

# New special topics courses for AY 2009-2010

## Fall 2009

### BIOL 596 (1 unit) Animal Behavior Lab

1400-1640, Thursday, LS-235, Clark, R.

Prerequisites: Credit or concurrent enrollment in Biology 527 (Animal Behavior Lecture)

Laboratory study of animal behavior with emphasis on the ethological approach, including the evolution and adaptive significance of behavior. Emphasis will be on data collection, data analysis, scientific writing, and presentation of scientific results.

### BIOL 596 (3 units) Stem Cell and Regenerative Biology

1230-1345, Tuesday, Thursday, LS-132, Zayas, R.

Prerequisites: Biology 366

The course will provide students with an introduction to the stem cell field and discuss the current topics related to stem cell and regenerative biology. Topics will include: a brief history of the field, stem cell basics and cloning, research on animal models of regeneration, tissue engineering, and the political and ethical issues surrounding the stem cell debate.

### BIOL 596 (4 units) Biology of Fishes

1230-1640 Tuesday, 1230-1345 Thursday, LS-343, Anderson, T.

Prerequisites: Biology 354

Biology of fishes, including ichthyology, ecology, and fisheries biology. Identification, morphology, classification, environmental constraints, habitats, behavior, growth, reproduction, biotic interactions, population dynamics, assemblage structure, fisheries biology concepts, stock-recruitment models, fisheries impacts and conservation.

### BIOL 596 (3 units) Chemical Ecology

0800-0915, Tuesday, Thursday, LS-132, Long, J.

Prerequisites: Biology 354, Chemistry 231

Ecology of chemical signals involved in organismal interactions in aquatic and terrestrial ecosystems. Focal organisms range from plankton to megafauna. Emphasis on the history of chemical ecology studies and needed experiments to address missing knowledge.

## Spring 2010

### BIOL 596 (2 units) Terrestrial Ecosystems & Climate Change Lab

1400-1640, Thursday, LS-235, Lai, C

Prerequisites: Biology 291, credit or concurrent enrollment in Terrestrial Ecosystems & Climate Change

Ecological methods used in ecosystem and climate change science, including chemical analysis (of stable isotopes and elements) and meteorological measurements. Modeling, data interpretation, and presentations emphasized.

### BIOL 596 (2 units) Ecological Metagenomics

1100-1150 and 1300-1540, Friday, LS 235, Dinsdale, E

Prerequisites: Credit or concurrent registration in Biology 354 and 366.

Training in next generation DNA sequencing technology with emphasis on ecological applications in microbial communities. Metagenomic analysis will be in the context of taxonomic identification, physiological function, and focal role of the microbial community in the broader ecosystem.

### BIOL 596 (3 units) International Experience: Sustainability of Coastal Ecosystems

1200-1350, Wednesday, P-146, Oechel, WC

Activity and International Travel, ARR

Prerequisites: Biology 354 and instructor permission.

Integrated ecological concepts and field research, focusing on the interactions of land, sea, and atmosphere systems and human impacts. Topics include global change issues, soil nutrient and vegetation analyses, benthic marine ecology, land use changes, endangered species ecology, and toxicology. NOTE: International travel and significant extra fees required.

	Bio. UD electives	Lab elective	Emph. Bioeng.	Emph. CMB	Emph. Ecology	Emph. Evol. Syst.	Emph Mar. Bio.	Emph. Zoology	Micro. UD electives
Anim. Beh. Lab	X	X			X	X		X	
Stem Cell Biol.	X			X					
Biol. Fishes	X	X			X		X	X	
Chem. Ecol.	X				X		X		
Terr. Ecos. Lab	X	X			X				
Ecol Metagenom.	X	X	X	X	X	X			X
Sust. Coast. Ecos.	X				X				