The Genetic Basis of Behavior
Biological Bases of Behavior 207
Spring Semester, 2014: Monday 2:00-5:00 PM
Location: Nursing 216

This course will present a comprehensive overview of the field of Behavioral Genetics, including basic principles as well as a sampling of current research.

Course Director:
Arlen Price 898-0214, arlen@exchange.upenn.edu
Office Hours: Before or after class and by arrangement

Text: None required. Background reading: Robert Plomin et al., Behavioral Genetics, Sixth Edition, 2012 (or any earlier edition if available). Other background papers will be posted during the course.

Special Research Topics and Guest Lectures in Course:
Wade Berrettini, Addictions
Maja Bucan, Bipolar Disorder/Schizophrenia
Joel Mainland, Olfaction
Arlen Price, Obesity
Danielle Reed, Taste Perception
Teresa Reyes, Epigenetics
Amita Sehgal, Circadian Rhythms

Class Time: Monday 2:00-5:00 PM, **First class meets on WEDNESDAY 1/15/2014**
Syllabus:

January
15   Introduction and History
15   Mendelian/Transmission Genetics
27   Heritability: Family, twin and adoption models

February
 3   Heritability: Estimation and limitations
10   Exam 1: 'Classical' Behavioral Genetics
10   Basic Molecular Genetics, Major gene mutations and genetic syndromes
17   The Genomics Era
17   Gene Identification through Linkage
24   Genes Linked to Behavior
24   Genetic associations from disequilibrium

March
 3   Gene/Behavior Associations
 3   Exam 2: Behavioral Genomics
10   Spring Break
10   Spring Break

17	DNA collection for TAS2R38 (Taste) gene
17	Environment and Behavior
17	Non-Mendelian Inheritance: Epigenetics
24	Epigenetics and Behavior
31	Introduction to Special Topics in Behavioral Genetics
31	<u>Exam 3</u>: Complex Inheritance

April

7	Mainland: Olfaction
7	Reed: Taste Perception (Lecture and DNA results)
14	Berrettini: Addictions
14	Price: Obesity
21	Reyes: Epigenetics
21	Bucan: Bipolar Disorder and Schizophrenia
28	Sehgal: Circadian Rhythms
28	Review

<u>**Evaluation**</u>:

Exam 1: Classical Behavioral Genetics	20%
Exam 2: Behavioral Genomics	25%
Exam 3: Complex Inheritance	20%
Final Exam: (Mostly New Material but Comprehensive)	35%