

New Course Offering  
Spring Term 2018

**Genetics Honors Seminar**  
Scientific Foundations of Precision Medicine  
Biosc 1590; 1 cr.  
Dr. Lewis Jacobson

Thursdays, 11:00-12:50  
Limited to 18 students

Prerequisites: Biosc 0350 (Genetics)  
**or** Biosc 0350 as co-requisite with permission  
Cumulative GPA  $\geq$  3.25 required  
**or** permission of instructor

This course will provide an opportunity for students to gain greater depth and breadth of knowledge of the practical applications of genetics and of the new genetic paradigms in medicine. Emphasis will be on class discussion, critical reading of primary research papers and integrative thinking.

Topics will include:

- How we derive genetic concepts from experimental observations
- Genetic basis of human diversity
- Genetic basis for precision medical diagnosis & treatment
- “Mendelian Randomization” and causality in clinical trials
- Genetic and clinical subtypes in diabetes
- Genetic diversity in cancer
- Economics and ethics in precision medicine

Students will write one short paper and one longer paper. There will be no exams. Class participation will be taken into account in grading.

Letter grade or SNC, your choice.