

PROVISIONAL SCHEDULE

MONDAY

9:30 A Brief History of Microscopes

10:15 Interactive Practical/lecture
-Anatomy of the light microscope
-Basic Optics

10:45 Coffee

11:15 Kohler Illumination

11:45 Practical on Kohler illumination

13:00 Lunch

13:45 Talk – Lenses, Numerical Aperture, Nomenclature on the lenses

14:15 Practical – four demonstrations for students to view
- Optical bench
- Numerical Aperture
- Resolution
- Conjugate planes (if unavailable, lenses)

15:45 Coffee

16:15 Final lecture Guest speaker (TBC)
Diffraction, Resolution and Contrast (2 hours)

TUESDAY

9:15 Recap of anatomy (All 3)

9:30 Practical – setting up Kohler illumination

10:00 Phase contrast and Dark field

10:45 Coffee

11:15 Practical – setting up phase contrast
Phase 1 and Phase 2

12:15 Lunch

13:00 Polarization and DIC (TBC)

(03/12/2007)

13:45 Practical – DIC and recap of phase contrast

15:00 Coffee

15:30 DIC practical continued

16:30 Basic microscope maintenance

WEDNESDAY

9:15 Practical DIC and phase (recap talk and then follow up practical)

10:00 Cameras and detectors

10:45 Coffee

11:15 Measurements

12:00 Then the course will split into materials or Fluorescence

Fluorescence

12:00 – 12:30 Fluorescence, Fluorochromes and Filters
(Practical)

12:30-13:00 Fluorescence imaging

13:00 – 14:00 Lunch

14:00 – 17:00 Practicals

Fluorescence alignment
Multicolour imaging
Time lapse imaging – observation of bleaching

Materials TBC from section

To include Reflection DIC and polarised microscopy

(03/12/2007)