BIOL 357

Term: Spring 2016  
Course No. & Section: BIOL 357-01  
Course Title: COMPARATIVE ANIMAL PHYSIOLOGY  
Professor: DR. WES DOWD

Course Description (principal topics covered):

Objectives:
- To examine environmental and evolutionary influences on functioning of animals, focusing on mechanisms utilized by animals to cope with challenges imposed by their abiotic and biotic surroundings

Content:
The course will examine molecular/cellular, organ-level, and organismal functions of a variety of animals, both vertebrates and invertebrates. We will uncover the exceptional “unity in diversity” of physiological processes. Course topics will include: acclimation vs. acclimatization vs. adaptation, metabolism and energetics, gas transport and respiration, thermal physiology, water and ionic regulation, pH regulation, stress, and adaptations to extreme environments.

Prerequisites/Recommended Background:
- BIOL 101, 102, 201; CHEM 110, 112

Required Texts/References:
- Selected readings from the primary literature

Course Work/Expectations:
- 3 lectures per week, no lab (Biol 352 may be taken at a later date)
- 3 midterm exams, plus final exam
- Other assignments such as presentations and/or papers

Comments: