

BIOM 6100 - Foundations in Statistics

Fall 2023

Course Co-Directors:

Daniel Beiting, Ph.D.

Assistant Professor of Pathobiology

School of Veterinary Medicine

Rm 314 Hill Pavilion 380 S. University Avenue

Phone: 215-898-9247

Email: beiting@upenn.edu

Russell Takeshi Shinohara, Ph.D.

Associate Professor of Biostatistics in Biostatistics and Epidemiology

Center for Clinical Epidemiology and Biostatistics Department of Biostatistics, Epidemiology and Informatics

Perelman School of Medicine

217 Blockley Hall 423 Guardian Drive

Phone: 215-746-1090

Email: russell.shinohara@penntmedicine.upenn.edu

Course Description:

Technological advances have transformed biomedical research, making the generation of complex and high-dimensional datasets routine, and underscoring the importance of robust statistical methods for data analyses. In this course, students will learn to use the open-source R programming language to explore foundational topics in statistics, including regression, hypothesis testing, survival analysis, inference, and handling missing data. The course will be virtual and asynchronous (self-paced) and will leverage online resources, including DataCamp.com.

Laptop required. Students will be evaluated based on completion of video lectures and online assignments.

Enrollment is expected to be 50-80 students

This course should be taken by 2nd year PhD students from CAMB, IGG, PGG.