Course Number & Title: BIOL-UA 27 At the Bench: Experimental Physiology

Instructor: Nataliya Galifianakis

Course Description: This advanced level course introduces an integrated approach of the experimental physiology at the level of molecular and cellular physiology; nervous and endocrine control of systems; and organ and body system. Through student-designed experiments, the course overviews the technical foundations of experimental design, critical data analysis, and modelling. Professional skills are enhanced via readings of current literature, preparation and presentation of a research talk, and writing a formal paper.

Pre-requisites: BIOL-UA 25 Principles of Animal Physiology

Grading Information: Course grades will be based on the following:
- Midterm Exam – 25%
- Assignments – 10%
- Lab notebook maintenance – 10%
- Attendance/participation – 5%
- Project presentation – 25%
- Writing research paper – 25%

Topics Covered
Introduction to Experimental Research
Basics of writing a science research paper
Biostatistics and data analysis
Data visualization and presentation
Nutrition
Body Composition
Energy Expenditure
Cardiorespiratory fitness
Muscular fitness and strength
Stress Management