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-requisite:
Principles of Animal Physiology (BIOL-UA 25)

Textbook and Required Materials:
N/A

Grading:
Midterm exam 25%
Assignments 10%
Lab notebook maintenance 10%
Attendance/participation 5%
Project presentation 25%
Writing research paper 25%

Topics:
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