



Overview: This course covers the theory and practice of current technologies for modifying insect genomes and manipulation gene expression. Although the focus will be on insects, many of the approaches will be applicable to other organisms.



Lecture Topics:

- Insect Embryogenesis, Development and Gene Promoters
- Insect transgenesis using transposon technologies and site-specific recombination systems
- Genome Editing using CRISPR/Cas9
- Gene Silencing Technologies
- Binary and Conditional Transgene Expression Systems
- Insect Biotechnology

Lab Topics:

- Embryo Microinjection
- Gene silencing
- Gene editing
- Detection of transgenic individuals with dominant markers