

Advanced Genetic Analysis

BIOL / GNET 621

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Tues, Thurs 11:00 - 12:15

Fri 3:00 - 3:50

BIOL / GNET 621 is intended to provide an intensive introduction to modern genetic analysis based on classical and contemporary paradigms, drawing on examples from a wide range of model organisms. There are two lectures per week; the material covered in lectures is reinforced through problem sets and readings of research and review articles. In addition, there is a weekly recitation, during which students lead discussions of readings and work on problem solving, under the guidance of a teaching assistant. There is no prerequisite for graduate students, though a previous course in genetics is helpful

Topics to be covered include:

- Mendelian genetics, recombination and mapping
- chromosome structure and function
- mitosis & meiosis
- mutations and mutagenesis
- complementation, epistasis, and pathway analysis
- mosaicism and mosaic analysis
- transposons
- non-Mendelian inheritance
- RNAi, epigenetics

