### Credit Hour Explanation

<table>
<thead>
<tr>
<th>Program credit hour requirements</th>
<th>A) Number of credit hours in current program (Quarter credit hours)</th>
<th>B) Calculated result for 2/3rds of current (Semester credit hours)</th>
<th>C) Number of credit hours required for proposed program (Semester credit hours)</th>
<th>D) Change in credit hours</th>
</tr>
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<tbody>
<tr>
<td>Total minimum credit hours required for completion of program</td>
<td>16</td>
<td>10.7</td>
<td>12</td>
<td>1.3</td>
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<tr>
<td>Required credit hours offered by the unit Minimum</td>
<td>3</td>
<td>2.0</td>
<td>2</td>
<td>0.0</td>
</tr>
<tr>
<td>Maximum</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Required credit hours offered outside of the unit Minimum</td>
<td>13</td>
<td>8.7</td>
<td>10</td>
<td>1.3</td>
</tr>
<tr>
<td>Maximum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required prerequisite credit hours not included above Minimum</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Maximum</td>
<td></td>
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</tbody>
</table>

### Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

**Program Learning Goals**

- Students will have the opportunity to study the basics of structure and function of the nervous system. Students enrolling will gain training in and exposure to the basic fundamentals of nerve cell function and neural systems.

### Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

**Is this a degree program (undergraduate, graduate, or professional) or major proposal?** No

### Program Specializations/Sub-Plans

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

### Pre-Major

**Does this Program have a Pre-Major?** No
**Attachments**

- Minor-Program-Request-Letter.pdf: Letter with all items addressed
  
  (Letter from Program-offering Unit: Owner: Knowles,Kari Richelle)

- NCSP Minor for semesters v 3.pdf
  
  (Program Proposal: Owner: Knowles,Kari Richelle)

**Comments**

- Please include updated informational program brochure which will be distributed to students interested in this minor.
  
  (by Herness,M Scott on 09/24/2013 04:32 PM)

- This is a request to convert a graduate minor from quarters to semesters. (by Knowles,Kari Richelle on 09/24/2012 01:48 PM)

**Workflow Information**

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<th>User(s)</th>
<th>Date/Time</th>
<th>Step</th>
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</thead>
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<td>Knowles,Kari Richelle</td>
<td>08/24/2012 11:48 PM</td>
<td>Submitted for Approval</td>
</tr>
<tr>
<td>Revision Requested</td>
<td>Herness,M Scott</td>
<td>08/24/2013 04:32 PM</td>
<td>Unit Approval</td>
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<td>GradSchool Approval</td>
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<td>Sceve,Melissa A</td>
<td>10/01/2013 02:59 PM</td>
<td>CAA Approval</td>
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September 12, 2013

Dr. John Oberdick, PhD
Graduate Studies Chair
Associate Professor
The Ohio State University College of Medicine

Neuroscience Minor – Semester Conversion

John,

The Graduate School Curriculum Committee (GSCC) met on September 11 and among its agenda items discussed the semester conversion proposal for the Neuroscience Graduate Studies Program minor. I explained to the committee that, due to a migration limitation of the curriculum.osu.edu program, the proposal to convert this graduate minor has inadvertently remained within approval queue since your submission in Autumn 2012. This event prevented proper transfer of the program to the Graduate School and explains the late date for semester conversion.

The GSCC thoroughly discussed the minor and its requirements. Overall, many strengths of the proposal were noted. In particular, it was noted that the advising instructions to students wishing to pursue this minor were well written. The proposal conforms to Graduate School rules. The transition plan is straightforward. We understand that the students who will be completing this minor will do so on either quarters or semesters. There are no students who will be completing this minor on courses taken over both calendars.

The GSCC commented that the learning goals for this program could be improved. At present, the goals are merely descriptive of the curriculum rather than being statements of the intended learning outcomes of students who pursue this program. Your program will have the opportunity to revisit its learning goals as graduate programs develop assessment plans over the next few years.

The Committee approved the conversion and I will pass the proposal along to the Council of Academic Affairs for their review.

Please don’t hesitate to contact me with questions or clarifications.

Many thanks,

Scott Hemness
Associate Dean
The Graduate School
August 24, 2012

Office of Academic Affairs
203 Bricker Hall
190 North Oval Mall
Columbus, OH 43210-1358

To whom it may concern,

I am writing this letter on behalf of the Neuroscience Graduate Studies Program (NGSP). This is an interdisciplinary graduate program that currently is under the academic direction of the Graduate School. The College of Medicine has assumed direct oversight of the program. The only degree offered by the program is a PhD. We are requesting approval for a graduate minor in neuroscience for the semester conversion.

Program Rationale Statement:

The NGSP is an interdisciplinary graduate program with faculty from several different colleges (e.g., Medicine, Social and Behavioral Science, Dentistry, Veterinary Medicine, BMAPS) participating. Neuroscience is a multidisciplinary field that encompasses studies in molecular and cellular neurobiology, developmental neurobiology, neuroimmunology, neural degeneration and regeneration, neuropharmacology, neurophysiology, behavioral neuroscience, sensory and motor neuroscience, etc. Students entering the program take a team taught core curriculum that covers all aspects of Neuroscience. They then select a lab in one of the several different subspecialties of Neuroscience noted above.

Under the quarter system, the program offered a graduate minor designation for students completing required coursework. These students would be obtaining their PhD in programs other than the Neuroscience Graduate Studies Program but who have a strong interest in Neuroscience or who are working in the laboratories of faculty who are members of the Neuroscience Graduate Studies Program.

The major changes in the curriculum are related to the core courses which are designed to provide a basic foundation for any student in the program, regardless of the subdiscipline they select for their thesis project. After several discussions, we decided to deconstruct and reconstruct the core curriculum. The committee was made up of faculty members, who were course directors of the original courses, faculty who participate in teaching the courses, and a junior and senior graduate student who successfully completed the core curriculum. Based on our discussions, we have reduced the overall number of courses without compromising the material to be covered. In the quarter system, we required students to enroll in 2 of 5 core courses (Cell
and Molecular Neuroscience, Neurophysiology, Structure and Function of the Nervous System, Neuropharmacology, or Behavioral Neuroscience). In addition, they were required to take electives offered by Neuroscience faculty to complete 16 quarter credit hours.

For the semester conversion, the committee determined that there was overlap in many of the topics covered in the individual courses. After evaluating the content of our courses, we determined it was best to develop a Neuroscience curriculum that covered all the material presented in the current 5 core courses in a 2 semester format. Areas of overlap will be merged and discussed one time. In some areas we determined that there was a presentation of more details than were needed for an introductory level course. Therefore, the more advanced concepts will be provided in newly developed electives (e.g., Neuropharmacology, Advanced Behavioral Neuroscience, and Neurodevelopment) which can be taken by students to fulfill the required credit hours. These electives are being developed by faculty members in various departments that participate in the NGSP.

The NGSP developed the core curriculum at the time of its inception and courses were listed under NeuroGSP. As the University guidelines for providing credit for teaching changed, individual departments assumed "ownership" of the courses in which their faculty was most heavily invested. No changes were made in course content. Departments requested cross listing of the courses between the department and the program. Therefore, most of the credit hours are listed as outside the unit.

List of Semester Courses:

Required to take one of the following:
- NEUROSC 7001 Foundations of Neuroscience I (6 credits)
- NEUROSC 7002/DENT 7012 Foundations of Neuroscience II (6 credits)

To meet the 12 credit hour requirement, students may select another course from the list above or select courses from the list below.
- NEUROSC 5644: Behavioral Endocrinology (3 credits; alternate years)
- NEUROSC 7050: Neurobiology of Disease (3 credits)
- NEUROSC 7500: Neuroimmunology (3 credits; alternate years)
- NEUROSC 7900: Developmental Neurobiology (2 credits; alternate years)
- NGSY 8250: Biology of the Tumor Microenvironment (2 credits)
- NEUROGS 7887: Seminar Topics in Neuroscience (students must register for both autumn and spring semester for this course) 1 credit/semester

And other courses as developed.

Semester/Quarter Advising Sheets: NA as these are graduate courses.
Transition Statement:

The directors of the program and the members of the NGSP committee all approve the new curriculum. There will be no disruption or delay of time-to-graduation for any students due to the conversion to semesters in fall of 2012. We will insure that any course credit discontinuities that occur due to the semester switch meet current minimum credit guidelines set by the graduate school in order to minimally affect credit requirements for doctoral candidacy as well as for doctoral completion and graduation. The appropriate formula will be applied to convert quarter hours to semester hours at the appropriate time. We will adhere to all statements in the Pledge to Students.

Please feel free to contact me or the program administrator, Keri Knowles, if you have any questions regarding this request.

Sincerely,

John Oberdick
NGSP co-director
Neuroscience Graduate Studies Program

Graduate Minor

The Graduate Minor in Neuroscience provides students with the opportunity to study the basics of structure and function of the nervous system. Students enrolling will gain training in and exposure to the basic fundamentals of nerve cell function and neural systems. Students completing a Neuroscience Minor will receive appropriate recognition of their efforts on their university academic record.

A minimum of 3 courses for a total of 12 or more credit hours is required for a Neuroscience Minor.

Curriculum: In order to ensure a foundation in the fundamentals of neuroscience, students are required to take one of the following two courses:

- **NEUROSC 7001:** Foundations of Neuroscience I 6 credits
- **NEUROSC 7002:** Foundations of Neuroscience II 6 credits

To meet the requirements for a minor, students may select additional courses from the list above and below.

- **NEUROSC 5644:** Behavioral Endocrinology 3 credits (alternate years)
- **NEUROSC 7050:** Neurobiology of Disease 3 credits
- **NEUROSC 7500:** Neuroimmunology 3 credits (alternate years)
- **NEUROSC 7900:** Developmental Neurobiology 2 credits (alternate years)
- **NGSY 8250:** Biology of the Tumor Microenvironment 2 credits
- **NEUROGS 7887:** Seminar Topics in Neuroscience 1 credit (total of 2 credits)
  (students must register for both autumn and spring semesters for this course)

Graduate School and Neuroscience Graduate Studies Program guidelines require that students earn a minimum of a B grade in all of these courses to receive a minor.
Neuroscience Graduate Minor

The Neuroscience Graduate Minor consists of graduate-level course work available to students who are not enrolled in the Neuroscience Graduate Studies Program. Students wishing to pursue an official Graduate Minor must follow the procedures for access outlined below.

Procedures:

1. A student in conjunction with her/his advisor should determine the appropriateness of pursuing a Graduate Minor and how best to incorporate it into the student’s program of study.

2. The student completes the Neuroscience Minor Program Form, including obtaining her/his advisor’s signature, which serves as an application to enroll in the Neuroscience Graduate Minor. This form will list the courses the student must complete in order to obtain the Neuroscience Graduate Minor transcript designation. **A minimum of 3 courses for a total of 12 or more credit hours is required for a Neuroscience Minor.**

3. A letter indicating why the student desires a Neuroscience Minor and a copy of the most recent student advising report should accompany the completed Neuroscience Minor Form. Graduate Minor Program Forms are available on the NGSP website (http://ngsp.osu.edu) and in the NGSP office, 1190B Graves Hall, 333 W. 16th Ave. or 115 Biological Sciences Building, 484 W. 12th Ave. and should be submitted to the NGSP Program Administrator either in person or via email (NGSP@osu.edu) during the first two weeks of each semester.

4. Upon receipt of the completed Minor Form, the NGSP Director(s) will review the request and send the student an acknowledgement indicating whether or not the request is approved (such approval is based SOLELY on the availability of space within the maximum limit of thirty students), with a copy being sent to the Graduate School and the student’s graduate program. The original will be kept on file in the NGSP office.

5. Upon receipt of the acknowledgement from the NGSP, the Graduate School will send the student an acknowledgement letter.

6. The student must adhere to the curriculum for the NGSP Minor as indicated on the approved Graduate Minor Program Form. If changes in the approved curriculum are necessary, the student must complete a new Minor Form and once again obtain approval via steps 1-5 above.

7. Upon completion of minor curriculum, the student must notify the NGSP office. The student’s transcript will be reviewed by the Subcommittee for the Graduate Minor for compliance with the minor requirements.

8. After verification of compliance, NGSP will complete the Minor Transcript Designation Form and submit it to the Graduate School.

9. The Graduate School will match the courses completed with those on the approved NGSP Minor form. Departures from the approved NGSP Minor could lead to a loss of transcript designation.
Graduate Minor Form

All academic aspects of the graduate minor are subject to the approval by each participating graduate program. Below are the general criteria applicable to all graduate minors. Students should consult the appropriate graduate studies committees for specific information regarding their proposed graduate minor.

Section 1: To be completed by the student (print)

Last name: __________________________ First name: __________________________ Mi: __________________________

Ohio State email address: __________________________ Ohio State I.D. number: __________________________ Phone number: __________________________

Name of graduate minor: __________________________

Graduate minor program of study

<table>
<thead>
<tr>
<th>Department</th>
<th>Course #</th>
<th>Course title</th>
<th>Credit hrs.</th>
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Signature, student __________________________ Date: __________________________

Signature, advisor __________________________ Date: __________________________

Signature, graduate studies chair in graduate minor program __________________________ Date: __________________________