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BIOB 595.02: Special Topics - Organismal Function

Bret W. Tobalske

University of Montana - Missoula, bret.tobalske@mso.umt.edu

Creagh W. Breuner

University of Montana - Missoula, creagh.breuner@umontana.edu

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Organismal Function, BIOB 595.02

Spring 2015

Class Time and Location

MW 8:40-10:00, NAC 201

Instructors

Bret Tobalske; bret.tobalske@mso.umt.edu

Office: HS 208 and field research station; phone: 6631

Office hours: by appointment

Creagh Breuner; creagh.breuner@umontana.edu

Office: Natural Science Annex: 101; phone: 5585

Office hours: by appointment

Course Goals:

Explore Mechanisms

To gain a deeper understanding of physiology and morphology that is relevant to any biologist, we will explore the physical and chemical mechanisms that underlie the relationship between form and function. We shall take an integrative view, beginning discussions of morphology and physiology from an evolutionary perspective, moving into the details of size and scaling, chemical signaling, and organismal complexity, and finish with a broader ecological approach to these topics.

Understand Complex Ideas and Hypotheses

Our approach is twofold: 1) We shall compare and contrast classic themes in physiology with novel and interesting new insight that has emerged from modern research and, (2) we shall examine the ways that modern insight in physiology can be extended in a comparative, ecological and evolutionary context. We will read, analyze and discuss classic and modern papers.

Grading

Participation in Discussion	50 pts
Assignments	50 pts
Integrative Exam I	100 pts
Integrative Exam II	100 pts
Research Presentation (20 minutes)	100 pts
Total	400 pts

Additional Details on Grading

Participation and assignments will be graded according to category: - = 70%, ✓ = 85% and + = 100%, whereas exams and research presentation will be graded on a linear scale.

Assignments will consist of A) brief (~1 paragraph) summaries of papers with thoughtful questions or B) brief problem-solving exercises that will require analysis, graphing and interpretation.

Exams will be structured to help you prepare for your graduate comprehensive exams. They will be open-book, take-home, and occur over a ~3-day interval. We will provide six questions and request that you answer three of the six.

The research presentation will be a 20-minute exploration of a mechanism/form/function question relevant to taxa of your choice. We encourage you to investigate the species which you are focusing upon with your thesis or dissertation.

Course and University Policy:

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and /or a disciplinary sanction by the University

All students need to be familiar with the [Student Conduct Code](#).

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