

Microscopy for Biomedical Research

Kathy Walters, Course Director

Spring 2010

Tuesdays 1-3pm 79 EMRB *Laboratory-to be arranged*

Date		Lecture Topic	Presenter
January	19	Orientation, Discussion of Project, Goals, and requirements <i>-Laboratory: -CMRF Tour</i>	Kathy Walters
	26	Microscopy Techniques Overview <i>-Preliminary Project Description Due</i> <i>-Laboratory: Project discussion</i>	Kathy Walters
February	2	Introduction to Chemical Processing of Biological Specimens <i>-Final Project Description Due</i> <i>-Laboratory: -Laboratory Practices, Safety, & Etiquette</i>	Kathy Walters
	9	Light Microscopy <i>-Laboratory: Koehler Illumination</i>	Kathy Walters
	16	Confocal and Multiphoton Microscopy <i>-Laboratory: hands on demonstration</i>	Tom Moninger
	23	TEM Optics and Image Optimization <i>-Laboratory: TEM hands on and sample prep</i>	Kathy Walters
March	2	SEM Optics and Processing <i>-Laboratory: SEM hands on and sample prep</i>	Jean Ross
	9	Imaging Techniques <i>-Laboratory: Computer imaging programs and image manipulation</i>	Jean Ross
	16	Spring Break	
	23	Enzyme and Immunocytochemistry <i>-Laboratory: Discussion</i>	Kathy Walters

- 30 **Informal Presentation of Project Results with Micrographs**
Basic training should be completed!!!!
- April 6 **Semi- formal Presentation of Project Results with Micrographs**
- 13 **Energy Dispersive Spectroscopy and X-Ray** Jean Ross
Photoelectron Spectroscopy
Student Instrumentation presentations
- 20 **Scanning Probe Microscopy** Jean Ross
Student Instrumentation presentations
- 27 **Student Instrumentation presentations**
-Laboratory: Project Results
- May 4 **Student Research Presentations!!!!**
- 11 ***Notebooks due in 76 EMRB by 8:00 a.m***

