

Course Schedule - Spring 2008

Physics

498 **Special Topics in Physics** credit: 1 to 4 hours.

Lecture course on topics of current interest in physics. For advanced undergraduates or graduates. Prerequisites: Determined for each offering; see Schedule.

CRN	Type	Section	Time	Days	Location	Instructor
36765	lecture	BIO	10:30 AM - 11:50 AM	MW	room 158 Loomis Laboratory	Selvin, P
<p>36765: 3 hours Intro to Biological PhysicsINTRODUCTION TO BIOLOGICAL PHYSICS. We will apply simple yet powerful ideas of physics to gain some understanding of biology. (What is the inertia of a bacteria and how does this affect its behavior?) We will begin with atoms, move to molecules, then macromolecules, then cells, and finally whole systems. For example, how do we see? The answer: photons cause the release of chemicals that create electricity. How do we move? The answer: tiny biomolecular motors break chemical bonds, using the energy to create force and motion with efficiencies that put man-made machines to shame. These motors, and indeed, much of biology at the molecular level, operate at the nanometer (one-billionth of a meter) and picoNewton (1 trillionth of a pound) scales. How can we measure such tiny things? Come find out! Prerequisite: PHYCS 211-212-213 sequence or consent of instructor. No prior biology knowledge or prerequisites, since the course includes a molecular biology primer.</p>						
49741	lecture	BIP	10:30 AM - 11:50 AM	MW		Selvin, P
<p>49741: 4 hours Intro to Biological PhysicsMeets with PHYS 498BIO (36765). Graduate students only, for 4 hours credit. (Undergraduates should enroll in 36765 for 3 hours credit.)</p>						