



NSCI 791: Senior Laboratory Rotations

Course Description: These are intensive laboratory rotations for second year students in the Program in Neuroscience. They are intended for students to begin research in their planned dissertation laboratories. Thus, all three rotations can be within the same laboratory. However, they may also be conducted in up to three different laboratories, depending on the student's training needs and interests.

Credit Hours: 6 (Fall/Spring); 9 (Summer)

Course Prerequisites: Students must have successfully completed both NSCI701 (Foundations in Neuroscience) and NSCI790 (Neuroscience Laboratory Rotation Survey) and be in good academic standing.

Course Dates: Fall, Spring, Summer semesters

Course Times: Various

Course Location: Various

Instructor: Donna Platt, Ph.D. (Course Director), TR420, x4-5896, dplatt@umc.edu

NSCI 791 mentors may be chosen from any active and funded Program in Neuroscience faculty with the agreement of the mentoring faculty and the course director.

Required Text and Other Learning Resources: Learning resources needed will be determined by the specific laboratory mentor.

Course Overview: The student and laboratory mentor will meet to draw up a list of goals for that rotation (specific techniques to be learned, and specific experiments to be conducted) along with a tentative reading list and other specific requirements such as attending laboratory meetings. The list of goals is provided to the Course Director. At the conclusion of the laboratory rotation, the student will prepare a written summary (in scientific journal style) of the rotation to include background, rationale, methods, data collected or results and a discussion of the interpretation of this experience which could focus on the implications of results collected or problems and planned solutions. If appropriate, this document will be built upon across the three rotations. Students also will prepare a 20 minute seminar on their laboratory experience.

Course Objectives: Upon completion of this course, students will be able to:

1. describe the scientific project within the laboratory that was the focus of the rotation.
2. independently apply one or more specific methods learned during the rotation.
3. plan experiments using the specific methods learned during the rotation along with other methods to test specific hypotheses.
4. evaluate the results obtained in experiments conducted during the rotation.

Grading Policy and Rubric. The final grade will consist of an evaluation of the students performance in the laboratory by the rotation supervisor(s) (70% of grade). In addition, students will complete a written summary of their rotation in standard scientific format (Background, Methods, Results, Conclusions, References) and present a 20 minute seminar on the rotation to a select group of students and faculty. The report should be written without the assistance of the mentor and will be evaluated/graded by the rotation mentor, course director, and 1 PIN faculty member chosen by the course director. The oral presentation can be worked on with the rotation mentor and will be evaluated by the mentor, course director, and 1 PIN faculty member chosen by the course director. Students are expected to complete the written summary and seminar presentation by the week of final examinations for the semester. The final grade for the rotation will be weighted at 70% for the mentor grade, 15% for the written report and 15% for the oral presentation.

Course Policies:

1. Students are expected to spend at least 20 hours per week on their laboratory rotation during the fall or spring semesters or 40 hours per week during the summer semester. However, this is likely to vary depending on the experimental needs of the project and the student's course commitments.
2. Hours worked in the laboratory must be adjusted to accommodate the student's class, examination, and seminar schedule. Students are expected to provide the mentor with this schedule within two weeks of beginning the rotation and to update the mentor as new assignments or other obligations arise. The total time commitment for the rotation should not exceed 400 hours.

University Policies:

Students with disabilities (ADA) statement Refer to UMC policy
Academic honesty statement Refer to UMC and SGSHS policies

