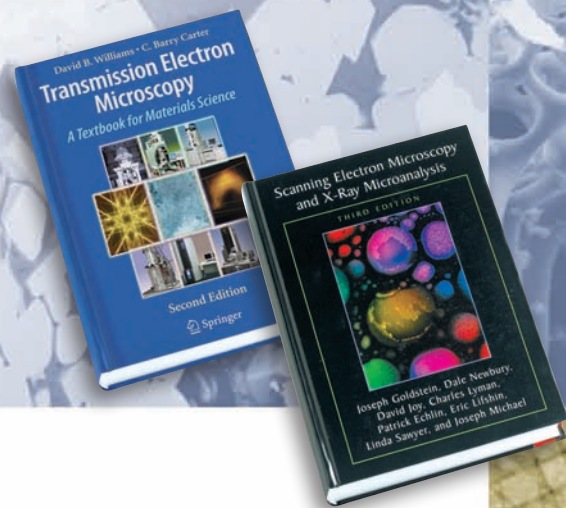


SPECIAL BENEFITS



YOU RECEIVE:

- A copy of one of the **TEXTBOOKS** authored by the course lecturers
- Access to a **WEBSITE** containing exclusive imaging and analysis software
- A **NOTEBOOK** containing course notes of the PowerPoint slides presented by the lecturers
- A laboratory **WORKBOOK** authored by the course lecturers
- A **CONTINUING EDUCATION CERTIFICATE**



"Thank you for preparing such a beneficial course. Having the entire week to focus only on microscopy learning, from the best in the industry, was phenomenal. For me, I took away a much better understanding of my customer's needs."

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June 4 – 9, 2017

MICROSCOPY COURSES



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Course Lecturer
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MAS President 2000
Editor, *Microscopy Today*

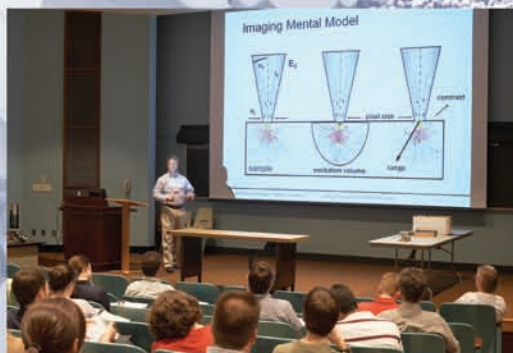


Lehigh University, Bethlehem, PA, USA

- Lehigh's SEM courses were founded by Joe Goldstein in **1970**.
- More than **6,000** engineers, scientists, and technicians have taken our courses, coming from 50 states and 35 countries.
- Goldstein et al., the SEM textbook, has worldwide sales of more than **52,500** copies since its first publication in 1975.
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"The course was spectacular! Great instructors and great set-up! Everything stayed on schedule, which I appreciated. The instructors were knowledgeable, approachable and entertaining. Will highly recommend!"

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In Memory of Joseph I. Goldstein,
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MAIN COURSES

SCANNING ELECTRON MICROSCOPY and X-RAY MICROANALYSIS June 5-9

Provides a working knowledge of SEM and EDS X-ray microanalysis as well as an introduction to variable-pressure (environmental), high-resolution SEM, and low-voltage SEM. Students are encouraged to bring their own specimens.

INTRODUCTION to SEM and EDS for the NEW OPERATOR June 4

A one-day course with lectures and labs related to the basic operation of the SEM. Enrollment limited to participants attending the main SEM course above.

SPECIALIZED COURSES

FOCUSED ION BEAM (FIB): Instrumentation and Applications June 5-9

Ion-solid interaction theory will be introduced and used in describing methods of specimen preparation for SEM, TEM, AFM, Auger, SIMS, and atom probe. Other topics include 2D/3D FIB/SEM analytical characterization, milling/deposition techniques for nanotechnology, and advances in instrumentation.

PROBLEM SOLVING: Interpretation and Analysis of SEM/EDS/EBSA Data June 5-9

This course will help experienced SEM/EDS/EBSA users to interpret images and analytical data, to use simulations to solve practical problems, and to understand SEM principles more deeply. This course is only offered biennially in odd-numbered years.

QUANTITATIVE X-RAY MICROANALYSIS: Problem Solving using EDS and WDS Techniques June 5-9

BRING A SPECIMEN – SOLVE A MICROANALYSIS PROBLEM!

Discover how to get the highest quality results for a wide variety of materials doing analysis and x-ray mapping with silicon drift detectors, Si(Li) EDS, and WDS. Master problem-solving and quantitative analysis using advanced software tools. Learn how to get the best analytical resolution by working at low voltages. Get new tips on how to deal with 'pernicious' samples like beam-sensitive materials, particles, surface layers, and rough surfaces. Learn the best ways to analyze light and trace elements, handling bad peak overlaps. Become a better analyst with increased skills and improve those job credentials.

SCANNING TRANSMISSION ELECTRON MICROSCOPY: From Fundamentals to Advanced Applications June 5-9

This course provides an understanding of the concepts, instrumentation, and applications of STEM. The course explores basic and advanced levels of the following topics: STEM imaging, aberration correction, EDS, EELS, CBED, tomography, data processing, sample preparation, and a review of complementary techniques.

Early bird discount!

Register and pay in full by **April 14**.
See www.lehigh.edu/microscopy for prices.
Registration deadline of **May 5** for all **Specialized Courses**.
Registration deadline of **June 5** for the **SEM Course**.

LECTURERS

John Armstrong, *American University*
Emma Bullock, *Carnegie Institution of Washington*
Paul Carpenter, *Washington University*
Helen Chan, *Lehigh University*
Lucille A. Giannuzzi, *EXpressLO LLC*
John Hunt, *Gatan, Inc.*
Robert Keyse, *Lehigh University*
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Chris Kiely, *Lehigh University*
Animesh Kundu, *Lehigh University*
Eric Lifshin, *SUNY Col. of Nanoscale Sci. & Eng.*
Charles Lyman, *Lehigh University*
John Mansfield, *University of Michigan*
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Keana Scott, *NIST*
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Complete course descriptions and registration form will be on our website in October 2016.

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COURSE QUESTIONS

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