufacturing, testing, and quality assurance programs. Examples of significant applications analyzed in detail.

2840:260. Compounding Methods. (2 Credits)
Principles and methods of selecting and compounding rubber for specific end uses. The compounder’s art. Processing and testing of basic elastomers and products. Laboratory.

2840:281. Polymer Project. (2 Credits)
Prerequisite: 2840:211. Student teams, choosing their own projects, design a polymeric product, select materials, processes, and simulate design and development of the product. Individual final reports required.

2840:290. Special Topics: Polymer Technology. (1-2 Credits)
(May be repeated for a total of four credits) Prerequisite: Permission. Selected topics or subject areas of interest in polymer technology.