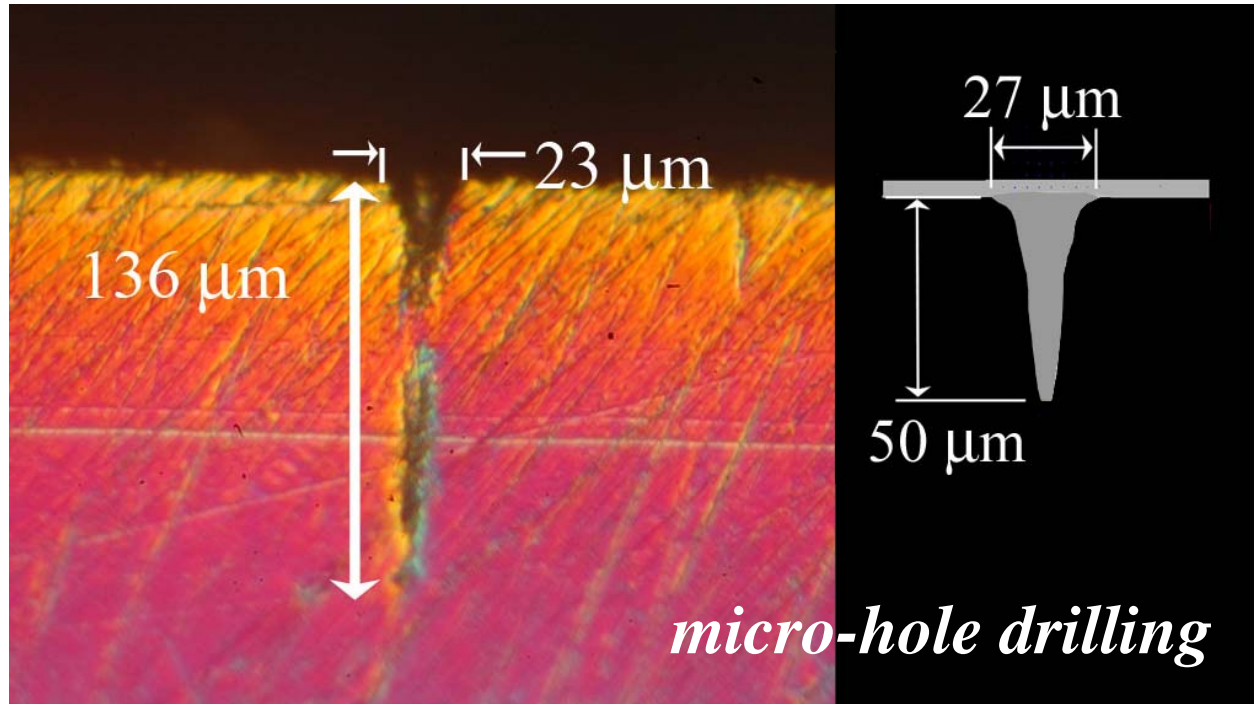


NEW COURSE IN FALL 2009!

MAE 589 Section 006

Modern Manufacturing Technologies

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Course Description

Modern manufacturing technologies are distinct in their multifarious nature in product sizes, materials, energy forms, theories, and information types. For example, modern electronic manufacturing needs to produce computer chips with 40 nm feature sizes, while the aircraft companies manufacture jumbo jets with wing spans of 80 m. Materials used include metal, plastic, rubber, semi-conductor, ceramics, crystals, bio-materials, etc. Multiple energy forms are also used in manufacturing, including mechanical, optical, chemical, electrical, biological, etc. The technologies needed to deal with this multifarious nature of modern manufacturing also involve nearly every facet of the modern engineering disciplines. This course aims to provide a broad and yet in depth discussion of many topics, such as nano-manufacturing, laser material processing, rapid prototyping, precision manufacturing, and several unconventional manufacturing processes.