Neuroscience Departmental Honors Program

The Neuroscience Departmental Honors Program provides motivated students with a program that offers development of scientific creativity, fostering of curiosity, and opportunities to contribute to the neuroscience community. The Department of Neuroscience, Cell Biology, and Physiology recognizes the achievements and inspiration of such students and will provide an experience in which students develop their scholarly interests and professional skills with a faculty research advisor, who will provide mentorship and scholarly collegiality, while shepherding the student's research.

Eligibility

To be admitted into the Neuroscience Departmental Honors Program, a student must have:

1. A minimum cumulative GPA of 3.5, and no lower than a B in completed Neuroscience Core courses.
2. At least junior status in the program (i.e. 60 credits or less remaining for completion of the B.S. degree).

Students should discuss the Honors Program with the Director of the Neuroscience Program no later than the Fall semester of their junior year. They should then identify a Research Project Advisor, complete, and submit their application form. A faculty member from outside of the Department of Neuroscience, Cell Biology, and Physiology may be selected. A student not meeting all the above requirements may petition for special permission to enter the Honors Program.

Academic Requirements

In order to complete the Neuroscience Departmental Honors Program, a student must:

1. Maintain a minimum of a 3.5 GPA while enrolled within the Honors Program.
2. Submit a 3-5 page proposal of the research project, which will be due no later than August 1st between the student's junior and senior year, and must be approved by the Research Advisor.
3. Completion of at least 5 credits (ideally spanning at least three semesters) of research (NEU 4990) with a grade no lower than a B for these courses. Ideally, these 5 credits should be completed by the end of the Fall semester of the student's senior year.
4. Completion of the Senior Capstone: Neuroscience Laboratory Research (NEU 4020) in spring of the student's senior year.
5. Students in the Honors Program will give an oral presentation of the results of the research project at a departmental Honors Program seminar, as a part of NEU 4020.
6. Completion of a manuscript-style Honors Thesis in NEU 4020 based upon the research project. Research Advisors are encouraged to provide guidance and feedback during this process.

Evaluation and Oversight
A student's Research Advisor will be comprised of a faculty member, in whose laboratory the student conducts their research, and will contribute to the review of the student's research proposal, as well as their manuscript-style Honors Thesis and oral presentation.

At the completion of each semester of NEU 4990, a semester grade will be given by the student's Research Advisor. The grade will be based on the student's quality of work, progress, contribution to laboratory activities, etc. As the Research Advisor will maintain a mentoring role to the student, it will be required that the mentor and student meet at least once a week to discuss relevant aspects of the student's work in the laboratory. A grade lower than B means the student has failed to meet the departmental honors requirement.

Near the end of NEU 4020, the manuscript-style Honors Thesis must be submitted for review. The Research Advisor is encouraged to provide guidance and feedback in the development of the document. The Research Advisor will be responsible for aiding in the review and grading of the Honors Thesis. The Research Advisor will also assist in grading the oral presentation associated with NEU 4020.

Timeline
A typical timeline for the Neuroscience Departmental Honors Program may look like the following:

<u>Junior Year (Fall)</u>
1. Speak to the Director of the Neuroscience Program regarding interest in the honors program
2. Identify Research Advisor
3. Complete and submit Application form (must be signed by Research Advisor)

<u>Junior Year (Spring)</u>
1. Complete first semester of NEU 4990 and Research Proposal

*It is encouraged that students continue their research during the Summer between their Junior and Senior years, if possible, to maintain continuity and enhance progress on their research project.

<u>Senior Year (Fall)</u>
1. Must have completed or be completing at least 5 credits of NEU 4990

<u>Senior Year (Spring)</u>
1. Complete NEU 4020
2. Write manuscript-style honors thesis and give oral presentation of research project

3. Complete forms for graduation

Forms for Graduation

There are two forms on the University Honors website that must be completed to ensure that your Departmental Honors designation appears on your transcript. These forms must be completed by the due date for the term of graduation and turned in to the University Honors Program.

Neuroscience Departmental Honors Program
Application Form

Name:_____ UID:_____

Email:_____

Expected Graduation (semester/year): _____

Total credits completed for all courses: _____

Cumulative grade point average (GPA) for all courses: _____

Total credits completed for the Neuroscience Core: _____

Cumulative grade point average (GPA) for the Neuroscience Core: _____

Academic Advisor: _____

Research Project Advisor: _____

Brief Description of Tentative Honors Project (if needed, submit additional documentation):

Student Signature:_____ Date: _____

Research Advisor Signature:_____ Date: _____

Submit applications to Alicia Hendricks (alicia.hendricks@wright.edu) in the Department of Neuroscience, Cell Biology, and Physiology office.

Departmental Honors: Neuroscience Research Project Proposal

Please complete the following elements, in detail, regarding what you are proposing to study for your Neuroscience Departmental Honors Research Project. A brief description of what each element should entail has been provided. The document should be between 3-5 pages long and is ideally due at the end of your first semester of NEU 4990, but no later than August 1st of the summer between your junior and senior year. It is likely that the Rationale, Experimental Design, and Expected Results elements will comprise the majority of your proposal. Once complete, it must be approved and signed by your Research Advisor. The completed and approved document with signature must then be submitted to the Director of the undergraduate Neuroscience Program.

Research Question - *This section delineates your experimental question/hypothesis. It is essential that your question be specific, testable, and clearly defined*:

Rationale - *Explain why this question is important. Include a description of what is known up to this point—what previous findings and observations lead you to ask this research question*:

Experimental Design - *This section should clearly explain the experimental strategy you will use. Include why your experimental design addresses the question. Briefly explain the experimental method(s) and what will be measured. Outline the experimental strategy in a flow diagram. Describe your control(s) and why it/they is/are necessary*:

Expected Results - *Imagine and describe the data that you expect to obtain and would support your hypothesis*:

Significance of Research - *What is the potential impact of your experimental results on our scientific knowledge? How might your results be used*:

Research Advisor Signature:_____Date: _____

Submit research project proposals to Alicia Hendricks (alicia.hendricks@wright.edu) in the Department of Neuroscience, Cell Biology, and Physiology office.