EP.26.089_FINAL
Approved by EP 02/02/2026

Program Change Request

New Proposal

Date Submitted: 10/30/25 2:08 pm

Viewing: : Neuroscience, MS

Last edit: 02/05/26 8:42 am

Changes proposed by: Michelle Tomaszycki

In Workflow

1. U Program Review
2. 1415-MCB Head
3. 1968-NEURO Head
4. SMCB Head
5. KV Dean
6. University Librarian
7. Grad_College
8. COTE Programs
9. Provost
10. Senate EPC
11. Senate
12. U Senate Conf
13. Board of Trustees
14. IBHE
15. HLC
16. DOE
17. Catalog Editor
18. DMI

Approval Path

1. 07/21/25 7:45 am Emily Stuby (eastuby): Rollback to Initiator
2. 08/28/25 11:08 am Brianna Vargas-Gonzalez (bv4): Approved for U Program Review
3. 09/12/25 2:08 pm Melissa Michael (mmichae): Approved for 1415-MCB Head

4. 09/12/25 2:13 pm Stephanie Pregent (spregent): Approved for 1968-NEURO Head
5. 09/12/25 2:14 pm Melissa Michael (mmichae): Approved for SMCB Head
6. 10/23/25 4:57 pm Melissa Reedy (murray): Rollback to Initiator
7. 11/05/25 2:41 pm Brianna Vargas-Gonzalez (bv4): Approved for U Program Review
8. 11/05/25 2:45 pm Melissa Michael (mmichae): Approved for 1415-MCB Head
9. 11/05/25 3:09 pm Martha Gillette (mgillett): Approved for 1968-NEURO Head
10. 11/05/25 3:15 pm Melissa Michael (mmichae): Approved for SMCB Head
11. 11/06/25 12:35 pm Melissa Reedy (murray): Approved for KV Dean
12. 11/10/25 1:29 pm Tom Teper (tteper):

Approved for University Librarian
13. 12/01/25 3:30 pm Allison McKinney (agrindly): Approved for Grad_College
14. 12/01/25 4:37 pm Suzanne Lee (suzannel): Approved for COTE Programs
15. 12/03/25 8:56 am Brooke Newell (bsnewell): Approved for Provost
16. 02/05/26 9:00 am Barbara Lehman (bjlehman): Approved for Senate EPC

Proposal Type

Proposal Type:	Major (ex. Special Education)

Administration Details

Official Program Name	Neuroscience, MS	
Diploma Title	Master of Science in Neuroscience	
Sponsor College	Liberal Arts & Sciences	
Sponsor Department	Molecular and Cellular Biology	
Sponsor Name	Brenda Wilson, Megan Mahoney	
Sponsor Email	wilson7@illinois.edu, mmm1@illinois.edu	
College Contact	Stephen R. Downie	College Contact

Email	sdownie@illinois.edu
College Budget Officer	Michael Wellens
College Budget Officer Email	wellens@illinois.edu

If additional stakeholders other than the Sponsor and College Contacts listed above should be contacted if questions during the review process arise, please list them here.

Melissa Michael (mmichae@illinois.edu)
Michelle Tomaszycki (mlt10@illinois.edu)
Melissa Reedy, murray@illinois.edu (LAS Assistant Director Course & Cir Dvt)

Does this program have inter-departmental administration?

Yes

Interdisciplinary Colleges and Departments (list other colleges/departments which are involved other than the sponsor chosen above)

Please describe the oversight/governance for this program, e.g., traditional departmental/college governance, roles of elected faculty committees and of any advisory committees.

The School of Molecular and Cellular Biology (MCB) and the Neuroscience Program, both within the College of Liberal Arts and Sciences, will provide oversight and governance for this degree program.

School of MCB
Brenda Wilson (wilson7@illinois.edu)
Melissa Michael (mmichae@illinois.edu)

Neuroscience Program
Megan Mahoney (mmm1@illinois.edu)
Michelle Tomaszycki (mlt10@illinois.edu)

College	Liberal Arts & Sciences
Department	Neuroscience

Is there an additional department involved in governance?

No

Effective Catalog Term

Effective Catalog Term	Fall 2026
Effective Catalog	2026-2027

Proposal Title

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberal Arts and Sciences, include the Graduate College for Grad Programs)

Establish the Master of Science in Neuroscience in the College of Liberal Arts and Sciences and the Graduate College

Does this proposal have any related proposals that will also be revised at this time and the programs depend on each other? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently and together as needed. Format your response like the following "This BS proposal (key 567) is related to the Concentration A proposal (key 145)"

Program Justification

Provide a brief justification of the program, including highlights of the program objectives, and the careers, occupations, or further educational opportunities for which the program will prepare graduates, when appropriate.

We propose to develop and establish a 9- to 21-month, self-supporting two-track (coursework-based alone or coursework plus research-based) Master of Science in Neuroscience (MS in Neuroscience) degree program. This program would be directed toward students who want advanced preparation for professional school or future careers in academia, industry, or government. The purpose of this program is to provide an educational option for non-thesis advanced study in the field of neuroscience. There are two tracks, one for those who require the advanced knowledge base and one that is a research-focused option for those who seek laboratory research experiences. The aim is to provide students with (1) a strong educational foundation in neuroscience, (2) a personalized and hands-on research experience for those whose future career plans require this background skillset, (3) an extensive experience in scientific writing and presentation skills, and (4) ample professional development opportunities so that they will excel in future doctoral programs, professional programs, industry, or government careers.

The University has suggested that each unit explore opportunities to increase revenue. This proposal is in part a result of that directive and a desire to extend our graduate offerings to currently underserved populations. The four Departments in the School of MCB have MS programs in their respective disciplines that are used primarily as terminal degrees awarded to PhD students who have passed their qualifying examinations but have chosen to leave the program. No students are admitted directly into these terminal MS degree programs. The School of MCB recently developed a course-based MS degree program in Molecular and Cellular Biology that already met our enrollment goals after the third round of admissions in Fall 2024. The Neuroscience program does not presently offer an MS degree. This MS in Neuroscience program will also afford PhD students in the current doctoral Neuroscience Program (NSP) a terminal master’s option.

While our graduate offerings in the School of MCB and in the Neuroscience PhD program are focused on research training toward a doctoral degree, both of these programs would like to better support students who are seeking advanced training in neuroscience at the master's level, either because they want to be excellent candidates for professional or graduate school or because they are seeking jobs in industry or government and a master's degree will make them much more attractive candidates.

The current Doctoral Degree Program in Neuroscience would welcome students who have successfully completed an MS in Neuroscience such as the proposed one. The NSP PhD program uses a holistic admissions rubric that assesses prospective students on three different dimensions: Academic Performance, Research Potential, and, weighted less heavily,

Leadership/Service. Applicants are placed into one of four possible categories within each of these three dimensions (poor, fair, good, and excellent). To achieve “excellent” in Academic Performance, a candidate must have at least a 3.5 GPA and letters of recommendation that speak to academic potential. Master’s degrees have been shown to greatly increase the likelihood that candidates will be placed in this category. Many applicants are placed into the “good” category despite strong GPAs due to lack of neuroscience courses or for poor grades in neuroscience. Both tracks will also be beneficial in this regard. For Research Potential, “excellent” is “at least 2 years of neuroscience-related research experience or a master’s along with presentations or publications, a clear research path as outlined in their personal statement and letters that speak to strong research potential.” Applicants scoring “good” in the research category are also highly likely to be admitted. The “good” category requires 1 year of research experience and a planned poster or publication. Students in the research-based track would therefore be classified as “excellent” (we do not distinguish between master’s degrees with or without a thesis) and students in the course-based track would be categorized according to the amount of research they conducted prior to, and during, their career at Illinois. Furthermore, the NSP PhD program is a direct-admit program. Faculty therefore have a large say in who is admitted and faculty tend to favor students they have already worked with at Illinois. Thus, master’s students who do well in 590 courses will be at a distinct advantage for admission into the NSP at Illinois.

In harmony with our desire to serve all of our students well, we are interested in targeting the following specific groups of students who are currently not being well served:

1. Students who take a gap year or two after earning a baccalaureate degree, but prior to admission to professional school. This group often takes a year or more to complete volunteering and community outreach requirements for medical school or other professional schools. In our most recent exit survey of our graduating MCB, BSLAS students in the School of MCB, 38% (118 of 313 respondents) indicated that they were taking a gap year during which they would apply to graduate or professional school. The survey also indicated that another 10% (32 of 313 respondents) had already applied to graduate or professional schools and were waiting for notification of admission. We believe that a course-based MS degree would be quite attractive to these students as a mechanism for deepening their knowledge base, improving GPAs if needed, helping to distinguish themselves among the applicant pool, and preparing them for their next advanced program. This group of students would include students from the University of Illinois Urbana-Champaign, as well as those who have earned baccalaureate degrees from other institutions in Illinois and elsewhere. We currently have several non-degree graduate-level students who take MCB courses each year in preparation for graduate or professional school applications. We would also target this population. Because gap years are usually just one year or 18-months, we have carefully chosen a set of courses that could be completed in two semesters if a student wishes, as opposed to the more usual 3-4 semesters for an MS degree. Students in the research track could also complete the program during a gap

for an MS degree. Students in the research-track could also complete the program during a gap year (2 semesters plus one summer), allowing them to not only strengthen their knowledge of neuroscience through courses, but adding critical skills to their research toolkit through laboratory experiences.

2. The proposed MS in Neuroscience program will respond to critical needs in the field of Neuroscience. First, this master's degree will be attractive to students who would like to apply for PhD programs, but who do not yet have the appropriate level of coursework or research training to do so. The Neuroscience PhD program requires either at least 2 years of research experience or a master's degree (thesis or non-thesis) to be placed in our highest category for research potential on our admissions rubric. Over the past 5 years, 23-37% of applicants and 36-53% of those admitted to our PhD program already possessed master's degrees. These master's degrees were conferred by peer institutions, such as Northwestern University, Johns Hopkins, Boston University, University of Wisconsin at Madison and Milwaukee, Brandeis University, Rochester University, and University of Texas at Dallas. Additionally, many students complete their education at smaller schools and are unable to gain sufficient research experience during their undergraduate career. Other students find neuroscience late during their bachelor's programs and are therefore not able to gain the necessary laboratory research experience to make them competitive for PhD programs. Thus, our proposed program, which will offer a strong graduate-level curriculum with the option for intensive research experiences, will meet the needs of many of these students.

3. Students who plan to obtain employment in industry, government, or nongovernmental organizations often benefit from additional advanced coursework and professional development. Our most recent senior survey in the School of MCB identified 10% of our graduates (31/313) as already being employed and another 20% (64/313) as having applied but not yet been hired. Jobs for our graduates span many areas including pharmaceutical and biotechnology industry, chemical and food industry, policy and other government positions, regulatory and consulting agencies, medical and/or science writers, research and development specialists, project management specialists, user experience roles, medical science liaisons, laboratory and medical technicians, clinical research assistants, health education specialists, and a wide variety of nongovernmental organizations. Students with a bachelor's degree are often hired by these entities, but having an MS degree would certainly make a student much more competitive for these positions. Importantly, there is an increased demand for neuroscientists in industry because neuroscientists are broadly trained from molecules to behavior. The U.S. Bureau of Labor Statistics predicts an 11% growth in demand for neuroscientists for 2023-2033. There are many such jobs available right now: a search of Indeed.com revealed 284 jobs in Illinois for neuroscience (almost all of these specify a master's in neuroscience as a requirement or preference) and 11,000 neuroscience jobs across the nation (8,000 that specify a master's in neuroscience).

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a resul of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects outside of the sponsoring department impacted by the creation/revision of this program? If Yes is selected, indicate the appropriate courses and attach the letter of support/acknowledgement.

Yes

Courses outside of the sponsoring department/interdisciplinary departments:

IB 432 - Genes and Behavior
ECE 421 - Neural Interface Engineering
CB 514 - Neurotoxicology
PSYC 404 - Cognitive Neuroscience
PSYC 414 - Brain, Learning, and Memory
PSYC 433 - Evolutionary Neuroscience

Please attach any letters of support/ acknowledgement for any Instructional Resources. Consider faculty, students, and/or other impacted units as appropriate.	CB Ltr 14 Jul 2025.pdf PSYC Ltr 14 Jul 2025.pdf IB Ltr 14 Jul 2025.pdf Elec & CompEng Ltr 14 Jul 2025.pdf Tables of Example Course Timelines v3 final.xlsx NEUR529_ProfessionalDevelopment_CIMCCompletedWorkflow.pdf

Program Features

Academic Level	Graduate
Does this major have transcripted concentrations?	No

What is the longest/maximum time to completion of this program?

21 Months/4 semesters

What are the minimum Total Credit Hours required for this program?

32 credit hours

What is the required GPA?	2.75 for admission, 3.0 to remain in good standing in the program
CIP Code	261501 - Neuroscience.

Is this program part of an ISBE approved licensure program?

No

Will specialized accreditation be sought for this program?

No

Does this program prepare graduates for entry into a career or profession that is regulated by the State of Illinois?

No

Program of Study

Attach Program of Study related information here.

Catalog Page Text - Overview Tab

Catalog Page Overview Text

Neuroscience, MS
for the degree of Master of Science in Neuroscience

For both the course-based and research-based tracks of the Master's in Neuroscience students are provided with a thorough foundation in neuroscience through an integrated and deliberate effort to ensure that they have the necessary understanding of the molecular and cellular biological science underpinning the study of neuronal systems and brain function at multiple levels, while also having access to the tools and training in the skillsets needed to navigate complex behavior and information processing involved in neural networks and integrative physiological systems, and a variety of neurological disorders. Both tracks equip students with the knowledge, tools, and skills to manage, analyze, and interpret datasets from across various neurobiological systems, in preparation for neuroscience careers in healthcare systems, pharmaceutical industry, biologically and environmentally relevant government agencies, and data-intensive biomedical research areas.

Course-based track:
Students will receive thorough preparation in molecular and cellular neurobiology, neuroendocrinology, neurophysiology, neurochemistry, neuropathology, neuroanatomy, genomics, and structural neurobiology. This will come from coursework and laboratory classes, as well as research opportunities and discovery experiences such as advanced optogenetics and neuroimaging technologies. A thesis is not required for this track.

Research-based track
Students will receive preparation in the same topics as the course-based track. In addition, students receive high quality research opportunities that prepare them for future research careers. A thesis is not required for this track. However, students will be required to present at a University-sponsored poster session.

Statement for
Programs of Study
Catalog

12 credit hours are required at the 500 level (Core and/or Electives)		
20 credit hours are required at the 400- or 500-level		
Neuroscience Core (Course-based & Research-based Tracks)		**13**
The following courses are required for both Course-based and Research-based tracks		
MCB/NEUR 461	Cell & Molecular Neuroscience	3

MCB/NEUR 462	Integrative Neuroscience	3
NEUR 529	Course NEUR 529 Not Found (unless NEUR 520 PDP has been previously completed)	1
NEUR/MCB 542	Interdisciplinary Approaches to Neuroscience I	3
NEUR/MCB 543	Interdisciplinary Approaches to Neuroscience II	3
Course-based Track		**19**
Minimum of 19 credit hours required from the elective options		
CB 514	Neurotoxicology	
ECE 421	Neural Interface Engineering	
IB/NEUR 432	Genes and Behavior	
MCB 401	Cellular Physiology	
MCB 410	Developmental Biology, Stem Cells and Regenerative Medicine	
MCB 418	Neurobiology of the Senses	
MCB 432	Computing in Molecular Biology	
MCB 450	Introductory Biochemistry	
MCB 460	Neuroanatomy Laboratory	
MCB 466	Neuro & Molecular Pharmacology	
MCB 529	Special Topics in Cell and Developmental Biology	
MCB 540	Scientific Writing	
PSYC 404/ NEUR 405	Cognitive Neuroscience	
PSYC/NEUR 414	Brain, Learning, and Memory	
PSYC/NEUR 433	Evolutionary Neuroscience	
Research-based Track		**19**
Research		
Minimum of 15 credit hours required of approved 590 courses		
BIOC 590	Individual Topics	
BIOP 590	Individual Topics	
CDB 590	Individual Topics	

MICR 590	Individual Topics
MIP 590	Individual Topics
NEUR 590	Indiv Topics Neuroscience

Electives

Minimum of 4 credit hours required from the elective options

CB 514	Neurotoxicology
ECE 421	Neural Interface Engineering
IB/NEUR 432	Genes and Behavior
MCB 401	Cellular Physiology
MCB 410	Developmental Biology, Stem Cells and Regenerative Medicine
MCB 418	Neurobiology of the Senses
MCB 432	Computing in Molecular Biology
MCB 450	Introductory Biochemistry
MCB 460	Neuroanatomy Laboratory
MCB 466	Neuro & Molecular Pharmacology
MCB 529	Special Topics in Cell and Developmental Biology
MCB 540	Scientific Writing
PSYC 404/ NEUR 405	Cognitive Neuroscience
PSYC/NEUR 414	Brain, Learning, and Memory
PSYC/NEUR 433	Evolutionary Neuroscience

Additional (400- and 500-level) courses can be considered upon approval of an advisor. Advisors will ensure that students fulfill the 500-level hour requirement.

Total Hours **32**

Other requirements may overlap

Minimum Hours Required within the Unit	8
Minimum 500-level Hours Required Overall	12
Minimum GPA	3.0

Corresponding Degree	MS Master of Science

Program Regulation and Assessment

Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

Student Learning Outcomes

Graduates of the MS in Neuroscience degree program will be able to:

1. Synthesize, understand, and critically evaluate core neuroscientific principles, particularly within their chosen fields of study.
2. Apply knowledge of neuroscientific methods and techniques to evaluate, create, design and carry out experiments.
3. Analyze and interpret scientific data and draw conclusions from it.
4. Effectively communicate (both orally and in writing) to professional and lay audiences.
5. Conduct research ethically and professionally.
6. Develop effective leadership and interpersonal skills to foster collaborations.

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

The Instructional Program of the School of MCB and the Neuroscience PhD Program will provide guidance, career services, and academic advising for students within the MS in Neuroscience degree program. The School of MCB Courses and Curriculum Committee and the Neuroscience Executive Committee will provide faculty input and oversight regarding the evaluation of the program.

We will assess student learning in each course, through rubrics and grades. We will assess mastery of research, experimental design, and quantitative skills through end-of-semester feedback forms solicited from research supervisors. Presentation skills and professional skills will be individually assessed by rubrics completed by faculty. Students will be classified as “not meeting”, “meeting”, or “exceeding” expectations for each outcome. If students are not consistently meeting these outcomes, we will assess our program and adjust accordingly.

The learning objectives of the proposed program will be assessed each academic year. We will produce a learning objectives map that will identify which courses support each learning objective. We will use a Degree Program Curriculum Map to assist in our understanding of how students move through the program and gain knowledge and skills that can be measured. We will use performance on selected questions of final exams in required courses to gauge success in meeting the learning objectives. We will also collect evidence of integrated knowledge and skills by monitoring progress in the 500-level courses that all students in the program will take. Through the use of rubrics, we will be able to determine whether, and at what level, students have attained the desired learning outcomes that we have set for them. We will also conduct annual focus groups with students to help us better understand the student experience in the program. In courses where students are asked to produce reports, presentations, and other types of summative work, we will look for evidence of content and skills mastery. We will use the information we collect to adjust course content if we find that objectives are not being met or not being met sufficiently. Overall, a GPA of 3.0 is required for successful completion of the MS in Neuroscience degree, which will confirm for us comprehensive knowledge and understanding by the graduating student.

The results of all assessment work will be shared with those charged with the delivery of our courses with an eye toward catching objectives that we may not fully meet or areas where we could improve outcomes with adjustments. The results from assessment activities will be shared with all members of the MCB Courses and Curriculum Committee comprised of two faculty members from each of our departments, Associate Directors for Graduate Education, Undergraduate Education, and Curriculum and Instruction, the Neuroscience Executive Committee, as well as two graduate students and one undergraduate student. The results are also shared with the Director for the School of Molecular and Cellular Biology and the Director of the Neuroscience PhD Program.

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

The Faculty of the School of Molecular & Cellular Biology and the Neuroscience PhD Program seek a minimum of 70% success rate for direct measures which include performance on formative and summative assessments, laboratory research data collection and write-up, and/or research presentations in the form of posters presented at research symposia. In situations where the direct measures do not lend themselves well to a percent mastery rate, the faculty expect students to perform satisfactorily.

For the research-based track, all 590 sections will have common guidelines and common assessments. Although the discipline of Neuroscience is diverse and therefore the timeline of research varies widely, all faculty mentoring a Neuroscience master's student will agree to mentoring guidelines. 1) They must work with the student to develop a project that can feasibly be completed in a year. This is similar to the first milestone in the Neuroscience PhD program—the first year project. The form that the research takes (self-designed, assigned, mentored by a PhD student or other lab member) will be individually determined. 2) All projects must provide the student with some sort of ownership over the project, such that they can present a poster at a university-sponsored event. These posters will be assessed using a common rubric.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

We will assess the academic performance of the students in the degree program to ensure that students are able to meet the educational performance expectations while ensuring the need for academic rigor, and we will evaluate the need for adjustment of the program and will make changes, accordingly. Specifically, we will use the information we collect to adjust course content if we find that learning objectives are not being met or not being met sufficiently (i.e., at the 70% success rate or higher). The results of all assessment work will be shared with those delivering the courses with an eye toward catching objectives that we may not fully meet or areas where we could improve outcomes with adjustments. The results from assessment activities are shared with all members of the MCB Courses and Curriculum Committee comprised of two faculty members from each of our departments (total of eight), the Neuroscience Executive Committee, Associate Directors for Graduate Education, Undergraduate Education, and Curriculum and Instruction, as well as two graduate students and one undergraduate student committee members. The results are shared with the Director for the School of Molecular and Cellular Biology and the Director of the Neuroscience PhD Program, and results are also available to all SMCB and NSP faculty members.

We will also assess the effectiveness of the 590 research sections. We anticipate that students will start in one lab and remain in that lab for the duration of their career. Thus, each student will likely enroll in only one 590 section. Switching labs (and thus 590 sections) may delay their progress through the program. Consistency will be maintained across 590 sections through specific guidelines given to all mentors, as stated above. In our annual assessment of the program, we will assess 590 sections for research progress. We will promptly address any discrepancies that arise.

Finally, we will assess the success of the MS in Neuroscience degree based on our students' success in securing employment or admission into a graduate or professional program. We will evaluate the numbers of graduates that end up in each environment and compare that to the students' original intentions, as expressed during the application process. We will not only look at acceptance rates, but at the quality and nature of the individual institutions or entities to which our students move after completing the degree. This assessment will include self-satisfaction reports from the students regarding their intentions prior to enrolling in the degree program. We will solicit input from our enrolled students as they progress toward their degree, in addition to surveying them as they leave and again several years after completion of the program.

Program
Description and
Requirements

Attach Documents

Delivery Method

This program is available:

On Campus - Students are required to be on campus, they may take some online courses.

Admission Requirements

Desired Effective Admissions Term: Fall 2026

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Applicants to the MS in Neuroscience program are expected to hold a bachelor's degree from an accredited four-year college or university. The degree should be in a biological, chemical, physical, or behavioral science, or a closely related field, and applicants should have completed courses in biology, chemistry, mathematics, and English composition. Coursework in neuroscience is desirable but not required. A minimum GPA of 2.75 is required for admission and a minimum of 3.0 (on a 4.0 scale) is required for the final 60 credit hours completed during the last two years of undergraduate study. Deficiencies in these areas will require additional coursework, as necessary, for successful completion of the degree. For those pursuing the research track, prior research experience—particularly beyond standard classroom laboratory experiences—is highly recommended.

We will also require TOEFL scores or IELTS scores for international students. We will use the required scores set forth by the Graduate College. Applications are considered individually by the admissions committee for the fall semester. Graduate Record Examination (GRE) scores are optional. International applicants must meet the minimum Test of English as a Foreign Language (TOEFL) requirement set by the Graduate College.

The number of students admitted to the program each year who indicate that they want to be in the research-based track will be determined by the availability of faculty mentors. We anticipate that this will be around 8-12 students per cohort or 16-20 total by year 5.

Enrollment

Number of Students in Program (estimate)

Year One Estimate	10-15	5th Year Estimate (or when fully implemented)
25-30		

Estimated Annual Number of Degrees Awarded

Year One Estimate	0	5th Year Estimate (or when fully implemented)
25		

What is the matriculation term for this program?

Fall

Budget

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

Additional Budget Information

With respect to teaching courses, we have the capacity to enroll additional students in our upper-level courses, and we are prepared to set aside seats as needed to ensure that these students have access to courses that match their educational interests and goals. We already have a very strong existing instructional program infrastructure that can absorb the new students we attract to this degree program. This is one of the main reasons we feel confident in our ability to add this program to our portfolio of course-based and research-based MS degree programs.

We have no plans to request additional faculty in order to support this proposed degree program. We do not expect to alter the number of faculty in the School of MCB or the Neuroscience PhD Program as a result of the creation of this MS degree program. The School of MCB and the Neuroscience PhD Program already have many neuroscientists among the faculty from our units. Neuroscience is well represented across campus. We have built the proposed program on existing courses, which means that we already have the personnel required to deliver it.

Faculty teaching load will not change as a result of this proposed degree program because the

required MCB and NEUR courses for this degree program currently have capacity to seat additional students or are delivered in sections and can be adjusted to scale. The student-faculty ratio is unlikely to shift significantly. We do not expect this program to significantly impact teaching loads in the initial 3 years since most of the courses have capacity to increase the number of seats for these students. If the proposed MS in Neuroscience substantially alters student-faculty ratios or teaching loads, we will recruit additional faculty to provide instruction or hire an instructor.

Given our current capacity, the addition of 10-15 students per cohort will not affect any one course in a significant way. The one exception to this might be the scientific writing course (MCB 540: Scientific Writing), which may need to have an additional neuroscience-specific section formed that is taught by neuroscience faculty. Further, we expect that some of the students who will choose this degree program may come from the group who would have selected the MS in MCB degree program in the absence of this proposed degree program. This further reduces the overall impact on student-faculty ratios and class size. If any individual course sees an increased pressure on enrollment, we will work with our faculty to find solutions so that the course can move forward with undiminished quality. We imagine that this might include the service of a course coordinator or assignment of additional graduate teaching assistants to the course.

Attach File(s)

Financial Resources

How does the unit intend to financially support this proposal?

The master's in neuroscience program will be supported through existing resources within the School of MCB and the Program in Neuroscience.

Will the unit need to seek campus or other external resources?

No

Attach letters of support

Tuition Waiver Policy Signed MS NEUR.pdf

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

We will use the Chemical and Life Sciences Academic Year Tuition Rate for New & Continuing Students

Is this program requesting self-supporting status?

Yes

IBHE

Institutional Context

University of Illinois at Urbana-Champaign

Describe the historical and university context of the program's development. Include a short summary of any existing program(s) upon which this program will be built.

Explain the nature and degree of overlap with existing programs and, if such overlap exists, document consultation with the impacted program's home department(s).

The University of Illinois Urbana-Champaign has for a long time been the home of the graduate Neuroscience Program. Founded in 1972, the same year that the Society for Neuroscience formally organized, the four initiators were from life sciences and psychology. The existing Neuroscience PhD program was developed in 1989 and has grown to include approximately 100 faculty members from 25 departments in 7 colleges and 60 graduate students. This PhD degree program was part of the School of MCB for many years before becoming a stand-alone entity in the College of Liberal Arts and Sciences. Because of this long history, the School of MCB and the program in Neuroscience feel confident in proposing a course-based and research-based MS in Neuroscience degree program, which will provide new opportunities for students to advance their education and research experience, while making full use of current and future faculty expertise and existing plus new course offerings. The School of MCB and the Neuroscience PhD Program (NSP) both have a long history of excellence in instruction, and in the development and deployment of bachelor's, master's, and doctoral degree programs.

There is currently no other MS in Neuroscience (course-based, research-based, or otherwise) program on our campus so there is no overlap with existing programs on this campus. The Neuroscience PhD program does not offer a master's degree, terminal or otherwise. In 2018, we began discussions about developing a MS in Neuroscience degree program, as Neuroscience has been increasing in popularity across the nation. The MS in Neuroscience students would be enrolled predominantly in courses currently offered by the Neuroscience and MCB programs. However, the MS in Neuroscience electives include courses offered by Electrical and Computer Engineering, Integrative Biology, Comparative Biosciences, and Psychology. Letters of support are attached.

University of Illinois

Briefly describe how this program will support the University's mission, focus and/or current priorities. Demonstrate the program's consistency with and centrality to that mission.

State of Illinois' mission: The Public Agenda for Illinois Higher Education (https://www.ibhe.org/Public-Agenda.html) is a planning blueprint for the State of Illinois to direct state policies and resources to the higher education and career needs of Illinois residents and to address the current and future economic needs of the state.

The University of Illinois' mission: Closely tied to that of the State of Illinois, the University of Illinois' mission (https://www.uillinois.edu/about/mission/) is to transform lives and serve society by education, creating knowledge, and putting knowledge to work on a large scale and with excellence.

The proposed MS in Neuroscience degree program addresses several elements of the University's Mission and Strategic Plan:

1) This proposal creates a new MS degree program where one has not existed previously. Specifically, it will provide students with the opportunity to earn a course-based or research-based M.S. degree in Neuroscience where no such opportunity existed in the past. This degree can serve them in many ways, including strengthening their competitiveness for admission to PhD or professional programs and enhancing their competitiveness for employment in skilled workforce areas to positively impact their earning power and influence in industry or government jobs or other arenas.

2) This proposed degree program will support economic development by funneling more specially qualified Illinois residents into jobs in the growing field of Neuroscience within the State of Illinois and elsewhere.

3) This proposed program will reflect our campus-wide commitment to diversity by working to support all students such that they have what they need to succeed at Illinois and elsewhere. We work daily to meet the requirement that our courses are taught with consideration to issues of diversity, equity, and inclusivity. All students are important in our School of MCB and Neuroscience community, and we continue to foster the development in each student of a sense of accomplishment, confidence, and pride in the work they do and the personal and professional experiences they encounter. These professional skillsets that our students develop positively impact the ability of our students to succeed in their future endeavors.

4) While serving the needs of targeted populations is the highest priority, this program also meets the need of our units and the Campus to find innovative ways to attract new students to study at Illinois. This, in turn, will generate tuition revenue for the future so that funds can be reinvested to give our students the best possible educational experience. This program, as

proposed, will provide a mechanism for sustainability with minimal new investment.

The proposed MS in Neuroscience degree program will provide high quality advanced instruction and research experiences for individuals who wish to further their training in neuroscience to improve their qualifications for PhD programs, professional programs, or jobs in industry or government. The program, as set forth, will make graduates from the master's program highly desirable in these career paths. Further, as outlined in the Strategic plan of the University, one goal is to increase revenue streams. This proposed MS in Neuroscience degree supports the University's mission through self-supporting continuing education programs. Additionally, we plan to generate enough revenue through this program to provide scholarships to students of underrepresented in the sciences, low-income students, and first-generation students, thereby serving the University's diversity and inclusion mission. The Master of Science in Neuroscience will allow a diverse population of individuals to greatly increase their competitiveness for attaining a PhD or professional degree, thereby increasing educational attainment. Furthermore, our global society and economy are increasingly reliant on scientific knowledge. The demand for neuroscientists has increased by 12% since 2012 and neuroscience is therefore one of the fastest growing disciplines across the nation, with projections of 11% growth over the next 10 years. Our MS in Neuroscience degree program meets this economic demand for high-quality credentials. This demand extends to the State of Illinois, where there is a demonstrated need for neuroscientists who have master's degrees (according to a search of jobs on Indeed.com). Our program integrates education and research, and gives students access to over 100 researchers conducting innovative research across many disciplines, from Psychology to Biology to Engineering.

Educational Attainment: By providing this new and unique two-track MS in Neuroscience degree program at the University of Illinois Urbana-Champaign, we will increase access to an advanced degree in Illinois that will enable our students to achieve skilled employment, by enabling us to train more graduate students in advanced areas with high-end technical skills. The result will be improved the overall quality of educational outcomes in Illinois.

College Affordability: Prior to the proposal of this degree program, there was no option for a student to earn a Master of Science degree in Neuroscience. The existing PhD program in Neuroscience does not confer an MS degree as the student moves through the program. The advent of this proposed MS in Neuroscience degree will allow students to study the discipline of most interest to them at the master's level, eliminating one step in their progression to the next level of education or employment.

High Quality Credentials to Meet Economic Demand: The proposed MS in Neuroscience degree program will help students achieve their educational and career objectives by providing a high-quality curriculum in a specific area that will lead to further education or meaningful employment with companies working to improve the quality of life for all citizens of Illinois

employment with companies working to improve the quality of life for all citizens of Illinois. Whether it is to further their education in academia or to gain skilled employment in industry or government, students graduating with an MS in Neuroscience will have the knowledge and skillsets necessary to succeed at their next career stage.

Integration of Educational, Research, and Innovation Assets: The proposed MS in Neuroscience degree program will help prepare students for success in the global economy by providing a rigorous and focused degree that will make them more competitive for matriculation in neuroscience or related graduate or professional degree programs or securing and retaining employment in this growing disciplinary area. Integral to this degree program, the proposed curriculum proposed provides comprehensive and foundational concepts necessary for success in the discipline, but also skillsets such as critical thinking, problem-solving, and communication that will feed innovation and high performance in academia, industry, and government, as well as societal arenas. Students completing this MS in Neuroscience degree will be highly prepared for stepping into exciting roles in academia, medicine, technology, business, industry, and government.

Discuss projected future employment and/or additional educational opportunities for graduates of this program. Compare estimated demand with the estimated supply of graduates from this program and existing similar programs in the state. Where appropriate, provide documentation by citing data from such sources as employer surveys, current labor market analyses, and future workforce projections. (Whenever possible, use state and national labor data, such as that from the Illinois Department of Employment Security at http://lmi.ides.state.il.us/ and/or the U.S. Bureau for Labor Statistics at http://www.bls.gov/).

Employment Outlook:
This program responds to the national priority for training graduate students at the master's level for careers outside of academia, providing foundational background for successful performance in industry, governmental or corporate environments, where scientific knowledge, critical thinking, and problem-solving experiences in addition to disciplinary competency are vital. While we have not conducted a full market analysis, we do require our BSLAS graduates in MCB and Neuroscience to submit a senior exit survey and have a very high rate of response on the instrument (74%). These responses, as cited in prior questions, suggest that there is a significant market for this degree program among our just graduating BSLAS students, which is expected to be on par with a similar group of students from other institutions. Quite simply, students can go farther in their careers with an MS degree in Neuroscience, and it can serve them in a multitude of ways either via improved employment opportunities or improved admissions offers from graduate and professional schools. The employment outlook for the group moving into industry is robust. Our students commonly are hired by biotechnology or pharmaceutical companies, such as AbbVie, Abbott Laboratories, Eli Lilly, Pfizer, Johnson & Johnson, Monsanto, and Kimberly-Clark. Indeed, these companies frequently visit our campus, seeking new recruits from our MCB programs. Similarly, employment in national laboratories and other government or nongovernmental organizations are also on the upswing in the area

of neuroscience. We predict increased interest by the companies in students with an MS in Neuroscience degree. For students seeking admission to graduate or professional school, the MS degree will help them to distinguish themselves from among a large group of highly qualified applicants. These students would be ranked very highly for admission the Neuroscience PhD program at Illinois. We would hope to make maximum use of the Graduate Career Development Office and their services as a resource for our students working toward employment at the end of their degree program.

As stated above, a master's in neuroscience is in high demand. According to a search of Indeed.com (July 2025) there are 284 jobs that require a master's in neuroscience in Illinois alone, as well as 8,000 jobs across the US. In industry and government, individuals with a master's degree in Neuroscience can seek out multiple opportunities, including medical and/or science writing, research and development, project managers, user experience roles, data analytics, medical science liaisons, laboratory and medical technicians, clinical research

What resources will be provided to assist students with job placement?

We will require a course (NEUR 529) that focuses on professional development. The course will take students through the process of developing and writing CVs/resumes, personal statements, cover letters, and giving oral presentations. We will also do mock interviews and talk about job/professional program search strategies. Given the strength of our existing neuroscience PhD program, we are confident that we will be able to provide outstanding training and mentorship to these master's students.

The School of MCB has existing resources located within our School of MCB Career Development team. Students will receive career advising as needed and will be encouraged to participate in the ACES & LAS Career Fair as well as the Illini Career & Internship Fair each year. Students will be encouraged to interact with employers through Handshake where they can apply for posted positions. The School of MCB Career Development Office will host information sessions throughout the year for companies interested in students with an MS in Neuroscience. The School of MCB also hosts one of the Academic Alliance Campus Partnership Managers from Sandia National Laboratories who will assist with advising and providing information regarding career development opportunities in government sectors.

It is likely that some of students earning this degree will not seek a job immediately after graduation but instead seek further education either in graduate or professional school. Students completing the MS in Neuroscience would be favorably considered by the NSP PhD Admissions Committee. The NSP PhD program uses a holistic admissions rubric that assesses prospective students on three different dimensions: Academic Performance, Research Potential, and, weighted less heavily, Leadership/Service. Applicants are placed into one of four possible categories within each of these three dimensions (poor, fair, good, and excellent). To achieve "excellent" in Academic Performance, a candidate must have at least a 3.5 GPA and

letters of recommendation that speak to academic potential. Master's degrees have been shown to greatly increase the likelihood that candidates will be placed in this category. Many applicants are placed into the "good" category despite strong GPAs due to lack of neuroscience courses or for poor grades in neuroscience. Both tracks will also be beneficial in this regard. For Research Potential, "excellent" is "at least 2 years of neuroscience-related research experience or a master's along with presentations or publications, a clear research path as outlined in their personal statement and letters that speak to strong research potential." Applicants scoring "good" in the research category are also highly likely to be admitted. The "good" category requires 1 year of research experience and a planned poster or publication. Students in the research-based track would therefore be classified as "excellent" (we do not distinguish between master's degrees with or without a thesis) and students in the course-based track would be categorized according to the amount of research they conducted prior to, and during, their career at Illinois. Furthermore, the NSP PhD program is a direct-admit program. Faculty

If letters of support are available attach them here:

that the admissions rubrics between the three schools are highly similar, indicating that not only will our master's students be successful in applying to the Illinois PhD program, but to other top-ranked programs as well.

Comparable Programs in Illinois

Advising and career coaching resources to support these pathways already exist in the School of MCB, and these students will be served by the existing structures. Based on the enthusiastic response we have experienced with the number of students enrolled in our recently launched BS in Neuroscience degree in SMCB, we anticipate that both tracks of the MS in Neuroscience program will grow rapidly. We anticipate the need for a dedicated coordinator and dedicated advisor/career coach for our proposed MS in Neuroscience program.

Identify similar programs and sponsoring institutions in the state, at both public and private colleges and universities. Compare the proposed program with these programs, and discuss its potential impact upon them. Provide complete responses, do not reference website links.

The Master of Science in Neuroscience will provide critical training to students that will allow them to pursue a variety of career paths-- to apply to PhD programs and professional programs, to obtain positions in industry, or to work for government agencies.
There are seven other MS in Neuroscience programs in the State of Illinois. See enclosed document for more details. They are found at the following institutions: Rosalind Franklin University of Medicine & Science, Loyola University Chicago, Northwestern University, University of Chicago, University of Illinois Chicago, Illinois State University, and Rush University. Each of those institutions also has a PhD in Neuroscience program. We are the only institution in the State of Illinois offering a PhD but not an MS degree in Neuroscience. We are also the only PhD program on campus without an associated MS degree. Further, we would be the only institution in the State of Illinois to offer a course-based MS in Neuroscience program making us unique among our competitors. There are two top master's programs in the State of Illinois -- at Loyola University of Chicago and at Northwestern University, both have a higher number of prerequisites for admission and therefore present a barrier for access to many students. The Northwestern program requires substantial previous research experience (at least 9 months) for admission-- we will have no such previous research requirement, allowing more students to apply to the program. The Loyola program requires an extensive background in biology, chemistry, and organic chemistry; two courses in each with accompanying laboratory sections. We will not have these course requirements as part of the degree program. Thus, our program is unique as we seek to provide a strong background in research and in coursework that students will require to be competitive for additional programs or positions.

Comparable
Programs in Illinois
Attach Documents
Comparable Master's Programs 14 July 2025.pdf

A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth

IBHE is charged to develop a strategic plan to address the present and future aims and needs and requirements of higher education in Illinois (110 ILCS 205/6) (from Ch. 144, par. 186) Sec. 6). Illinois Administrative Code:

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically justified based on the educational priorities and needs of the citizens of Illinois Respond to the following questions about how the proposed program will support the three goals of A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth Strategic Plan.

Equity

Describe institutional-level plans to close equity gaps in access, progression, completion, and attainment and the implications for the proposed program. More specifically, provide institutional-level plans for attracting, recruiting, retaining, and completing a diverse group of students including working adults, students of color, transfer and low-income students and implications for the proposed program. Explain how progress will be monitored.

The proposed program will reflect our campus-wide commitment to equity by working to support all students so that they have what they need to succeed at Illinois and elsewhere. We work daily to meet the requirement that our courses are taught with consideration to issues of equity and inclusivity. All students are important in our School of MCB and Neuroscience community, and we continue to foster the development in each student of a sense of accomplishment, confidence, and pride in the work they do and the personal and professional experiences they encounter. The growth of these professional skillsets in our students will positively impact the ability of our students to succeed in their future endeavors.

As for all of the degree programs in the School of MCB and the College of LAS, the MS in Neuroscience program is designed to respond to all three of the goals of the A Thriving Illinois Strategic Plan.

With regard to equity, the School of MCB and the College of LAS has embraced the goals of the Campus to expand access for high-achieving, low- and moderate-income students by engaging in several efforts to enhance recruitment and retention in our majors and degree programs.

1. For this Master's in neuroscience, we will leverage existing offices within the School of MCB. This includes having access to the Assistant Director for Curriculum & Instruction + Diversity, Equity, Inclusivity, who is also the School's Director of the Merit Program for Emerging Scholars, an enrichment and cohort-building program for undergraduates of high potential who are women or members of minority groups underrepresented in STEM areas. This person is committed to DEI-related goals within MCB's curricula and is helping to develop and implement policies that foster understanding, adoption, and adherence to DEI best practices. This person helps organize and convene School-wide lectures, workshops, professional networking and DEI training workshops, and other climate improving activities that welcome and help retain underrepresented students in STEM majors. This person also serves on the School's Diversity Committee and will help interface with Campus-level Climate efforts.

2. We will call upon the expertise of the MCB Assistant Director for Curriculum & Instruction, who, in partnership with Integrative Biology, Mathematics, and Chemistry is co-teaching a Merit Mentoring & Professional Network course (LAS 199 MPN funded by the Student Success Initiative) that provides both a majors-based mentoring network and professional development opportunities and sponsorship of paid high-impact major-related co-curricular experiences including, but not limited to, undergraduate research, teaching, and other laboratory

experiences. Our required Professional Development course (NEUR 529) will also serve many of these same functions.

3. We will make a strong and sustained effort to attract exceptionally talented students to our program. Once we achieve self-supporting status, we will be able to offer merit-based scholarships to our students.

4. We will participate in Campus recruiting events specifically targeting underrepresented minority and first-generation college students, such as those offered by Aspire and the recently established South and Central Illinois STEM Alliance (SCI-STEMA), a multi-institutional program where the University of Illinois serves as the flagship institution and is supported through the Chancellor's Office, the College of LAS, and Grainger College of Engineering.

5. We will work closely with College of LAS Access and Achievement Program (AAP) to provide retention services for STEM students admitted through Aspire, SCI-STEMA, and other programs that support underrepresented students.

6. We will also work closely with the Office of Minority Student Affairs (OMSA) to provide free support and academic services for underrepresented students.

7. We have participated, and will continue to participate, in a climate survey process conducted by the College of LAS to gather information from all unit constituencies as it pertains to DEI perceptions, analyzing the results, prioritizing, and implementing subsequent action plans to address issues that are identified.

8. We will expand outreach activities. In partnership with STEM Illinois, an outreach initiative of the University of Illinois Urbana-Champaign, the School of MCB aims to engage with K-12 students, especially those from diverse backgrounds and different learning styles, and connect them with STEM education and career opportunities. The School of MCB Communications and Academic Advising units help produce webcast episodes featuring alumni in health professions to provide career guidance to underrepresented students to help develop a high school to college pipeline. The School of MCB will also reach out to underserved high school students in our community by offering them a summer enrichment experience by continuing and expanding our partnership with the eCLOSE Institute, a nonprofit public charity organization aimed at building teacher-scientist teams for high schools. The Neuroscience Program also aims to engage with K-12 students. Each Spring, we have Brain Awareness events, where our students go into Champaign-Urbana schools to teach students about neuroscience and the brain.

9. We will partner with the Interdisciplinary Health Sciences Institute's Community Academic Scholars Initiative to provide students opportunities to pursue community-based research

Scholars initiative to provide students opportunities to pursue community-based research projects in the summer.

10. We will provide virtual prospective information sessions regarding our Masters; making it more accessible for low-income students to learn about our programs.

11. We will recognize and celebrate first-generation students through special social engagement events. The Neuroscience program has a first-generation support group.

Describe program and institution-based high-impact practices and wrap-around student support services ensuring equitable access and success for students enrolled in the proposed program.

The School of MCB has embraced the overall goals of the Campus to increase student graduation rates for high-achieving, low- and moderate-income students by engaging in several efforts to enhance retention in our majors. The School of MCB has a large Instructional Program and Advising Center that provides extensive academic advising, career development, and assistance resources, including tutoring, peer mentoring, and cohort-building opportunities. These resources will be made available to the MS students in the proposed program.

Additional efforts include:

1. Tailored advising will occur in the research-based track MS program as students will be working in individual labs under the supervision of a specific faculty advisor.

2. We will require an 8-week course, NEUR 529, where students in both the research- and course-based tracks will work on writing CVs, resumes, cover letters, and personal statements. Students will also hone their interview and presentation skills, as well as explore various career paths.

3. Once we achieve self-sustaining status, we will offer travel awards for students to attend the Society for Neuroscience conference. This is the flagship conference in the Neuroscience discipline.

4. We will coach students to access the University of Illinois Career Center and Writing Center.

5. We will encourage students to access tutoring services at the campus Jefferies Center. This center provides in-person and on-line tutoring.

6. We will make students aware that the campus health center offers mental health resources.

7. We will help our students connect with the U of I Career Center in partnership with the Jeffries Center. This center sponsors the FOCUS program, an intensive semester program

created to eliminate the gap in post-graduation outcomes and starting salaries between first-generation students and their peers. Its aim is to positively impact their career trajectory, earnings potential, and economic security for years to come.

Explain institutional strategies being implemented to increase and retain faculty, staff, and administrators of color and the implications for the proposed program. Explain how progress will be monitored.

To sustain our leadership role as the largest and most successful NIH-supported biomedical enterprise on the campus, to advance the excellence of our educational and research missions, and to propel its dominance as a world-recognized leader in innovative and transformative science, the School of MCB will continue to recruit multiple tenure-track or tenured faculty members every year. This hiring effort will occur in the critical thrust areas defined by the Strategic Advisory Committee of the School, which will strive to target new faculty members at the forefront of paradigm-shifting discoveries and advances in the biological sciences, including revolutionary innovations in data science and emerging biotechnologies that will shape the way we study biology and interact with our world. These hires will not only contribute to the fundamental understanding of life, but also will have direct or indirect translational implications and applications that strongly alignment with the health-centric strategic planning of the campus.

MCB's Strategic Advisory Committee (SAC), composed of eight tenured faculty members from four departments, is responsible for developing a broad vision of SMCB's future research directions and identifying key areas for strategic investments. To date, the SAC has emphasized several top priority areas including brain plasticity, immunology, neuroinflammation, neurophysiology, microbiome, RNA biology, cancer and metabolism, stem cells and regeneration, and emerging infectious diseases, as well as the associated genomics, informatics, and data sciences. The School is committed to achieve gender, racial and ethnic diversity in our faculty ranks by leveraging various mechanisms available to us. The School's faculty consists of approximately 35% females with approximately 5% from underrepresented groups. Recruitment of outstanding scientists from diverse backgrounds is critical for maintaining gender diversity and academic excellence of the School, and the SAC has this as a priority. Noteworthy is the Early Career Researchers seminar series started by the Departments of Microbiology and Cell and Developmental Biology, which is bringing in outstanding post-doctoral fellows, targeting members of underrepresented groups, for departmental seminars with the goal of identifying strong faculty candidates from diverse backgrounds that could be recruited.

The School's DEI Committee, comprised of eleven faculty and instructional program staff members, provides leadership in gauging School climate and developing policy and actions to address any identified areas needing improvement regarding admissions, pedagogy, mentoring, hiring, and promotion. For example, the DEI Committee hosts a regular series of Fireside Chats, conversations that explore the question: Who belongs in research science? This series showcases a variety of voices and stories to show the diversity of experiences among faculty and the challenges they have overcome throughout their careers.

The Neuroscience program does not directly hire faculty but works to support other units in hiring diverse faculty.

Sustainability

Describe strategies and initiatives the institution plans to implement that makes the proposed program and college more generally affordable for students and their families, including those who have been historically underserved.

With regard to sustainability, in addition to participating in and implementing the financial support efforts provided by the Campus and College of LAS, the School of MCB decreases the barriers for our students to access important laboratory research experiences by providing: (1) significant fellowship support for summer research opportunities, (2) work-study opportunities as undergraduate hourly assistants in the Instructional Program curricular and advising offices and as preparatory assistants for laboratory courses, and (3) ample hands-on, course-based laboratory experiences for students to gain laboratory experience, both of which are critical for securing future academic advancement or employment in the competitive job market.

The Graduate College Fellowship program provides financial support through fellowships and tuition and partial fee waivers to students to promote inclusion and diversity by supporting students who represent a broad array of life experiences and perspectives. Master's students are eligible for a one-year $20,000 award through the Equity and Aspire Master's Fellowships. When our program becomes self-sustainable, we will offer merit-based scholarships to defray the cost of tuition for matriculants.

Provide tuition cost analysis for comparable programs and institutions in Illinois.

We are requesting Chemical & Life Sciences Differential Tuition rate for this degree program. The tuition for Master's in Neuroscience students who are residents of the State of Illinois for the 2025 Academic year is $18,958. The same degree program for a non-resident is $35,262, and tuition for international students is also $35,262. Compared to the other Neuroscience Master's programs in Illinois, this tuition rate makes us the third cheapest option (range: $8,337 at Illinois State to $66,912 at Northwestern). We believe that this tuition rate nicely balances revenue generation and program affordability and accessibility.

Growth

Provide a supply and demand analysis for the proposed program that, at minimum, does the following: a) Provides evidence of student interest in the proposed program including any strategies to incentivize students to stay in Illinois. b) Identifies and provides evidence of a high-quality credential with viability for future careers.

With regard to growth, this proposed MS in Neuroscience degree program will support economic development by funneling more specially qualified Illinois residents into jobs in the State of Illinois and elsewhere. This degree can serve the Strategic Plans of Illinois and the University in many ways, including strengthening the competitiveness of graduates for admission to more advanced neuroscience or related studies in PhD or professional programs and enhancing their competitiveness for employment in skilled workforce areas to positively impact their earning power and influence in industry or government jobs or other arenas.

The MS in Neuroscience degree program is an innovative approach to providing additional support for the tremendous and rapidly growing demand for employees with capabilities in the cutting-edge of neurobiology but also in the fields where the vast amounts of neuroscience-related data is being generated, especially at the interface of biology, medicine, pharmaceutical and other health-related fields. There is an urgent and growing need for graduates with a degree in neuroscience in medicine, healthcare, and pharmaceutical industries. There is already a high need for these individuals in the biomedical fields of neurophysiology, neurochemistry, and neuropathology where their skillset integrates molecular cell biology with the study of the brain and its functional systems. As mentioned above, there is an increased demand for neuroscientists in industry because neuroscientists are broadly trained from molecules to behavior. The U.S. Bureau of Labor Statistics predict an 11% growth in demand for neuroscientists for the period of 2023-2033. There are many such jobs available right now: a search of Indeed.com revealed 300 jobs in Illinois for neuroscience (almost all of these specify a master’s in neuroscience) and 11,000 neuroscience jobs across the nation (8,000 that specify a master’s in neuroscience).

Explain how the program engaged with business and industry in its development and how it will spur the state’s economy by leveraging partnerships with local, regional, and state industry, business leaders and employers.

The School of MCB engages in Campus and College of LAS level industry engagement activities such as the DPI and Research Park in several ways. Notably, many MCB faculty have translational research projects funded by the DPI that seek to bridge the academic-industry application divide. Many School faculty members and current or graduated students have connections with startup companies associated with the EnterpriseWorks incubator located in the Campus Research Park. The Neuroscience program has had success with a one-to-one mentorship program with AbbVie at Research Park. Over 70% of startup companies that graduate from EnterpriseWorks remain within the State of Illinois. In addition, many of the current students and graduates from the School of MCB and the NSP find employment in the myriad corporations located in Research Park.

Describe how the proposed program will expand access and opportunities for students through high-impact practices including research opportunities, internships, apprenticeships, career pathways, and other field experiences.

The School of MCB provides extensive undergraduate laboratory research experience for all students in our majors, both in the form of course-based laboratory research experiences and in the form of experiential training in faculty research laboratories, including study abroad, and through internships at various local or regional hospitals, clinical laboratories, industries, and governmental or nongovernmental organizations. As mentioned above, the School and its Departments provide approximately forty-five summer research fellowships to work in faculty laboratories. As part of this experience, students also participate in laboratory meetings, journal clubs, seminars, and research conferences where they present posters or talks about their research. Many students choose to submit a senior thesis for consideration of graduating with high or highest distinction.

The Neuroscience program offers access to over 100 faculty members in 25 different departments across campus. This offers students unparalleled access to most of what Illinois has to offer, including core human and animal imaging facilities at the Beckman Imaging Center, the Beckman Institute Microscopy Suite and Visualization lab, and genomics and spatial transcriptomics core facilities in the Carl Woese Institute for Genomic Biology. The Neuroscience program is highly collaborative and therefore frequently students are working with faculty across disciplines and gaining valuable experience using multiple cutting-edge techniques.

At Illinois, university faculty and student entrepreneurs also have opportunities to participate in the Illinois I-CORPS training program, which is part of the NSF Great Lakes Regional I-CORPS Hub. This training helps researchers to gain valuable insight into entrepreneurship, starting a business, industry requirements, and challenges associated with moving promising research ideas from the laboratory to the marketplace. Some School faculty have also participated as mentors or technical advisors for local, regional, or national I-CORPS programs. Two NSP alumni have started their own companies—PSYONIC and Traverse Science. Aadeel Akhtar of PSYONIC has been very active in working with our students. Innovation is also a cornerstone of the NSP —to date, NSP faculty have produced a total of 208 patents.

Students in the MS in Neuroscience program will have access to the same opportunities to engage with these faculty, core facilities, training programs, and techniques.

Explain how the proposed program will expand its models of teaching and learning, research, and/or public service and outreach that provide opportunity for students to succeed in the work of the future.

The School of MCB participates in the campus-wide recruiting platform Handshake, where students can find jobs, internships, upcoming career fairs, on-campus recruiting events, networking opportunities, workshops, and other career development events. Each fall term, the School hosts a Career Symposium for our majors, where alumni and professional mentors come to campus to share their experiences and career paths and connect with our students.

Every Fall term, the School hosts a school-wide Graduate Research Symposium, where graduate students and postdoctoral fellows present their work in the form of posters or talks. The day-long event also includes a plenary lecture, a few featured talks from new faculty, and opportunities to socialize, exchange research information and ideas, and foster collaborations.

The Neuroscience Program offers weekly research seminars from top neuroscientists across the country and Canada. Additionally, the NSP offers a Society for Neuroscience poster preview night, which gives students a chance to get feedback on their posters that they will present at the Society for Neuroscience conference. Both the MCB Graduate Research Symposium and Neuroscience SfN poster preview night will provide a venue for students in the research-based track to present their work.

Beyond workforce need, describe how the program broadly addresses societal needs (e.g., cultural or liberal arts contribution, lifelong learning of Illinois residents, or civic participation).

Neuroscience is one of the fastest growing domains of medical and pharmaceutical information technology today. Medical enterprises, private and public healthcare organizations, government health agencies, and pharmaceutical companies all over the world are scrambling to adopt and integrate modern molecular biology and biomedical technologies with neuroscience, psychology, and other mental health areas. Because neuroscience is at the crux of understanding the biology of how the brain works, it is the key to researching the causes of and developing the biomedical solutions to the ongoing mental health crisis. Disorders ranging from autism, ADHD, anorexia, and Alzheimer's disease to substance use disorder, epilepsy, schizophrenia, Parkinson's disease, and many more are on the rise and pose an enormous financial burden. It is critical that our students, who wish to meet this urgent need through their future neuroscience-based educational and professional career choices, have a strong foundation in Neuroscience, and this proposed MS degree program will provide the means for them to achieve their goals.

This proposed MS degree program will also reflect and serve as example of our campus-wide commitment to diversity by working to support all students such that they have what they need to succeed at Illinois and beyond. We work daily to meet the requirement that our courses are taught with consideration to issues of inclusivity and diversity, such that all students learn in an environment that is welcoming and teaches acceptance through example. All students are important in our School of MCB and Neuroscience Program community, and we continue to foster the development in each student of a sense of accomplishment, confidence, and pride in the work they perform. These professional skillsets that our students develop will positively impact the ability of our students to succeed in their future endeavors, teaching them life-long skills needed for success in their careers, lives, and communities.

A Thriving Illinois:
Higher Education
Paths to Equity,
Sustainability, and
Growth - Attach
Documents

Program Description and Requirements

Illinois Administrative Code:

1050.30(b)(1) A) The caliber and content to the curriculum assure that the objectives of the unit of instruction will be achieved; B) The breadth and depth of the curriculum are consistent with what the title of the unit of instruction implies; C) The admission and graduation requirements for the unit of instruction are consistent with the stated objectives of the unit of

instruction.

1050.30(b)(3): Appropriate steps shall be taken to assure that professional accreditation needed for licensure or entry into a profession as specified in the objectives of the unit of instruction is maintained or will be granted in a reasonable period of time.

1050.50 (a)(2)(C) Requirement for Programs in which State Licensure is Required for Employment in the Field: In the case of a program in which State licensure is required for employment in the field, a program can be found to be in good standing if the institution is able to provide evidence that program graduates are eligible to take the appropriate licensure examination and pass rates are maintained as specified in the objectives of the unit of instruction. If there is no such evidence, the institution shall report the program as flagged for review.

Program Description

Provide a description of the proposed program and its curriculum, including a list of the required core courses and short ("catalog") descriptions of each one. (This list should identify all courses newly developed for the program).

Provide Program Description here:

Neuroscience, MS
for the degree of Master of Science in Neuroscience

For both the course-based and research-based tracks of the Master's in Neuroscience, students are provided with a thorough foundation in neuroscience through an integrated and deliberate effort to ensure that they have the necessary understanding of the molecular and cellular biological science underpinning the study of neuronal systems and brain function at multiple levels, while also having access to the tools and training in the skillsets needed to navigate complex behavior and information processing involved in neural networks and integrative physiological systems, and a variety of neurological disorders. Both tracks equip students with the knowledge, tools, and skills to manage, analyze, and interpret datasets from across various neurobiological systems, in preparation for neuroscience careers in healthcare systems, pharmaceutical industry, biologically and environmentally relevant government agencies, and data-intensive biomedical research areas.

Course-based track:
Students will receive thorough preparation in molecular and cellular neurobiology, neuroendocrinology, neurophysiology, neurochemistry, neuropathology, neuroanatomy, genomics, and structural neurobiology. This will come from coursework and laboratory classes, as well as research opportunities and discovery experiences such as advanced optogenetics and neuroimaging technologies. A thesis is not required for this track.

Research-based track
Students will receive preparation in the same topics as the course-based track. In addition, students receive high quality research opportunities that prepare them for future research careers. A thesis is not required for this track. However, students will be required to present at a University-sponsored poster session.

We will require that students in both the Course-based and Research-based tracks take a minimum of 32 credit hours. At least 12 credit hours are required at the 500 level (Core and/or Electives) and 20 credit hours are required at the 400- or 500-level. Additional (400- and 500-level) courses can be considered upon approval of an advisor. Advisors will ensure that students fulfill the 500-level hour requirement.

Neuroscience Core (Course-based & Research-based Tracks) for 13 credit hours:

MCB 461 (NEUR 461): Cell and Molecular Neuroscience (Fall) 3 credit hours
MCB 462 (NEUR 462): Integrative Neuroscience (Spring) 3 credit hours
NEUR 529: Professional Development (Summer and Fall) 1 credit hour

NEUR 542 (MCB 542): Interdisciplinary Approaches to Neuroscience I (Fall) 3 credit hours
NEUR 543 (MCB 543): Interdisciplinary Approaches to Neuroscience II (Spring) 3 credit hours

Course-based Track
Minimum of 19 credit hours required from the elective options

CB 514: Neurotoxicology (Spring odd years) 3 credit hours
ECE 421: Neural Interface Engineering (Spring) 4 credit hours
IB 432 (NEUR 432): Genes and Behavior (Spring) 3 credit hours
MCB 401: Cell Physiology (Fall) 3 credit hours
MCB 410: Developmental Biology, Stem Cells and Regenerative Medicine (Spring) 3 credit hours
MCB 418: Neurobiology of the Senses (Spring) 3 credit hours
MCB 432 Computing in Molecular Biology (Fall) 3 credit hours
MCB 450: Introduction to Biochemistry (Fall, Spring) 3 credit hours
MCB 460: Neuroanatomy Laboratory (Fall) 2 credit hours
MCB 466: Neuro & Molecular Pharmacology (Spring) 3 credit hours
MCB 529: Special Topics in Cell and Developmental Biology 1 to 4 credit hours
MCB 540: Scientific Writing (Fall) 3 credit hours
PSYC 404 (NEUR 405): Cognitive Neuroscience (spring) 4 credit hours
PSYC 414 (NEUR 414): Brain, Learning and Memory (Spring) 4 credit hours
PSYC 433 (NEUR 433): Evolutionary Neuroscience (Fall) 4 credit hours

Research-based Track
Research: Minimum of 15 credit hours required of approved 590 course
BIOC 590: Individual Topics
BIOP 590: Individual Topics
CDB 590: Individual Topics
MICR 590: Individual Topics
MIP 590: Individual Topics
NEUR 590: Indiv Topics Neuroscience

Electives: Minimum of 4 credit hours required from the elective options
CB 514: Neurotoxicology (Spring odd years) 3 credit hours
ECE 421: Neural Interface Engineering (Spring) 4 credit hours
IB 432 (NEUR 432): Genes and Behavior (Spring) 3 credit hours
MCB 401: Cell Physiology (Fall) 3 credit hours
MCB 410: Developmental Biology, Stem Cells and Regenerative Medicine (Spring) 3 credit hours
MCB 418: Neurobiology of the Senses (Spring) 3 credit hours
MCB 432 Computing in Molecular Biology (Fall) 3 credit hours
MCB 450: Introduction to Biochemistry (Fall, Spring) 3 credit hours
MCB 460: Neuroanatomy Laboratory (Fall) 2 credit hours

MCB 460: Neuroanatomy Laboratory (Fall) 2 credit hours

MCB 466: Neuro & Molecular Pharmacology (Spring) 3 credit hours

MCB 529: Special Topics in Cell and Developmental Biology 1 to 4 credit hours

MCB 540: Scientific Writing (Fall) 3 credit hours

PSYC 404 (NEUR 405): Cognitive Neuroscience (spring) 4 credit hours

PSYC 414 (NEUR 414): Brain, Learning and Memory (Spring) 4 credit hours

PSYC 433 (NEUR 433): Evolutionary Neuroscience (Fall) 4 credit hours

Attach Program Description Files if needed	MSinNS-Course descriptions_ 09_30_2025_final.pdf

Graduation Requirements

Provide a brief narrative description of all graduation requirements, including, but not limited to, credit hour requirements, and, where relevant, requirements for internship, practicum, or clinical. For a graduate program, summarize information about the requirements for completion of the thesis or dissertation, including the thesis committees, and the final defense of the thesis or dissertation. If a thesis or dissertation is not required in a graduate program, explain how the functional equivalent is achieved.

For the course-based track of the MS in Neuroscience, graduation eligibility will require a minimum of two full-time semesters and a maximum of four full-time semesters. Graduation requirements will be met when the student has earned 32 credit hours of courses as identified in the table of approved courses and has a minimum GPA of 3.0.

The proposed course-based MS in Neuroscience degree program track does not require a thesis-based laboratory research component, which is often not required for success of the groups of individuals that this program will target for this track. A course-based MS in Neuroscience degree such as that proposed here will provide strong preparation for pre-health professional schools, graduate education, and employment opportunities in industry, government or non-government organizations, where fundamental principles of modern molecular and cellular biology and critical thinking and problem-solving skills are important, but the research thesis requirement is not necessary for success. On the other hand, students who wish to gain the necessary laboratory technique skills and bench experience as part of their future career preparation, but without the research thesis requirement, are given the opportunity to take advanced laboratory courses. These laboratory courses are designed to provide advanced practical training at the bench along with fundamental, critical thinking and analytical skills demanded by many employers in industry and government, as well as by PhD or professional degree programs.

For the research-based track of the MS in Neuroscience, graduation eligibility will require at least two full-time semesters plus one summer semester. Graduation requirements will be met when the student has earned 32 credit hours of courses and research credit as identified in the table list of approved, required, and elective courses and has a minimum GPA of 3.0. The proposed research-based MS in Neuroscience degree program track does not require a thesis, but will have a significant laboratory research component, that takes students along the process of research, from developing a research question and choosing methodology, to data collection and analysis, as well as writing up and disseminating the research in the form of a poster presentation at a university-sponsored event. This research-based MS in Neuroscience degree will provide strong preparation for pre-health professional schools, graduate education, and employment opportunities in industry, government or non-government organizations. Research experiences are highly important in these career paths.

Plan to Evaluate and Improve the Program

Describe the program's evaluation plan.

The Instructional Program of the School of MCB and the Neuroscience PhD Program will provide guidance, career services, and academic advising for students within the MS in Neuroscience degree program. The School of MCB Courses and Curriculum Committee, which also has Neuroscience faculty on it, will provide faculty input and oversight regarding the evaluation of the program.

We will assess student learning in each course, through rubrics and grades. We will assess mastery of research, experimental design, and quantitative skills through end-of-semester feedback forms solicited from research supervisors. Presentation skills and professional skills will be individually assessed by rubrics completed by faculty. Students will be classified as "not meeting", "meeting", or "exceeding" expectations for each outcome. If students are not consistently meeting these outcomes, we will assess our program and adjust accordingly.

The learning objectives of the proposed program will be assessed each academic year. We will produce a learning objectives map that will identify which courses support each learning objective. We will use a Degree Program Curriculum Map to assist in our understanding of how students move through the program and gain knowledge and skills that can be measured. We will use performance on selected questions of final exams in required courses to gauge success in meeting the learning objectives. We will also collect evidence of integrated knowledge and skills by monitoring progress in the 500-level courses that all students in the program will take. Through the use of rubrics, we will be able to determine whether, and at what level, students have attained the desired learning outcomes that we have set for them. We will also conduct annual focus groups with students to help us better understand the student experience in the program. In courses where students are asked to produce reports, presentations, and other types of summative work, we will look for evidence of content and skills mastery. We will use the information we collect to adjust course content if we find that objectives are not being met or not being met sufficiently. Overall, a GPA of 3.0 is required for successful completion of the MS in Neuroscience degree, which will confirm for us comprehensive knowledge and understanding by the graduating student.

We will also evaluate the success in the research-based track by assessing outcomes in the 590 research sections. We will have common expectations for all 590 sections that will be shared with the instructors/advisors. We anticipate that students will start in one lab and remain in that lab for the duration of their career. Thus, each student will likely enroll in only one 590 section. In our annual assessment of the program, we will assess 590 sections for research progress. We will promptly address any discrepancies that arise.

The results of all assessment work will be shared with those charged with the delivery of our

courses with an eye toward catching objectives that we may not fully meet or areas where we could improve outcomes with adjustments. The results from assessment activities are shared with all members of the MCB Courses and Curriculum Committee comprised of two faculty members from each of our departments, the Associate Directors for Graduate Education, Undergraduate Education, and Curriculum and Instruction, and the NSP Executive Committee. The results are also shared with the Director for the School of Molecular and Cellular Biology and the Director of the Neuroscience PhD Program.

Plan to Evaluate and Improve the Program

Attachments

Budget Narrative

Fiscal and Personnel Resources

Illinois Administrative Code: 1050.30(a)(5): A) The financial commitments to support the unit of instruction, research or public service are sufficient to ensure that the faculty and staff and support services necessary to offer the unit of instruction, research or public service can be acquired and maintained; B) Projections of revenues necessary to support the unit of instruction, research or public service are based on supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

Budget Rationale

Provide financial data that document the university's capacity to implement and sustain the proposed program and describe the program's sources of funding.

Is the unit's (Department, College, School) current budget adequate to support the program when fully implemented? If new resources are to be provided to the unit to support the program, what will be the source(s) of these funds? Is the program requesting new state funds? (During recent years, no new funds have been available from the state (IBHE) to support new degree programs).

Given the increased demands for students trained in neuroscience, we anticipate that there will be a large enough demand after the first few years to support our proposed MS in Neuroscience degree program as a self-supporting program. We can readily add the MS in Neuroscience to our existing graduate degree programs, using many of the courses that are already regularly offered, such that the cost to the existing programs will be minimal, entailing mostly addition of seats to courses, additional advising and coordinating personnel, and program administration. As highly ranked graduate programs, we are in an excellent position to educate and train students at the master's level and have them be successful after graduation. To ensure success, applicants will be carefully chosen for the research track based on their career needs and their potential to conduct research, and we will provide appropriate mentorship and training by faculty. For the research-based track, all faculty mentoring a Neuroscience master's student will agree to mentoring guidelines. 1) They must work with the student to develop a project that can feasibly be completed in a year. This is similar to the first milestone in the Neuroscience PhD program—the first year project. The form that the research takes (self-designed, assigned, mentored by a PhD student or other lab member) will be individually determined. 2) All projects must provide the student with some sort of ownership over the project, such that they can present a poster at a university-sponsored event.

The professional development course (NEUR 529) assists students in the preparation of application materials for their chosen next steps (graduate school, professional school, government, or industry), and assists with career placement as well. Students in the research track will be required to present at a University-sponsored poster session. Examples include the MCB Graduate Research Symposium, the NSP SfN Poster Preview Night, or MCB/NSP Annual Retreats. Through these activities, they will demonstrate their oral and written scientific skills.

Faculty Resources

Will current faculty be adequate to provide instruction for the new program or will additional faculty need to be hired? If additional hires will be made, please elaborate.

Our current faculty should be adequate to provide instruction for the proposed two-track MS in Neuroscience. Currently, we have the capacity to enroll additional students in our upper-level courses, and we are prepared to set aside seats as needed to ensure that these students have access to courses that match their educational interests and goals. We already have a very strong existing instructional program infrastructure that can absorb the new students we attract to this degree program. This is one of the main reasons we feel confident in our ability to add this program to our portfolio of course-based and research-based MS degree programs.

We have no plans to request additional faculty to support this proposed degree program. We do not expect to alter the number of faculty in the School of MCB or the Neuroscience PhD Program because of the creation of this MS in Neuroscience degree program.

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

Faculty teaching load will not change because of this proposed degree program because the required and elective courses for this degree program currently have capacity to seat additional students or are delivered in sections and can be adjusted to scale. The student-faculty ratio is unlikely to shift significantly. We do not expect this program to significantly impact teaching loads in the initial 3 years since most of the courses have capacity to increase the number of seats for these students. If the proposed MS in Neuroscience degree substantially alters student-faculty ratios or teaching loads, we will recruit additional faculty to provide instruction or hire an instructor.

Given our current capacity, the addition of 10-15 students per cohort will not affect any one course in a significant way. The one exception to this might be the scientific writing course (MCB 540), which may need to have an additional neuroscience-specific section formed that is taught by neuroscience faculty. Further, we expect that some of the students who will choose this degree program may come from the group who would have selected the MS in MCB degree program in the absence of this proposed degree program. This further reduces the overall impact on student-faculty ratios and class size. If any individual course sees an increased pressure on enrollment, we will work with our faculty to find solutions so that the course can move forward with undiminished quality. We imagine that this might include the service of an additional course coordinator or assignment of additional graduate teaching assistants to the course.

Describe how the unit will support student advising, including job placement and/or admission to advanced studies. Will current staff be adequate to implement and maintain the new program or will additional staff be hired? Will current advising staff be adequate to provide student support and advisement, including job placement and or admission to advanced studies? If additional hires will be made, please elaborate.

Students will take NEUR 529, a course that focuses on professional development. The course will take students through the process of developing and writing CVs/resumes, personal statements, cover letters, and giving oral presentations. We will also do mock interviews and talk about job/professional program search strategies. Given the strength of our existing neuroscience PhD program, we are confident that we will be able to provide outstanding training and mentorship to these MS in Neuroscience students.

The School of MCB has existing resources located within our School of MCB Career Development team. Students will receive career advising as needed and will be encouraged to participate in the ACES & LAS Career Fair as well as the Illini Career & Internship Fair each year. Students will be encouraged to interact with employers through Handshake where they can apply for posted positions. The School of MCB Career Development Office will host information sessions throughout the year for companies interested in students with an MS in Neuroscience. The School of MCB also hosts one of the Academic Alliance Campus Partnership Managers from Sandia national Laboratories who will assist with advising and providing information regarding career development opportunities in government sectors.

It is likely that some students earning this degree will not seek a job immediately after graduation but instead seek further education either in graduate or professional school. Students completing the MS in Neuroscience would be favorably considered by the NSP PhD Admissions Committee.

Advising and career coaching resources to support all of these pathways already exist in the School of MCB, and these students will be served by the existing structures. Based on the enthusiastic response we have experienced with the number of students enrolled in our recently launched BSLAS in Neuroscience degree in SMCB, we anticipate that both tracks of the MS in Neuroscience program will grow rapidly. We anticipate hiring an additional dedicated advisor/career coach for our proposed MS in Neuroscience program once it becomes self-sustaining.

Are the unit's current facilities adequate to support the program when fully implemented? Will there need to be facility renovation or new construction to house the program?

The current facilities in the School of MCB and the Neuroscience program are adequate to support the program when fully implemented. We do not anticipate needing facility renovations or new construction.

Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

The proposal team consulted with Biosciences Librarian, Kelli Trei and, based upon their input, determined that the Library's resources, collections, and services already include coverage of the subjects included in the Masters of Science in Neuroscience and are more than sufficient to meet the needs of the program outlined in this proposal.

Textbooks and journal articles currently in use in our courses would also be used by students in this program. The demand for materials is likely to be limited to those currently available and in use. The existence of this program will only add a small number of students to those already using available materials.

Summarize information about library resources for the program, including a list of key textbooks, a list of key text and electronic journals that will support this program, and a short summary of general library resources of the University that will be used by the program's faculty, students, and staff.

Individual required and elective classes may rely on e-books and electronic journals of primary scientific literature in order to provide material for teaching courses. The journals will vary broadly but can include Journal of Neuroscience, Neuroscience, Brain and Behavior, Science, Nature, Nature Neuroscience, and Trends in Neuroscience. Textbooks may be required; this will depend on the specific instructors' requirements for their courses.

Are any sources of funding temporary (e.g., grant funding)? If so, how will the program be sustained once these funds are exhausted?

No, there are no sources of temporary funding available.

If this is a graduate program, please discuss the intended use of graduate tuition waivers. If the program is dependent on the availability of waivers, how will the unit compensate for lost tuition revenue?

The proposed program will not provide graduate tuition waivers, as the MS in Neuroscience is seeking self-supporting status.

Budget Narrative
Fiscal and
Personnel
Resources
Attachments

Personnel Budget

Category Year One Year Five Notes

Faculty (FTE)

Faculty FTE Year1	Faculty FTE Year 5	Faculty FTE Notes
0	0	We will use available existing faculty and will not hire additional new faculty specifically for this program.

Faculty ($)

Faculty Year 1	Faculty Year 5	Faculty Notes
0	0	We will use available existing faculty and will not hire additional new faculty specifically for this program.

Advising Staff ($)

Advising Staff Year 1	Advising Staff Year 5	Advising Staff Notes
0	Academic Advisor (80,223)	Salary ($55,000) + benefits ($25,223) for the Advisor to be hired once program is self-sustaining.

Graduate Students ($)

Graduate Students Year 1	Graduate Students Year 5	Graduate Students Notes
0	0	Graduate students will not receive waivers or stipends. We have requested self-supporting status.

Other Personnel Costs

Other Personnel Costs Year 1	Other Personnel Costs Year 5	Other Personnel Costs Notes
0	0	We do not require additional personnel.
0	0	

Budget Narrative Attachments

Facilities and Equipment

Illinois Administrative Code: 1050.30(a)(4): A) Facilities, equipment and instructional resources (e.g., laboratory supplies and equipment, instructional materials, computational equipment) necessary to support high quality academic work in the unit of instruction, research or public service are available and maintained;

B) Clinical sites necessary to meet the objectives of the unit of instruction, research or public service;

C) Library holdings and acquisitions, owned or contracted for by the institution, that are necessary to support high quality instruction and scholarship in the unit of instruction, research and public service, are conveniently available and accessible, and can be maintained.

Describe the facilities and equipment that are available, or that will be available, to develop and maintain high quality in this program. Summarize information about buildings, classrooms, office space, laboratories and equipment, and other instructional technologies for the program.

Classrooms for course instruction are numerous and available in buildings across campus including Burrill Hall, Morrill Hall, Gregory Hall, English Building, Natural History Building, Beckman, Psychology Building, the Campus Instructional Facility, and many others. As courses that we plan to offer are already in place, classroom availability is not anticipated to be an issue.

Faculty that will provide research mentorship are already present on campus and their home department has provided adequate laboratory space which includes sinks, lab benches and fume hoods. Additionally, research faculty are given startup funds to purchase their required laboratory chemicals, basic scientific equipment such as refrigerators, freezers, stir plates, scales, pipettes, lab plastics and gloves. Specialized equipment required for specific lines of research (i.e. rodent surgical equipment or tools for measuring neuronal activity in cells) is also available either within individual laboratories or within shared resources available to a department, building, or campus. We provide examples of the animal vivarium, high performance biological computing within the Biotechnology center, and the Beckman Institute, all of which provide resources for neuroscience-focused faculty.

The University of Illinois has an animal vivarium. This is an IUCAC-approved Central Animal Facility that is supervised by a licensed veterinarian. All animals are housed, cared for, and used strictly in accordance with the NIH guide for the Care and Use of Laboratory Animals. The facility is fully accredited by the American Association for the Accreditation of Laboratory Animal Care (AALAC).

The Biotechnology Center provides campus-wide state-of the-art research services through numerous specialized facilities, including a W. M. Keck Center for Comparative and Functional Genomics (Functional genomics unit, with Affymetrix Microarray Core printer to generate custom microarrays, and ABI High Throughput Quantitative Real Time PCR Instrumentation, High-Throughput Sequencing and Genotyping Unit, Custom Library Unit, Oligonucleotide Synthesis Unit and Bioinformatics Unit), Protein Sciences Facility (sequence determination mass spectrometry unit, and peptide synthesis), Flow Cytometry Facility and Immunological Resource Center. High-Performance Biological Computing (HPCBio) and bioinformatics group is part of the campus Biotechnology center. Their core mission is to provide a first-class infrastructure for bioinformatics, combining hardware, software, databases, training, consulting and services. The experts in this core service center provide consulting, advice and personalized services to researchers across campus, enabling them to efficiently manage and analyze high-throughput datasets.

The Beckman Institute for Advanced Science and Technology at the University of Illinois Urbana-Champaign is a world-class research institute devoted to interdisciplinary research in the physical sciences, computation, engineering, biology, behavior, cognition, and neuroscience. The Beckman Institute brings together over 600 researchers from over 30 departments and programs as far-ranging as psychology, computer science, electrical engineering, and neuroscience. The interdisciplinary and collaborative environment of the institute provides graduate students with a unique environment and access to numerous seminars and training opportunities. The facilities are maintained by the Beckman Institute, providing researchers with access to state-of-the-art equipment, including the Imaging Center with instrumentation for magnetic resonance imaging and other imaging modalities, the Illinois Simulator Laboratory, which offers advanced immersive visualization environments, the Microscopy Suite, and the Visualization Laboratory.

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

Will the program need additional technology beyond what is currently available for the unit?

No

Are there other costs associated with implementing the program?

No

Facilities and Equipment Attachments

Faculty and Staff

Illinois Administrative Code: 1050.30(a)(3): A) The academic preparation and experience of faculty and staff ensure that the objectives of the unit of instruction, research or public service are met; B) The academic preparation and experience of faculty and staff, as evidenced by level of degrees held, professional experience in the field of study and demonstrated knowledge of the field, ensure that they are able to fulfill their academic responsibilities; C) The involvement of faculty in the unit of instruction, research or public service is sufficient to cover the various fields of knowledge encompassed by the unit, to sustain scholarship appropriate to the unit, and to assure curricular continuity and consistency in student evaluation; D) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, which are directly assigned to the unit of instruction, research or public service, have the educational background and experience necessary to carry out their assigned responsibilities.

Describe the personnel resources available to develop and maintain a high quality program, including faculty (full- and part-time, current and new), staff (full- and part-time, current and new), and the administrative structure that will be in place to oversee the program. Also include a description of faculty qualifications, the faculty evaluation and reward structure, and student support services that will be provided by faculty and staff.

Neuroscience at Illinois is continually growing with over 100 faculty affiliated with the Neuroscience PhD program. These faculty come from 7 different colleges at the university and a total of 25 different departments. Neuroscience is also growing at the undergraduate level, with 3 new majors in MCB, Psychology, and Engineering. Thus, we have outstanding faculty resources available to this program. Faculty evaluation and reward structure will not change. The School of MCB administration will oversee this for faculty for whom MCB is their primary home department. Non-MCB faculty will be evaluated by their home departments, and the proposed MS in Neuroscience program administration, including the Directors of SMCB and Neuroscience, will update these departments on faculty contributions to the proposed program.

Summarize the major accomplishments of each key faculty member, including research/scholarship, publications, grant awards, honors and awards, etc. Include an abbreviated curriculum vitae or a short description.

Our faculty are highly accomplished, including 8 American Academy of Arts and Sciences fellows, 3 NIH director's award winners, approximately 10 chaired professorships, University Scholars, and members of the Center for Advanced Study, as well as members of scientific review panels for NIH and NSF, and leaders of national and international societies. We are including NIH and NSF biosketches for faculty that will be involved with mentoring students or teaching within the Masters in Neuroscience program, as well as brief biosketches attached.

Faculty and Staff

Attachments

Faculty_Biosketches.pdf

HLC Section

Credit Hours

Existing or repackaged curricula (Courses from existing inventory of courses): 100	Number of Credit Hours:	32 Percent of Total:
Revised or redesigned curricula (Courses for which content has been revised for the new program):	Number of Credit Hours: 0	0 Percent of Total:

New curricula (Courses developed for the new program that have never been offered):	Number of Credit Hours:	0 Percent of Total:
0		
Total Credit Hours of the Program:	Number of Credit Hours:	32 Percent of Total:
100		

New Faculty Required

Will new faculty expertise or new faculty members be needed to launch this program?

No

Please explain
existing coverage:

Neuroscience at Illinois is continually growing with over 100 faculty affiliated with the Neuroscience PhD program. These faculty come from 7 different colleges at the university and a total of 25 different departments. Thus, we have outstanding faculty resources available to offer this program.

Additional Funds

Will the proposed program require a large outlay of additional funds by the institution?

No

Institutional Funding

Please explain institutional funding for proposed program:

As the program expands by year 5, we will use revenue generated from this degree program to cover the cost of additional academic counselors or administrative staff as needed.

EP Documentation

EP Control Number EP.26.089

Attach Rollback/
Approval Notices

Non-EP Documentation

U Program Review

Comments

Rollback Documentation and Attachment: Re_ EMAIDS proposal.pdf

DMI Documentation

Attach Final Approval Notices

Banner/Codebook Name

Program Code:

Minor Code	Conc Code	Degree Code	Major Code

Senate Approval Date

Senate Conference Approval Date

BOT Approval Date

IBHE Approval Date

HLC Approval Date

DOE Approval Date

Effective Date:

Program Reviewer Comments

Emily Stuby (eastuby) (07/21/25 7:45 am): Rollback: Department Request

Emily Stuby (eastuby) (08/27/25 9:13 am): Removed duplication for interdepartmental and corrected workflow. Also removed the decimal on the CIP code.

Melissa Reedy (murray) (10/23/25 4:57 pm): Rollback: per request from NEUR team

Brianna Vargas-Gonzalez (bv4) (11/05/25 2:40 pm): NEUR 529 is a new course approved for Summer 2027. The red box on this course will clear once we roll to the 2026-2027 AY catalog.

Key: 1343