

NEU259 FALL 2014 INTRODUCTION TO LIGHT AND ELECTRON MICROSCOPY

Tuesday/Thursday 10-11 AM, 1000 BSB Conference Room

Thursday Demo: 11:00-12:30, Locations to be announced

Gina Sosinsky, Ph. D.
gsosinsky@ucsd.edu X40128

Mark Ellisman, Ph. D.
mellisman@ucsd.edu X41392

Recommended readings will be per individual instructors. Reading materials on electron microscopy can be found at <http://cryoem.ucsd.edu/courses.shtm>. Some materials may be posted to a Dropbox area. Password for pdf downloads will be announced at first class or contact Dr. Sosinsky.

Our course websites can be accessed at: http://ncmir.ucsd.edu/training/ucsd_courses/index.shtm

No	Date	Lecture	Lecturer	Demo
1	2-Oct Th	Intro to Course / Intro to Optics I	Gina Sosinsky/ James Bouwer	NCMIR Tour-ME
2	7-Oct Tu	Intro to Optics II	James Bouwer	
3	9-Oct Th	Confocal Microscopy /Fluorescence	Tom Deerinck	LM - HH/MM/GS
4	14-Oct Tu	Multiphoton Microscopy	James Bouwer	
5	16-Oct Th	Transmission Electron Microscopy	Tom Deerinck	TEM – TD
6	21-Oct Tu	Specimen Preparation	Gina Sosinsky	
7	23-Oct Th	Immunocytochemistry for LM and EM	Gina Sosinsky	Confocal – Hiro Hakozaki (HH)
8	28-Oct Tu	In Situ Hybridization	Angela Cone	
9	30-Oct Th	Optical probes for live cell imaging	Varda Lev-Ram	SEM – TD
10	4-Nov Tu	Midterm		<u>Midterm extra time</u>
11	6-Nov Th	Advanced Light Microscopy Techniques (e.g. TIRF, PALM, STED, etc.)	Hiro Hakozaki	
	<i>11-Nov Tu</i>	<i>Veterans Day Holiday</i>	*****	*****
12	13-Nov Th	Digital Imaging	James Bouwer	Common Image Pro- cessing Software & Deconvolution (HH)
13	18-Nov Tu	Image Processing/Analysis Fundamentals	Gina Sosinsky	
14	20-Nov Th	Deconvolution Microscopy	James Bouwer	
15	25-Nov Tu	Scanning Probe Microscopies	Gina Sosinsky	AFM demo- tentative
	<i>27-Nov Th</i>	<i>Thanksgiving Holiday Week</i>	*****	*****
16	2-Dec Tu	Electron Tomography	Guy Perkins	
17	4-Dec Th	Molecular Microscopy: Specimen Prep	Gina Sosinsky	Tomography
18	9-Dec Tu	Molecular Microscopy: 3D Recon Methods	Tim Baker	
19*	11-Dec Th	Databases and Image Informatics	Maryann Martone	TBD
	*****	**Finals Week Dec.15-19	*****	
20	18-Dec Th	Student Presentations & end of class celebration	All instructors	

* **Written assignment “My thesis project and how microscopy can contribute to my thesis”.** (1 page limit is for the body of writing. Use Arial font, 11 pt, 1 inch margins (2.5 cm) relative to 8.5 x 11 inch paper format. Line spacing should be 6 lines/inch (use single spacing with Microsoft Word).

** **Final examination is take-home and due back by Dec 18th (last Thursday in the quarter).**