



FOUNDAMENTALS OF OPTICAL MICROSCOPY

COURSE CONTENT

Introduction to optical microscopy

Diffraction and image formation theory
Resolution and magnification

Objectives:

Point Spread Function (PSF) and Modular Transfer Function (MTF)

Condenser and Köhler configuration

Practical Session -- Köhler set up
Practical Session -- Measuring the 2D PSF in air
Practical Session -- Measuring the MTF

Detectors and image acquisition

Camera detector for microscopy
Optimizing image acquisition

Practical Session -- Wide-field imaging in transmission and photography

Fluorescence microscopy

Introduction on dyes
Microscope elements

Practical Session -- Fluorescence imaging