

**Course Outline**  
**Quantitative X-ray Microanalysis:**  
**Problem Solving using EDS and WDS Techniques**  
 June 9-13, 2008

5:00-8:00	<b>Sunday, June 8 (evening)</b> Registration (Whitaker Lobby)
<b>Day One</b>	<b>Monday, June 9</b>
8:30-8:50	Welcome and Course Roadmap
8:50-10:00	E-beam/Specimen Interactions and Monte Carlo
10:00-10:20	Break
10:20-12:00	X-ray Analysis: The Basics
12:00	Lunch
1:15-2:40	EDS: Good Spectrometry Practice
2:40-3:00	Break
3:00-5:00	Lab 1: EDS Instrumentation
5:30	Dinner
7:00-7:45	Spectrum Processing Overview: Background and Overlaps
7:45-9:30	Lab 2: Spectrum Processing: Background and Overlaps (DTSA)
<b>Day Two</b>	<b>Tuesday, June 10</b>
8:30-10:00	Wavelength-Dispersive Spectrometry
10:00-10:20	Break
10:20-12:00	Practical X-ray Microanalysis – Part I (Qualitative Analysis)
12:00	Lunch
1:15-3:00	Lab 3: Monte Carlo and TRYZAF
3:00-3:20	Break
3:20-5:00	Special Samples 1: Film(s)-on-Substrate
5:30	Dinner
7:00-9:00	Lab 4: WDS Measurements – Part 1
<b>Day Three</b>	<b>Wednesday, June 11</b>
8:30-10:00	Special Samples 2: Particle Effects in EPMA Analysis
10:00-10:20	Break
10:20-12:00	Special Samples 3: Particles, Rough Surfaces, and Beam-Sensitive Specimens
12:00	Lunch
1:15-3:30	Lab 5: WDS Measurements – Part 2
3:30-3:45	Break
3:45-5:00	Standardless Analysis
6:30	Cocktail hour and banquet

<b>Day Four</b>	<b>Thursday, June 12</b>
8:30-9:15	Light Element Analysis
9:15-10:15	Practical X-ray Microanalysis – Part II (Measurement Pitfalls)
10:15-10:30	Break
10:30-12:00	Practical X-ray Microanalysis – Part III (Statistics)
12:00	Lunch
1:15-3:30	Lab 6: Light Element Analysis
3:30-3:45	Break
3:45-5:00	X-ray Mapping: Quantitative and Qualitative
5:30	Dinner
7:00-9:00	Lab 7: Special Samples Computer Lab (Film-on-Substrate, Particles, Rough Samples)
<b>Day Five</b>	<b>Friday, June 13</b>
8:30-10:00	Practical X-ray Microanalysis: Applications
8:30-9:00	Metals (including inclusions)
9:00-9:30	Ceramics and Minerals
9:30-10:00	Polymers
10:00-10:20	Break
10:20-11:15	The Analytical Report
11:15-12:00	New Developments in X-ray Spectrometry: Silicon Drift Devices, Microcalorimetry
12:00	Lunch (box lunches – Whitaker Lobby)

*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 9/10/07*