BIOL- GA 1140 Genomic Innovation

Instructors:
Neville Sanjana
Tuuli Lappalainen

Course Description:
Genomic Innovation is a project-oriented course focused on understanding the current landscape of genome science and on building ideas and organizations to accelerate progress in technology innovation, scientific understanding and industrial applications of genomics. The course will introduce students to cutting-edge technologies and applications in genetics and genomics and their responsible use in science and society.

Pre-requisite:
N/A

Textbook and Required Materials:
N/A

Grading:
Projects 65%
Homework assignments 35%

Topics:
New frontiers and applications in genome sequencing
Mining genomic data from our environment and health records
Technology transfer and intellectual property
Funding of genomic ventures
Genomics in cancer research, diagnosis and treatment
The revolution of portable sequencers
Launching and running a biotech startup
Genetic variation in humans
New frontiers in genetic diagnosis
Genome editing and CRISPR
Single cell technology