Biophysics 210: Biological Light Microscopy
Kurt Thorn
Syllabus

Discussion section meets Tuesdays from 1-2:30pm in MH2100
Labs meet Thursday or Friday from 2-5pm (location varies)

Week 4: Brightfield Contrasting Techniques

Goals: Understand techniques available to provide increased contrast in brightfield imaging. Know how phase contrast and differential interference contrast (DIC) microscopy work, what microscope components are required for each, and how to set them up. Know what types of samples are best for phase contrast, DIC, dark field, and polarization microscopy, and when you would (and wouldn't) choose to use them.

Discussion Section: April 21st
Labs: April 23rd and 24th

Lectures (watch before discussion section):

- Darkfield and Phase Contrast Microscopy
- Polarized Light and its Interaction with Material
- Polarization Microscopy
- Differential Interference Contrast Microscopy

Additional Reading (optional):

- Phase contrast vs DIC
- MicroscopyU: Phase Contrast
- MicroscopyU: DIC

Discussion Section Topic: We will go through a set of exercises to better understand both phase contrast and DIC. We will also go through some exercises integrating resolution and cameras.

Lab: We will set up both Phase Contrast and DIC on a variety of different samples. We will also go through the Fourier Optics Demo if we don't get to it in week 3.