



Sample Curriculum: Polarized Light & DIC

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Polarized Light Microscopy –

a 1 day, hands on course on principles of polarized light microscopy and differential interference contrast (DIC).

This course covers:

- An introduction to the polarizing light microscope (bits and pieces, structure and function)
- What works with polarized light and why (isotropic vs. anisotropic materials - it's all a matter of refractive index)
- Retardation, thickness, and birefringence relationships
- States of polarization (including when and how to use circularly polarized light)
- Polarization colors – source, interpretation of, and aberrations
- The Michel-Levy chart
- How to use Polarized light to identify contaminants
- Unaxial vs. Biaxial materials
 - Using the Indicatrix to describe the difference
- DIC - an contrast enhancement technique based on polarized light.
 - Bits & pieces
 - Optimum setting
 - Using directionality to best advantage
 - Interpretation and sources of mis-information (including: which way is UP?)

MME will supply all workbooks and course materials, including Pol demonstration kits (1 per student). Where possible, MME will supply 1 copy of "Optimizing Light Microscopy", a useful 188 page book which discusses the principles presented in these courses.

The client will supply:

- classroom and laboratory space;
- one microscope for each two students with the necessary components (in this case, Polarized Light Accessories and DIC), preferably fitted with video systems and, if possible, printers;
- an overhead projector
- 35mm projector
- and relevant samples for observation.

Please note that, for maximum impact and effectiveness, we prefer to move the microscopes into a conference room, away from the general lab. If this move is a problem, please let us know as early as possible. Also, if there is a problem with the number of microscopes available, please let us know as soon as possible. We will try to coordinate with your local dealer for loan of equipment.

Microscopy/Microscopy Education

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