

# BIOL 580. GENETIC APPROACHES TO NEURAL SYSTEMS.

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Credits: 3

Offered by: Biology (Faculty of Science)

Terms offered: Winter 2026

[View offerings for Winter 2026 in Visual Schedule Builder.](#)

## Description

This course will focus on recent research employing genetic-based methods to examine the functional and structural properties of the nervous system. The focus will be on approaches for studying neural circuits and behavior in a range of model organisms. Topics will include recent technological advances, such as optogenetics for modifying and controlling neuronal activity, and animal models of neurological diseases. Students will critically analyze the application of these methods to current research through in-class discussion of primary literature, student presentations, and written assignments.

- Prerequisite(s): BIOL 306 or permission of the instructors.

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