FALL 2011 COURSE ANNOUNCEMENT

Foundations of Polymer MEMS
(ECE 676)

We use polymers everyday without thinking about them. For instance, the Device and MEMS researchers in Shumaker Research Building use polymers extensively in fabrication processing, as well as the material of choice for realizing enhanced device functionality. In order to be more creative users we need to develop a background in polymers and their physical properties. These properties can lead to the self-assembly of highly ordered solid-state nanostructures, to fluid flows that are quite different from water, and to elastic properties quite unlike those of inorganic semiconductors and metals. This course is designed to give engineers and science students a general reading background of polymers. The course includes readings on polymer properties from two leading textbooks, together with independent readings and reports to the class by students on special topics of interest to them and their ongoing or potentially planned research.

Main texts:  Intro to Physical Polymer Science, 4th Ed., by Sperling
             The Physics of Polymers, 3rd Ed., by Strobl

Prereqs:    Because of the unique multidisciplinary aspects of polymers & MEMS, interested students from all departments are welcomed to enroll.

Course info: ECE 676
             3:00 - 3:50 MWF
             Rm 306, Lutz Hall
             (first day meets at W. Speed Rm 002)

Taught by:  R. W. Cohn, Professor and Director
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