

**Course Syllabus: BIOL 4450/6450: Spring 2014**

**Theory and Practice of Scanning Electron Microscopy**  
CRN 21966 and 21990; MW 1:00 – 1:50 p.m. (BC 1202), MW 2:00 – 3:50 p.m. (BC 1075)

B ( **Instructor:** Dr. Russ Gearty 2014 2

BIOL 3200 and 3250 or consent of the instructor (**for 6450:** admission into the graduate program).  
General principles of scanning electron microscopy operation and theory with comparison to light and TEM optics in a laboratory intensive environment. Topics include:

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approximately 1/3 of the lecture material but each exam is comprehensive and can ask questions from any

the class on April 30, 2014 during the lecture period. A paper copy containing a Title, Abstract, and References section will be required for hand-in at this time also.

**Attendance:** Students who miss class (lecture or laboratory) will lose points toward their final grade. Don't miss class.

**Grading:** The final grades will be based on a percentage of your cumulative points relative to the total points possible:  
Guaranteed grade distribution is as follows (Max. pts = 650 for BIOL 4450; 750 for BIOL 6450):

A = 90-100%	<u>Points available: BIOL 4450:</u>	<u>Points available: BIOL 6450:</u>
B = 80-89%	Lecture Exams: 300 pts	Lecture Exams: 300 pts
C = 70-79%	Basic Check-Out: 50	Basic Check-Out: 50
D = 60-69%	Oral Proficiency Exam: 100	Oral Proficiency Exam: 100
F = ≤ 59%	<u>Lab Image Portfolio: 200</u>	Lab Image Portfolio: 200
	Total: 650 pts	Research Proposal 25
		<u>Research Presentation: 75 pts</u>
		Total: 750 pts

**Tentative EXAM SCHEDULE:**

**Tentative Lecture and Laboratory Schedule:**

<u>Week</u>	<u>Date:</u>	<u>Lecture:</u> <u>Topic:</u>	<u>Day</u>	<u>Laboratory:</u> <u>Exercise</u>
1.	13 Jan.	Introduction and history of microscopy Biological		