

**Course Outline**  
**Focused Ion Beam:**  
**Instrumentation and Applications**  
 June 14-17, 2010

5:00-8:00      **Sunday, June 13 (evening)**  
 Registration (Whitaker Lobby)

**Day One      Monday, June 14**  
 8:30-8:45      Welcome  
 8:45-10:00    Introduction to FIB Instrumentation  
 10:00-10:20    Break  
 10:20-12:00    Physics of Ion/Matter Interaction  
 12:00          Lunch  
 1:15-3:00      Lab 1: TRIM Ion Interaction  
                   Simulations  
 3:00-3:30      Break  
 3:30-5:00      Imaging with Ions  
 5:30             Dinner  
 7:15-9:00      Lab 2: Introduction to FIB  
                   Instruments and Imaging with Ions

**Day Two      Tuesday, June 15**  
 8:30-10:00     SEM, TEM, AES, AP, SIMS for the  
                   FIB Practitioner  
 10:00-10:20    Break  
 10:20-12:00    Micro- and Nano-Fabrication:  
                   Deposition in the FIB  
 12:00          Lunch  
 1:15-2:45      Lab 3: Optimizing Deposition  
                   Conditions  
 2:45-3:15      Break  
 3:15-4:00      Redeposition During Ion Milling  
 4:00-5:00      Critical Issues with High Resolution  
                   SEM  
 5:30             Dinner  
 7:00-8:15      SEM Sample Preparation in the FIB  
 8:30-9:30      Lab 4: Producing SEM Samples in the  
                   FIB

**Day Three      Wednesday, June 16**  
 8:30-10:00     TEM Specimen Prep  
 10:00-12:20    Break  
 10:20-12:00    Lab 5: TEM Specimen Prep  
 12:00          Lunch  
 1:15-2:15      Lab 6: Sample Manipulation  
 2:15-3:15      Semiconductor Applications  
 3:15-3:40      Break  
 3:40-5:00      3D FIB Tomography  
 6:30             Course Cocktail hour and banquet

**Day Four      Thursday, June 17**  
 8:30-10:00     Case Studies/Applications  
 10:00-10:20    Break  
 10:20-11:30    Selection of FIB Tools  
 11:30-12:00    Summary  
 12:00          Lunch  
 1:15-3:00      Lab 7: Student Sample Time

*Note: All classes and labs will be held in Whitaker Lab.*

*Disclaimer: The organizers reserve the right to change the instrumentation or sequence of lecture topics and to cancel lectures or substitute lecturers if necessitated by circumstances beyond their control. Updated 9/15/09.*