THE
UNIVERSITY
OF RHODE ISLAND
FACULTY SENATE OFFICE

THINK BIG WE DO™

Green Hall, 35 Campus Avenue, Kingston, RI 02881 USA p: 401.874.2616

Serial Number #19-20-11D

TO: President David Dooley

FROM: Bahram Nassersharif, Chairperson of the Faculty Senate

1.   The attached BILL titled, the Curricular and Standards Committee Report #2019-20-4: Interdisciplinary Neuroscience Program, Undergraduate, is forwarded for your consideration.

2.   This BILL was adopted by vote of the Faculty Senate on <u>November 21, 2019.</u>

3.   After considering this bill, will you please indicate your approval or disapproval. Return the original, completing the appropriate endorsement below.

4.   In accordance with Section 10, paragraph 4 of the Senate's By-Laws, this bill will become effective December 12, 2019 three weeks after Senate approval, unless: (1) specific dates for implementation are written into the bill; (2) you return it disapproved; or (3) the University Faculty petitions for a referendum.

_____
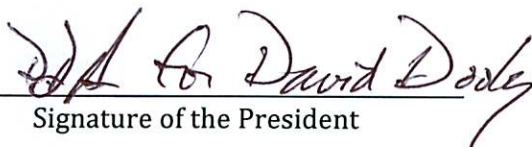Bahram Nassersharif
Chairperson of the Faculty Senate

November 22, 2019

ENDORSEMENT

TO: Chairperson of the Faculty Senate

FROM: President of the University

a. Approved ____.

b. <mark>Approved subject to Notice of the Council on Postsecondary Education</mark> ✓.

c. Disapproved ____.

_____
Signature of the President

11/22/2019
(date)

UNIVERSITY OF RHODE ISLAND FACULTY SENATE
November 21, 2019

Faculty Senate Curriculum and Standards Committee
Report 2019-2020-4

At the November 7, 2019 (originally scheduled for October 24, 2019) meeting of the Curriculum and Standards Committee and by electronic communication, the following matters were considered and are now presented to the Faculty Senate.

SECTION II
Curricular Matters Which Require Confirmation by the
Faculty Senate

NEW PROGRAMS

COLLEGES OF HEALTH SCIENCES, ENVIRONMENT AND LIFE SCIENCES, and PHARMACY:
Interdisciplinary Neuroscience Program: (See Appendix G)
This proposal is for the creation of an Interdisciplinary Neuroscience Program (INP) that will integrate new undergraduate interdisciplinary neuroscience majors affiliated with COP, CELS, and CHS with the existing INP graduate program. An undergraduate interdisciplinary neuroscience major will leverage; a) our existing academic graduate programs in neuroscience (masters, Ph.D., and certificate), b) expertise in neuroscience research across the campus and c) the George and Anne Ryan Institute for Neuroscience.

All undergraduate students will receive a Bachelor of Science (BOS) in one of three major options: students will graduate with a BOS degree with a major in Clinical Neuroscience from CHS, students will graduate with a BOS degree with a major in Molecular Neuroscience from CELS, and students will graduate with a BOS degree with a major in Neuropharmacology from COP. The INP graduate program, which involves faculty from several colleges, will move from the Graduate School to become part of the INP. Faculty affiliated with the INP will continue to mentor, advise, and interact with INP graduate students and efforts will be made to bring greater identity and opportunity to the program and the students. The INP will be led by a Director and will include other support as necessary and affordable and consistent with the growth of the program.

Curriculum

The required core curriculum for the undergraduate neuroscience program includes preparation courses and core courses with a minimum of 15 credits in one of three majors. Preparation courses currently exist at URI in chemistry, biology, and math. Core courses are in molecular biology, pharmacy, statistics and neuroscience. Ten new courses specific to the undergraduate major in neuroscience will be added to meet the core competencies for undergraduate neuroscience majors outlined by the Society for Neuroscience (https://www.sfn.org/Careers/Higher-Education-and-Training/Core-Competencies/Core-Competencies-for-Neuroscience-Undergraduates, 2019).

In addition to completing core and foundational courses, students will select 15 credits (or more) from courses organized into three majors designed to customize learning towards professional goals. Undergraduates will initially matriculate through University College for one to two years in an exploratory neuroscience major and through advising will choose the neuroscience major that best suits their career goals. The three majors include: 1. Clinical Neuroscience; 2. Molecular Neuroscience; 3. Neuropharmacology

THE
UNIVERSITY
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OF RHODE ISLAND

Revised

Appendix G

Full Proposal Form
For All Programs including Certificates
Requiring New Funding or Resources

A Proposal for: Undergraduate Interdisciplinary Neuroscience Major, BS

Date: 10/2/2019

A. PROGRAM INFORMATION

A1. Name of institution: University of Rhode Island

A2. Name of department, division, school or college
Departments: Courses included in this proposal are offered by the following Departments: Biology, Biomedical and Pharmaceutical Sciences, Cell and Molecular Biology, Chemistry, Computer Science and Statistics, Mathematics, Interdisciplinary Graduate Program in Neuroscience, Pharmacy Practice, Psychology, Statistics, and Engineering.

Colleges: Pharmacy, Health Sciences, and Environmental & Life Sciences

A3. Title of proposed program and Classification of Instructional Programs
Program title: Interdisciplinary Neuroscience – Bachelor of Science

Majors:	(CIP) code
• Clinical Neuroscience	26.1501
• Molecular Neuroscience	26.1503
• Neuropharmacology	26.1003

A4. Intended initiation date of program change. Include anticipated date for granting first degrees or certificates, if appropriate.
Initiation date: Fall 2020
First degree date: Spring 2023

A5. Intended location of the program: Kingston Campus

A6. Description of institutional review and approval process

	Approval Date
Program – Interdisciplinary Neuroscience Program	9-20-19
Colleges - CHS, CELS, and COP	9-4-19
Curriculum and Standards Committee	
Faculty Senate	
President of the University	

A7.   Summary description of proposed program (not to exceed 2 pages)

This proposal is for the creation of an Interdisciplinary Neuroscience Program (INP) that will integrate new undergraduate interdisciplinary neuroscience majors affiliated with COP, CELS, and CHS with the existing INP graduate program.   An undergraduate interdisciplinary neuroscience major will leverage; a) our existing academic graduate programs in neuroscience (masters, Ph.D., and certificate), b) expertise in neuroscience research across the campus and c) the George and Anne Ryan Institute for Neuroscience. The presence of a variety of research labs on campus across colleges and the state-of-the-art neuroscience research conducted at the George and Anne Ryan Institute for Neuroscience will be a benefit to undergraduates seeking laboratory experience. An additional benefit to undergraduate students is that INP affiliated faculty including those affiliated with the George and Anne Ryan Institute for Neuroscience, as well as postdoctoral researchers and graduate students can serve as mentors to undergraduate neuroscience majors. Curricular requirements for the major will include required core courses, and three specialized neuroscience majors designed to foster knowledge and experience in clinical neuroscience, molecular neuroscience, and neuropharmacology. It is recommended that the proposed undergraduate major be administered within the existing structure of the INP that includes representation across five colleges.

All undergraduate students will receive a Bachelor of Science (BOS) in one of three major options: students will graduate with a BOS degree with a major in Clinical Neuroscience from CHS, students will graduate with a BOS degree with a major in Molecular Neuroscience from CELS, and students will graduate with a BOS degree with a major in Neuropharmacology from COP.   The INP graduate program, which involves faculty from several colleges, will move from the Graduate School to become part of the INP. Faculty affiliated with the INP will continue to mentor, advise, and interact with INP graduate students and efforts will be made to bring greater identity and opportunity to the program and the students. The INP will be led by a Director and will include other support as necessary and affordable and consistent with the growth of the program.

Administrative Structure
- The INP will be a program at the University of Rhode Island with administrative management by the Deans' Oversight Committee (DOC) comprising the Deans of the COP, CHS, and CELS.   One Dean, to be selected by the Provost, will serve as Coordinating Dean on a 3-year rotating basis.
- The INP Director is a faculty member at the Associate or Full Professor level who has served on the INP Executive Committee and is elected by the INP core faculty with input from the DOC and concurrence of the INP Executive Committee. The Director will provide leadership for both the graduate and undergraduate programs. The INP Director will report to the DOC and will meet with that Committee no less than one time per semester and once over the summer for the purposes of reporting on the progress of the program, any challenges that emerge, and the overall direction of the program.
- The INP Director will have overall responsibilities for the INP program. The INP Director does not have annual review responsibilities for INP faculty but may provide input as to the teaching, research, and service contributions of INP faculty participating in the INP program if requested.
- The Provost will provide financial support for the INP Director and a full-time professional advisor who will be recruited specifically for the program. The advisor will report directly to the INP Program Director.

- The INP Director will receive compensation and a workload adjustment to allow time for administrative responsibilities. Compensation will be an appropriate salary adjustment and summer salary.
- The 0.5 FTE Associate Director and the funds to support this position will be transferred from the Graduate School. The Associate Director will report to the Director of the INP.
- Given the multi-college pathway of the program and the requirement for experiential learning opportunities for all students, the Provost's Office will fund a professional advisor position dedicated to the INP program.
- The INP will have its own unique operating budget (chartfield string) that resides within the Provost's office. However, as with all other academic programs at URI, any annual budget changes or requests must be proposed by the Director to the DOC and, if deemed appropriate and cost-effective, the priorities will be included in the budget requests from the three Deans to the Provost's Office
- All three colleges, as well as Art & Sciences and Engineering, will have representation on the INP committees that administer the INP program including:
  - Executive committee
  - Curriculum committee
  - Admissions and advising committee

Curriculum
The required core curriculum for the undergraduate neuroscience program includes preparation courses and core courses with a minimum of 15 credits in one of three majors. Preparation courses currently exist at URI in chemistry, biology, and math. Core courses are in molecular biology, pharmacy, statistics and neuroscience. Ten new courses specific to the undergraduate major in neuroscience will be added to meet the core competencies for undergraduate neuroscience majors outlined by the Society for Neuroscience (https://www.sfn.org/Careers/Higher-Education-and-Training/Core-Competencies/Core-Competencies-for-Neuroscience-Undergraduates, 2019). In addition to completing core and foundational courses, students will select 15 credits (or more) from courses organized into three majors designed to customize learning towards professional goals. Undergraduates will initially matriculate through University College for one to two years in an exploratory neuroscience major and through advising will choose the neuroscience major that best suits their career goals. The three majors include:
1. Clinical Neuroscience
2. Molecular Neuroscience
3. Neuropharmacology

A8. Signature of the President

David M. Dooley

A9. Person to contact during the proposal review
   Name: Leslie Mahler, PhD
   Title: Director, Interdisciplinary Neuroscience Program
   Associate Professor, Communicative Disorders
   Phone: 874-2490
   Email: lmahler@uri.edu

A10. List and attach any signed agreements for any cooperative arrangements made with other institutions/agencies or private companies in support of the program.
   There are no external agreements for this undergraduate program.

B.   RATIONALE: There should be a demonstrable need for the program.

B1.   State the program objectives.
The objective of the new undergraduate program in neuroscience is to prepare students for multiple future career options including; neuroscience research, clinical work, teaching in neuroscience, medical and graduate school, biotechnology and pharmaceutical industries, public health, and technical writing among others.

The learning outcome goals for the program include:
   o Demonstrate knowledge of the development, structure, and function of the nervous system.
   o Demonstrate knowledge of neuroscience research techniques and experimental design.
   o Demonstrate appropriate ethical principles.

Establishing an undergraduate neuroscience program is consistent with national trends indicating that neuroscience is a current and growing focus of both research and employment. Neuroscience has also been a strategic focus at URI for seven years beginning with the formation of the INP in 2011 and strengthened by the creation of the Ryan Institute for Neuroscience in 2015. Creating an undergraduate neuroscience major at URI will make neuroscience accessible to URI undergraduates and leverage our existing expertise in basic and applied neuroscience with curricular innovations in data science and engineering. Feedback from the URI Office of Admissions indicates that students applying to URI are specifically interested in selecting a neuroscience major and that URI is losing applicants because this undergraduate major is not currently offered.

B2.   Explain and quantify the needs addressed by this program, and present evidence that the program fulfills these needs.

   a.   What is the economic need and workforce data related to the program?
Neuroscience is a highly attractive major among undergraduate students where these programs are available. URI is lagging behind other universities in the region and a neuroscience undergraduate major would attract high performing high school and undergraduate students. Studies by Ramos et al., (2011 and 2016) identified the unprecedented growth of undergraduate neuroscience in the US and the number of institutions offering neuroscience majors has risen from <10 in 1986 to 157 in 2014. Their

data extend emerging literature demonstrating growth in undergraduate neuroscience education that prepares students for graduate and professional studies in basic science research and health care professions. Based on these findings, the creation of a new undergraduate neuroscience major will successfully attract additional, highly qualified students to URI.

b. Provide information on jobs available as a result of successfully completing the certificate or degree: job titles, job outlook/growth, and salaries.

As the landscape shifts in biomedical education and job markets, URI has a unique opportunity to design a forward-thinking and innovative major in neuroscience that produces graduates possessing skills valued by employers in a variety of sectors. Examples of future employment include the following growth jobs:

- Research/basic science/drug development at biotech and pharmaceutical companies
- University professor
- Physician
- Psychologist
- Speech-language pathologist
- Occupational therapist
- Physical therapist
- Research administrator/project manager/lab director
- Grant specialist
- Science writer
- Science education in K-12
- Big data analyses

B3. If an external advisory or steering committee was used to develop the program, identify committee members and their affiliations and describe the committee's role.

The Neuroscience Task Force hosted Gary Dunbar, PhD, Director of Neuroscience at Central Michigan University at URI as an external consultant and advise us about creating an undergraduate major in Neuroscience.

C. INSTITUTIONAL ROLE: The program should be clearly related to the published role and mission of the institution and be compatible with other programs and activities of the institution.

C1. Explain how the program is consistent with the published role and mission of the institution and how it is related to the institution's academic planning.

The proposed undergraduate major in neuroscience is consistent with the mission of URI by offering our students the opportunity for learning and academic success in this growing area of study. The graduate program began admitting students in 2011 and has graduated thirteen master's degree students and nine doctoral students.

This undergraduate major is consistent with the goals of the University's academic strategic plan.

Goal 1: Enhance student success

- The neuroscience undergraduate curriculum incorporates interactive learning providing students the opportunity to actively engage in learning techniques.
- The interdisciplinary nature of the program provides the opportunity for students to expand their view of neuroscience across a broad representation of skills and professions available to students who study neuroscience.

Goal 2: Expand research, scholarship, and creative work
- Neuroscience research is at the cutting edge of some of the most significant innovative research that addresses global challenges to improve health and understand degenerative neurological conditions.
- Neuroscience research is not discipline-specific which will encourage students to foster collaborations with scientists in related fields.
- URI needs a neuroscience undergraduate major to be competitive with other universities and establish relationships with collaborators across the state.

C2. Explain the relationship of the program to other programs offered by the institution.

The current graduate program in Interdisciplinary Neuroscience has collaborations with multiple departments across five colleges. The undergraduate major will also have strong relationships with other departments at URI particularly in the College of Pharmacy, College of Environmental Life Sciences, and the Health Sciences College. Neuroscience undergraduate majors will be taking existing courses in Biology, Chemistry, Physics, and Psychology as well as new neuroscience courses.

D. INTER-INSTITUTIONAL CONSIDERATIONS: The program should be consistent with all policies of the Council on Postsecondary Education pertaining to the coordination and collaboration between public institutions of higher education.

D1. List similar programs offered in the state and region, and compare the objectives of similar programs. If similar programs exist, how is this program different or why is duplication necessary?

Brown University offers an undergraduate major in neuroscience and Salve Regina offers a minor in neuroscience. The URI neuroscience program will be distinct in its interdisciplinary nature offering three majors that cross multiple departments and five colleges including a major in clinical neuroscience that is not available at any other program in the state. There are also programs offered at University of Connecticut, University of Massachusetts, University of New Hampshire, and the University of Vermont. URI needs this major to be competitive for new undergraduate applicants.

D2. Estimate the projected impact of program on other public higher education institutions in Rhode Island (e.g. loss of students or revenues), provide a rationale for the assumptions made in the projections, and indicate the manner in which the other public institutions were consulted in developing the projections. Have you communicated with other institutions about the

development of this program and have any concerns been raised related to role, scope, and mission or duplication?

URI is the only state institution to offer a major in neuroscience at the graduate level and this will be true for the undergraduate major as well. We regularly collaborate with Brown University in teaching and research and clinical endeavors. We will continue these collaborations as the Neuroscience Program at URI grows with the creation of the undergraduate major. No concerns have been articulated about duplication of educational offerings or concerns related to its creation.

We contacted the Faculty for Undergraduate Neuroscience, the leading organization in defining quality undergraduate education, to identify an external consultant to advise us about the creation of a new neuroscience major at URI. Gary Dunbar, Director of the Program in Neuroscience at Central Michigan University recommended the creation of an undergraduate program to put URI on the national stage as a leading institution for neuroscience education and research given our interdisciplinary focus.

D3. Using the format prescribed by the Council on Postsecondary Education, describe provisions for transfer students (into or out of the program) at other Rhode Island public institutions of higher education. Describe any transfer agreements with independent institutions. The institution must also submit either a Joint Admissions Agreement transition plan or the reason(s) the new program is not transferable (see _Procedure for Strengthening the Articulation/Transfer Component of the Review Process for New Programs_).

There will be coordination of courses with RIC and CCRI for students who wish to transfer to URI to major in neuroscience as undergraduates. Given the specialization of courses, it is anticipated that students from RIC or CCRI will need to transfer after one year.

D4. Describe any cooperative arrangements or affiliations with other institutions in establishing this program. (Signed copies of any agreements pertaining to use of faculty, library, equipment, and facilities should be attached.)

a. How does this program align to academic programs at other institutions?

There are neuroscience programs offered at Brown University, Salve Regina, University of Connecticut, University of Massachusetts, University of New Hampshire, and the University of Vermont. The distinction of the proposed neuroscience major is the breadth of opportunities for students to prepare for future employment provided by the interdisciplinary approach to training with three majors: Clinical Neuroscience, Molecular Neuroscience, and Neuropharmacology.

b. Are recipients of this credential accepted into programs at the next degree level without issue?
Students who graduate with a major in interdisciplinary neuroscience have an ever-growing choice of career options. These include; graduate school in

neuroscience, medical school, graduate programs in allied health professions, and technical writing. Students will be able to apply for a graduate degree during the final semester of their undergraduate program

    c. How does this program of study interface with degree programs at the level below them?
This is an undergraduate program. The primary interface will be with graduate degree programs.

D5. If external affiliations are required, identify providing agencies (indicate the status of any arrangements made and append letters of agreement, if appropriate).

There are no external affiliations required. There is a Memorandum of Understanding to affirm the partnership and commitment of COP, CHS, and CELS to create an Interdisciplinary Neuroscience Program to include a new academic undergraduate major in Neuroscience with three majors and incorporating the existing graduate INP.

D6. Indicate whether the program will be available to students under the New England Board of Higher Education's (NEBHE) Regional Student Program (RSP).
Not initially. We will re-evaluate this option after we have data about actual enrollment.

E. PROGRAM: The program should meet a recognized educational need and be delivered in an appropriate mode.

E1. Prepare a typical curriculum display for one program cycle for each sub-major, specialty or option, including the following information:

    a. Name of courses, departments, and catalog numbers and brief descriptions for new courses, preferably as these will appear in the catalog.
Please refer to the accompanying curriculum spreadsheet that includes the core curriculum requirements, requirements for the three majors and free electives. Separate tabs describe what a typical student's courses would be for each major.

    b. Are there specializations and/or tracks/options/sub-plans/concentrations?
If so, describe required courses in area of specialization or tracks/options/sub-plans/concentrations.

No

    d. Course distribution requirements, if any, within program.

None

d. **Total number of free electives available after specialization requirements are satisfied.**
There will be 80 credits available for general education requirements and free electives after the requirements for the major are met.

e. **Total number of credits required for completion of program or for graduation. Present evidence that the program is of appropriate length as illustrated by conformity with appropriate accrediting agency standards, applicable industry standards, or other credible measure, and comparability of lengths with similar programs in the state or region.**
The total number of preparation course credits = 33
The total number of core course credits = 29
The total number of major course credits = 18

f. **Identify any courses that will be delivered or received by way of distance learning (refer to *Policy on Distance Learning, Council on Postsecondary Education, State of Rhode Island and Providence Plantations*).**
There are 10 new neuroscience courses that are being proposed to support the new undergraduate major. The include:
  - NEU 101   Foundations of Neuroscience
  - NEU 110   Neurosciences Seminar
  - NEU 210   Neuroethics and Diversity
  - NEU 262   Neuroscience Research methods
  - NEU 230   Neuroscience Professional Development
  - NEU 301   Cellular & Molecular Neuroscience
  - NEU 310   Developmental Neurobiology
  - NEU 320   Clinical Neuroscience
  - NEU 410   Experiential Neuroscience
  - NEU 460   Neurosciences Journal Club

g. **Is the program content guided by program-specific accreditation standards or other outside guidance?**

This is not an accredited program.

E2. **Describe certification/licensing requirements, if any, for program graduates and the degree to which completion of the required course work meets said requirements. Indicate the agencies and timetables for graduates to meet those requirements.**
                    NA

E3. **Demonstrate that student learning is assessed based on clear statements of learning outcomes and expectations and provide an assessment plan.**

a. **Include the learning goals (what students are expected to gain, achieve, know, or demonstrate by completion of the program) requirements for each program.**

- Students will demonstrate knowledge of the fundamental constructs and experimental foundations of the discipline of neuroscience
- Students will demonstrate understanding of the ethical problems and responsible conduct of research in neuroscience
- Students will demonstrate an ability to reach, understand, and articulate current research/issues in various sub-disciplines of neuroscience
- Students will identify the leading professional journals, conferences, and membership organizations in their field
- Students will comprehend and apply principles of research design and statistical analysis to neuroscience research
- Students will present research through oral presentations
-

      b. Demonstrate that student learning is assessed based on clear statements of learning outcomes and expectations.

      c. Provide an assessment plan detailing what a student should know and be able to do at the end of the program and how the skills and knowledge will be assessed. Consult with the <u>Office of Student Learning, Outcomes Assessment, and Accreditation (SLOAA)</u> when preparing the <u>Learning Outcomes Assessment Plan</u> for student learning assessment. Following consultation, submit a final draft of the plan to the Chair of the <u>Learning Outcomes Oversight Committee</u> (LOOC) for approval by the full Learning Outcomes Oversight Committee.

Please refer to attached Student Learning Outcomes plan.

F. FACULTY AND STAFF: The faculty and support staff for the program should be sufficient in number and demonstrate the knowledge, skills, and other attributes necessary to the success of the program.

      F1. Describe the faculty who will be assigned to the program. Indicate total full-time equivalent (FTE) positions required for the program, the proportion of program faculty who will be in tenure-track positions, and whether faculty positions will be new positions or reassignment of existing positions. What are the minimal degree level and academic/technical field requirements and certifications required for teaching in this program?

INP faculty have their academic appointments in various academic departments across several colleges at URI. Those faculty who wish to contribute to the INP because of their academic interests and expertise in neuroscience may become affiliated with the program. Faculty seeking membership in the INP are required to send a CV to the Executive Committee along with a brief statement describing their teaching and/or research. The INP Executive Committee will evaluate the qualifications of the applicants then submit the list to the core INP faculty for a vote. Faculty who are approved and their respective Dean will receive a letter of confirmation and their participation in the INP will be reviewed every three years. Faculty approved by the INP Executive committee become core faculty when they are actively engaged in the INP

through teaching, mentoring, or service. Core faculty are eligible to serve on the INP Executive Committee and all standing committees of the INP.

The Deans of each college with core INP faculty nominate members to the Executive Committee for a term of three years. Nominees must have been Core members of the INP for a minimum of one year. No more than two members from any one college may serve on the Executive Committee at any given time. A representative of the Graduate School will also serve on the Executive Committee to represent the graduate programs.

Appropriate departmental and college support will be provided for faculty to teach courses in the INP at the graduate and undergraduate levels. It is understood that faculty who teach neuroscience courses will incorporate those courses into their expected workload and these teaching commitments will count toward promotion and tenure expectations. Credit hours generated will be attributed to the faculty and their home department and colleges. The expectation is that INP undergraduate courses will be given equal weight with existing college programs and departments.

Increased demand for teaching assistants to support curricular demands created by new undergraduate neuroscience students will likely occur as the number of students and courses in the program increase. INP graduate students who are awarded a teaching assistantship will be given priority consideration for large enrollment and/or lab undergraduate courses related to the neuroscience major.

Department chairs, in consultation with the Dean of the College, will determine how to cover existing departmental courses when faculty teach in the INP undergraduate and/or graduate neuroscience program a process that is consistent with current practice at URI. This process may include strategic reassignment of some teaching responsibilities within departments as appropriate and/or requests by Deans for resources to cover courses when no alternative viable options exist.

F2. **List anticipated support staff, the percent of their time to be spent in the program, and whether these are reassignments or new positions. Indicate total full-time equivalent (FTE) positions required for the program.**

- The 0.5 FTE Associate Director and the funds to support this position will be transferred from the Graduate School. The Associate Director will report to the Director of the INP.
- Given the multi-college pathway of the program and the requirement for experiential learning opportunities for all students, the Provost's Office will fund a professional advisor position dedicated to the INP program.

F3. **Summarize the annual costs for faculty and support staff by indicating salaries and fringe benefits (adjusted for the proportion of time devoted to the program). Distinguish between existing resources and new resources. Specify in the narrative if resources are to be provided by more than one department. Include the salary and benefits information on the Rhode Island Office of Postsecondary Commissioner budget form (https://www.riopc.edu/page/academic_program/**

See attached budget form.

G.   STUDENTS: The program should be designed to provide students with a course of study that will contribute to their intellectual, social, and economic well-being. Students selected should have the necessary potential and commitment to complete the program successfully.

G1.   Describe the potential students for the program and the primary source of students. Indicate the extent to which the program will attract new students or will draw students from existing programs and provide a specific rationale for these assumptions. For graduate programs, indicate which undergraduate programs would be a potential source of students.

It is expected that there will be a combination of students who transfer into neuroscience from existing programs at URI and new students entering the major.
The office of enrollment management has information that there are students interested in neuroscience who do not currently apply to URI since the major does not exist.

G2.   Estimate the proposed program size and provide projected annual full-time, part-time, and FTE enrollments for one complete cycle of the program. Provide a specific rationale for the assumptions made in the projections. Depending on the nature of the program, use the FTE or part-time estimates of enrollment on the Rhode Island Office of Postsecondary Commissioner budget form (https://www.riopc.edu/page/academic_program/

We are planning for a controlled enrollment that will increase over four years in the following manner: Year 1 = 35 students; Year 2 = 55; Year 3 = 100; Year 4 = 140

G3.   Indicate how the institution provides programs and services designed to assist students in achieving their academic goals.

The new program will use existing resources available through University College for Academic Success for support and retention of students.

G4.   List the program admission and retention requirements for students. Provide descriptions of the specific criteria and methods used to assess students' ability to benefit from the program. Describe how satisfactory academic progress will be determined.

Initially, there will not be any program admission requirements. Students must maintain a GPA of 2.0 to remain in the major. One of the responsibilities of the program advisor is to monitor student progress and intervene as needed.

G5.   Indicate available funds for assistantships, scholarships and fellowships. Include this information on the Rhode Island Office of Postsecondary Commissioner budget form (https://www.riopc.edu/page/academic_program/

H. ADMINISTRATION: Administrative oversight for the program should be sufficient to ensure quality.

H1. Indicate how the program will be administered and the degree to which this work will affect the administrative structure in which it is located.

- The INP will be a program at the University of Rhode Island with administrative by the Deans' Oversight Committee (DOC) comprising the Deans of the COP, CHS, and CELS. One Dean, to be selected by the Provost, will serve as Coordinating Dean on a 3-year rotating basis.
- The INP Director is a faculty member at the Associate or Full Professor level who has served on the INP Executive Committee and is elected by the INP core faculty with input from the DOC and concurrence of the INP Executive Committee. The Director will provide leadership for both the graduate and undergraduate programs. The INP Director will report to the DOC and will meet with that Committee no fewer than one time per semester and once over the summer for the purposes of reporting on progress of the program, any challenges that emerge, and the overall direction of the program.
- The INP Director will have overall responsibilities for the INP program. The INP Director does not have annual review responsibilities for INP faculty but may provide input as to the teaching, research, and service contributions of INP faculty participating in the INP program if requested.
- This is a new administrative structure at URI as an interdisciplinary program.

H2. Indicate the titles of the persons who will have administrative responsibility for the program and the percent of time each will spend on the program.

Director = 0.5 who will be a faculty member elected for a 3-year term.
Associate Director = 0.5 who will be a permanent position.
Advisor = 1.0 who will be a permanent position.

H3. Indicate additional annual administrative salaries and related costs to be associated with the program. Distinguish between existing resources and new resources. Include this information on the Rhode Island Office of Postsecondary Commissioner budget form (https://www.riopc.edu/page/academic_program/

Please refer to the budget form

I. INSTRUCTIONAL RESOURCES: The instructional resources should be sufficient in quantity, quality, and timeliness to support a successful program.

I1. Estimate the number and cost of relevant print, electronic, and other non-print library materials needed (and those available) for the program and compare with recommendations of national accrediting agencies.

The library resources needed to support the program already exist.

I2. Identify and evaluate other instructional resources and instructional support equipment (such as computers, laboratory equipment, supplies, clinical space, internships, proctors) in terms of overall capability to satisfy the needs of the program. If these instructional resources are considered insufficient or if

upgrading is necessary for the development of the program, the additional needs should be detailed and their cost estimated.

Instructional resources to support students in labs for experiential learning will be needed. These are included in the budget.

I3. Estimate annual expenditures for instructional resources. Distinguish between existing resources and new resources. The information should reflect the annual operation and maintenance of the instructional resources, recurrent costs and costs for necessary additions. Include this information on the Rhode Island Office of Postsecondary Commissioner budget form (https://www.riopc.edu/page/academic_program/

Please refer to budget form.

I4. Provide a Library Impact Statement.

Please refer to attached LIS.

J. FACILITIES AND CAPITAL EQUIPMENT: Facilities and capital equipment should be sufficient in quantity, quality, and timeliness to support a successful program.

J1. Describe the facilities and capital equipment (e.g., classrooms, office space, laboratories, and telecommunications equipment) and assess the adequacy of these resources relative to the program and to the requirements of the American with Disabilities Act and state disability statues.

This is an interdisciplinary program in which faculty in existing departments will use their current office space and facilities. These areas are already in compliance with the ADA rules and regulations. Increased class sizes in the future may necessitate additional sections of course courses such as CHEM 101/102 or BIO 101/103. The program currently has one office in Tyler that is supported by the university. We will be requesting an additional office student space as the enrollment increases

J2. If new or renovated facilities are necessary, explain in detail (e.g., requirements, costs, sources of revenue, and expected date of completion). Include this information on the Rhode Island Office of Postsecondary Commissioner budget form (https://www.riopc.edu/page/academic_program/

NA

J3. Estimate the annual additional expenditures for new program facilities and capital equipment. Include this information on the Rhode Island Office of Postsecondary Commissioner budget form (https://www.riopc.edu/page/academic_program/

NA

J4. Indicate whether the needed facilities are included in the institution's master plan.

NA

K. FINANCIAL CONSIDERATIONS: Projected revenues should be sufficient to support a successful program and must cover the estimated costs of the program.

K1. Expenditures for program initiation and annual operation should be estimated and displayed in the proposed budget. The summary should enable the reader to understand expenditures for a period representative of one full program cycle.

Please refer to attached budget form for revenue and expenditures.

K2. Revenue estimates should be provided for a similar period of time. For a new program, the appropriateness and feasibility of instituting differential tuition and/or fees should be addressed.

NOTE: **Excel budget forms (Rhode Island Office of Postsecondary Commissioner https://www.riopc.edu/page/academic_program/) are self-calculating.**

Please refer to attached budget form.

K3. Describe how current institutional resources will be redeployed or extra institutional resources will be obtained to support the program (e.g., describe program eliminations, staff reallocations and/or external sources of monies).

Department chairs, in consultation with the Dean of the College, will determine how to cover existing departmental courses when faculty teach in the INP undergraduate and/or graduate neuroscience program a process that is consistent with current practice at URI. This process may include strategic reassignment of some teaching responsibilities within departments as appropriate and/or requests by Deans for resources to cover courses when no alternative viable options exist.

L. EVALUATION: Appropriate criteria for evaluating the success of a program should be developed and used.

L1. List the performance measures by which the institution plans to evaluate the program. Indicate the frequency of measurement and the personnel responsible for performance measurements. Describe provisions made for external evaluation, as appropriate.

There are no plans for external review of the program at the current time. The program will be reviewed by the Executive Committee of the INP every three years.

L2. Describe and quantify the program's criteria for success.

The criteria for success include recruitment and retention of students in line with existing programs at URI. We will also assess graduation rates, time-to-degree, job placements, and graduate school acceptance rates for those who choose to apply.

L3. **If the proposed program is eligible for specialized accreditation, indicate name and address of the accrediting agency and a list of accreditation requirements. If specialized accreditation is available but not sought, indicate reasons.**

NA

L4. **Describe the process that communicates the results of the program evaluation to appropriate institutional stakeholders and uses the outcomes for program improvement.**

The Executive Committee of the INP will report to the Deans of CELS, CHS, and COP who will be monitoring the program's success. The Executive Committee will maintain a close relationship with the office of enrollment management to monitor demand and enrollment of students.

CIP Code Descriptions for Interdisciplinary Neuroscience Program Degrees at URI
10-2-19

26.1501 Neuroscience
A program that focuses on the interdisciplinary scientific study of the molecular, structural, physiologic, cognitive, and behavioral aspects of the brain and nervous system. Includes instruction in molecular and cellular neuroscience, brain science, anatomy and physiology of the central nervous system, molecular and biochemical bases of information processing, behavioral neuroscience, biology of neuropsychiatric disorders, and applications to the clinical sciences and biomedical engineering. Examples: [Behavioral Neuroscience], [Cognitive Neuroscience], [Computational Neuroscience], [Developmental Neuroscience].

26.1503 Neurobiology and Anatomy
A program that focuses on the scientific study of the structure and function of the central and peripheral nervous system in vertebrates and invertebrates. Includes instruction in molecular and cellular studies of neuronal and glial cells and circuits, neural transmitters and receptors, neuronal signaling processes, membrane and synapse structure and communication, autonomic function, nervous system circuitry and mapping, and anatomical and functional basis of central nervous system diseases and disorders. Examples: [Neurobiology and Neurophysiology]

26.1003 Neuropharmacology
A program that focuses on the scientific study of drugs that modify the function of the brain and central nervous system, the effects of such drugs on health, disease, perception, motor action, and behavior; and the development of countermeasures and treatment therapies. Includes instruction in neuroanatomy, neurophysiology, behavioral neuroscience, neurobiochemistry, neuropathology, the mechanisms of brain function, medicinal chemistry, pharmaceutics, and studies of specific drugs and drug therapies.

Process: Students will enter URI through University College then move into one of three degrees in one of three colleges.

Academic Program	Plan	Description	CIP	Subplan	Description	CIP
UC_UN	UC_NEUR_BS	Exploring Neuroscience	26.1501	CHSCLIN	Clinical Neuroscience	26.1501
				ELSCIMOLEC	Molecular Neuroscience	26.1503
				COPPHARM	Neuropharmacology	26.1003

Academic Program	Plan	Description	Degree	CIP
CHS	HS_CLI_BS	Clinical Neuroscience	Bachelor of Science	26.1501
ELSCI	EL_MOL_BS	Molecular Neuroscience	Bachelor of Science	26.1503
PHARM	PH_NEU_BS	Neuropharmacology	Bachelor of Science	26.1003

By-Laws of the Interdisciplinary Neuroscience Program at the University of Rhode Island

Article I Program Governance

Section 1.1. Structure

1.1.1   The INP Executive Committee will govern the undergraduate and graduate neuroscience programs
1.1.2   Membership of the INP will consist of URI Faculty who participate in teaching, mentoring and/or research in Neurosciences, and otherwise contribute to the operation of the INP.
1.1.3   A subset of faculty members of the INP will be designated as Core Faculty (as per 1.2.1)

Section 1.2. Program Faculty Membership

1.2.1 Core Faculty

1.2.11 Core Faculty status requires satisfaction of at least one of three criteria:
o   Meaningful contribution to teaching in NEU courses (more than one lecture per year)
o   Mentoring a student for one semester per year in NEU 591 Special Projects in Neuroscience (Independent Study) or NEU 410, Experiential Neuroscience
o   Service on an INP standing committee for a minimum of one year.

1.2.12 Core Faculty are also expected to:
o   Give at least one seminar/colloquium on a neuroscience-related topic
o   Attend annual INP Faculty meetings and other program-sponsored events
o   Attend at least two colloquium talks per year
o   Invite and host colloquium speakers

1.2.13 Core Faculty are eligible to serve on the INP Executive Committee and all Standing Committees of the Program.

1.2.14 Core Faculty with Graduate Faculty status may serve as Major Professors to graduate students in the program and as members of masters and doctoral committees.

1.2.15 INP Faculty who do not meet the requirements for Core Faculty status may not serve on the Executive Committee, and they do not have voting rights.

1.2.16 Adjunct faculty members with Graduate Faculty Status, as defined in section 7.11.23 of the University Manual, may also be members of the INP.

1.2.2 Membership in the INP

1.2.21 Faculty seeking membership in the INP must provide a CV to the Executive Committee, along with a brief statement describing their teaching and/or research activities in neuroscience, how they intend to serve the INP, and whether they intend to initially join as a Core or Affiliate member.

1.2.22 New faculty hires associated with neurosience will automatically become affiliated members of the INP for a limited term not to exceed three years.

1.2.23 The Executive Committee will review information provided by the applicants for involvement in neuroscience activities outlined in the bylaws and submit a final list to the Core INP Faculty for a vote that will take place within two weeks. If there is a majority vote for approval by the Core Faculty, then the application will be approved by the Executive Committee.

1.2.24 Membership in the INP is for a three-year term and is renewable based on a review on neuroscience activities outlined in these bylaws.

1.2.25 Membership renewal requires a one-page statement describing teaching/mentoring and/or neuroscience research and/or contributions to the INP over the prior three years.

Section 1.3. Executive Committee

1.3.1 The Deans of each college with core INP faculty nominate one member to serve on the Executive Committee for a term of three years.   Nominees must have been Core members of the INP for a minimum of one year. Terms will be for three years, staggered and renewable. No more than two members from any one college serving on the Executive Committee may serve at any given time. A representative of the Graduate School will also serve on this committee to represent the graduate programs.

1.3.12 The Executive Committee will nominate the Director of the INP, as well as the Chairs of the Curriculum and Admissions and Advising committees.

1.3.14 The George and Anne Ryan Institute will have equivalent representation to the Executive Committee as the colleges

1.3.15 The George and Anne Ryan Institute Director will nominate a representative to the Executive Committee

1.3.16 If necessary, the Executive Committee may nominate an at-large member to maintain balance in representation among the colleges and institutes. The term will be for one year.

1.3.17 The Director of the INP will report to the Deans from three colleges, College of Pharmacy (COP), Health Sciences College (HSC), and the College of Environment and Life Sciences (CELS) through the coordinating Dean on a 3-year rotating basis.

Section 1.4. Officers

1.4.1 Director of the INP

1.4.11 The Director of the INP will lead the Interdisciplinary Neuroscience Program (INP) and he/she is required to hold Faculty status at URI. The Director will report directly to one of three Deans from the College of Pharmacy (COP), Health Sciences College (HSC), and the College of Environment and Life Sciences (CELS) on a 3-year rotating basis. The Director will be a 0.5 FTE appointment who will be assisted in her/his duties by the Associate Director of the INP. The Director will work closely with College Deans, Department Chairs, Center Directors, INP faculty, and key internal and external stakeholders to determine the needs of the INP relative to neuroscience growth and sustainability. The Director will serve as the chair of the INP Executive Committee and work collaboratively with members to effectively integrate objectives of the INP with available resources to advance neuroscience at URI. The director is responsible for the INP budget that will be allocated directly to the program and will have its own chart field string. The Director will work with the Associate Director on admissions and advising, curricular affairs, program assessment, and student recruitment and retention.

1.4.12 The Director of the INP is nominated by the Executive Committee and elected by a majority vote of the INP Core Faculty including the Associate Director.

1.4.13 The Director of the INP must be a current or previous member of the Executive Committee

1.4.14 The Director of the INP serves a three-year term, and will not serve more than two consecutive three-year terms.

1.4.15 Members of the Executive Committee interested in becoming Director of the INP will be identified in January of semester in which the current Director's term expires. A vote will be held by February 15th to allow the current Director to mentor the incoming Director in administration of the program.

Section 1.4.2 Deans Overseeing the INP

1.4.21 The Deans of COP, HSC, and CELS will work to advance the University's investment in neuroscience research by helping to grow the graduate INP program. They will help to develop new neuroscience endeavors with existing and newly recruited faculty from various URI colleges and centers. The Deans will also identify and pursue opportunities for research collaboration and educational relationships with national and regional partners including but not limited to the George & Anne Ryan Institute for Neuroscience, Brown University, Norman Prince Neuroscience Institute, Brown Institute for Brain Sciences, and other stakeholders in the state of Rhode Island.

Section 1.4.3 Associate Director

1.4.31 The Associate Director of the INP is selected for this position by the Deans of COP, HSC, and CELS in consultation with the INP Director. A minimum of a doctoral degree in a STEM discipline and one year of administrative experience is required for this position..

1.4.32 The Associate Director is a permanent position and will serve as the liaison between the Graduate School, the colleges, and the Executive Committee. The Associate Director oversees the day-to-day operations of the program, including coordination of the activities amongst the INP committees and participating Departments and Colleges within the University, program assessment, student advising, curricular affairs, admissions and recruitment, leading INP faculty meetings, supervising the Academic Advisor and Support Person, hiring and supervising graduate student program assistants, and managing graduate student financial support.

1.4.33 The Associate Director will track faculty membership by reviewing activity related to the INP and provide information annually to the Executive Committee annually for review.

Section 1.4.4 Academic Advisor

1.4.41 The full-time Academic Advisor is responsible for providing educational guidance and assistance for students in the INP. The goal of the Academic Advisor is to ensure that each student reaches their education potential. Their responsibilities will include managing student progress regarding course work, appropriate track selection and the advancement of students through the curriculum including whether students meet the requirements for graduation. The Academic Advisor will also help to identify at-risk students and provide assistance and information regarding support services available on campus as appropriate. A minimum of a Master's degree or five years of advising experience is required for this position.

1.4.42 The Academic Advisor is required to work closely with academic advisors from all colleges affiliated with the INP to ensure accurate, high-quality advising.

Article II INP Faculty Meetings

Section 2.1. Call to Order

2.1.1 The Associate Director shall call meetings of the INP faculty to consider questions of governance and educational policy at such times as the Executive Committee may deem necessary.

Section 2.2. Time of Meetings

2.2.1 A general meeting of INP faculty members is called at least once per year. Other meetings may be held as needs arise.

Section 2.3. Quorum

2.3.1 A quorum for Faculty meetings shall consist of a majority of the Core Faculty members.

Section 2.4. Agenda and Voting

2.4.1 Agenda

2.4.11 An agenda for all general meetings shall be delivered to all INP Faculty members at least two days before such a meeting.

2.4.12 Members of the faculty who wish to include items on the agenda of a general meeting shall submit items to the Associate Director at least one week before the scheduled meeting.

2.4.2 Voting

2.4.21 Only Core Faculty have full voting rights.

2.4.22 Online voting will be provided for elections of the Director of the INP, at-large members, and changes to bylaws.

Article III Program Committees

Section 3.1. Standing Committees

3.1.0 In addition to the Executive Committee, three standing committees carry important responsibilities for the operation and welfare of the INP. The Executive Committee is responsible for appointing committee members and selecting the chair of the committees. Committee members will serve for a minimum of one year with the option to renew.

3.1.1 Admissions and Advising Committee

3.1.11 The Admissions and Advising Committee will evaluate applicants and recommend admission and shall be responsible for dealing with issues relating to student progress.

3.1.2 Curriculum Committee

3.1.21 The Curriculum Committee lists and helps faculty develop the required and elective courses taken by INP students.

3.1.3 Grants and Research Committee

3.1.31 The Grants and Research Committee will focus on developing proposals that support the INP

3.1.4 Standing Committee Chairs

3.1.41 Standing committee chairs must be members of the INP Core Faculty, but need not be members of the Executive Committee and will be selected by committee members.

3.1.42 Standing committee chairs may attend Executive Committee meetings as non-voting ex officio members

Section 3.2 Ad Hoc Committees

3.2.1 The Executive Committee shall appoint ad hoc committees as needed.

Article IV: Student Representatives

Section 4.1. Student Liaison Committee

4.1.1 A Student Liaison Committee will participate in the governance of the program

4.1.12 Six students will be elected by the INP undergraduate, MS and PhD students (two from each student group) to serve a one-year term.

4.1.13 The Student Liaison Committee will meet with the Associate Director at least twice each semester to provide input and share concerns about INP programs and policies

Article V: Ratification and Amendments

Section 5.1 Changes to these bylaws

5.1.1 Changes to the bylaws of the INP may be proposed to the Executive Committee by Core Faculty members. Changes to the bylaws require approval by a majority of the Core Faculty of the INP.

DATE: September 30, 2019

TO: Margaret Benz
            Coordinator, Faculty Senate

FROM: Linda Barrett
            Director, Budget and Financial Planning

SUBJECT: Proposal for an Undergraduate Interdisciplinary Neuroscience Major, BS

As requested in an email from Leslie Mahler, Associate Professor in the Department of Communicative Disorders, dated September 23, 2019, the Budget and Financial Planning Office has reviewed the proposal for an Undergraduate Interdisciplinary Neuroscience Major, BS.

The Budget and Financial Planning Office concurs that the proposal for an Undergraduate Interdisciplinary Neuroscience Major, BS is anticipated to have a positive impact on the Fund 100 unrestricted budget as it has been presented.

There is no major impact to the process in Enrollment Services relative to this proposal.

Please let us know if you require any further information.

cc: Donald DeHayes   Dean Libutti
       Matthew Bodah   Carnell Jones
       Anne Veeger   Leslie Mahler
       Cheryl Hinkson   Colleen Robillard
       Joanne Lawrence   John Humphrey
       Paul Larrat   Gary Liguori
       John Kirby

Office/BudgetImpactStatements/undergraduate interdisciplinary neurosciencemajor,BS/BudgetImpactStatementLetter.final

ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance.

Page 1 of 3

Choose one: X Full-time   □ Part-time   □ Combination of full- and part-time

REVENUE ESTIMATES

	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024
Tuition: In-State	$12,590	$12,590	$12,590	$12,590
Tuition: Out-State	$29,710	$29,710	$29,710	$29,710
Tuition: Regional	$22,032	$22,032	$22,032	$22,032
Mandatory fees per student	$1,976	$1,976	$1,976	$1,976
FTE # of New Students: In-State	20	35	60	90
FTE # of New Students: Out-State	15	20	40	50
# of In-State FTE students transferring in from the institution's existing programs				
# of Out-State FTE students transferring in from the institution's existing programs				

TUITION AND FEES	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs
First Year Students								
In-State tuition	$251,800.00	$0.00	$440,650.00	$0.00	$755,400.00	$0.00	$1,133,100.00	$0.00
Out-of-State tuition	$445,650.00	$0.00	$594,200.00	$0.00	$1,188,400.00	$0.00	$1,485,500.00	$0.00
Regional tuition								
Mandatory fees	$69,160.00	$0.00	$108,680.00	$0.00	$197,600.00	$0.00	$276,640.00	$0.00
Second Year Students								
In-State tuition			$251,800.00	$0.00	$440,650.00	$0.00	$755,400.00	$0.00
Out-of-State tuition			$445,650.00	$0.00	$594,200.00	$0.00	$1,188,400.00	$0.00
Regional tuition								
Mandatory fees			$69,160.00	$0.00	$108,680.00	$0.00	$197,600.00	$0.00
Third Year Students								
In-State tuition					$251,800.00		$440,650.00	
Out-of-State tuition					$445,650.00		$594,200.00	
Regional tuition								
Mandatory fees					$69,160.00		$108,680.00	
Fourth Year Students								
In-State tuition							$251,800.00	
Out-of-State tuition							$445,650.00	
Regional tuition								
Mandatory fees							$69,160.00	
Total Tuition and Fees	$766,610.00	$0.00	$1,910,140.00	$0.00	$4,051,540.00	$0.00	$6,946,780.00	$0.00
GRANTS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
CONTRACTS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
OTHER (Specify)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Grants, Contracts, Other	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TOTAL	$766,610.00	$0.00	$1,910,140.00	$0.00	$4,051,540.00	$0.00	$6,946,780.00	$0.00

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.

ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance.

Page 2 of 3

EXPENDITURE ESTIMATES

	Year 1 2021 Additional resources required for program	Year 1 2021 Expenditures from current resources	Year 2 2022 Additional resources required for program	Year 2 2022 Expenditures from current resources	Year 3 2023 Additional resources required for program	Year 3 2023 Expenditures from current resources	Year 4 2024 Additional resources required for program	Year 4 2024 Expenditures from current resources
PERSONNEL SERVICES								
Director	$45,000.00		$46,350.00		$47,740.00		$49,172.00	
Associate Director	$50,000.00	$50,000.00	$51,500.00		$106,090.00		$109,272.00	
Faculty								
Support Staff								
Advisor	$55,000.00		$56,500.00		$58,000.00		$60,000.00	
Fringe Benefits %	$32,249.00		$32,249.00		$32,249.00		$32,249.00	
Total Personnel	**$182,249.00**	**$50,000.00**	**$186,599.00**	**$0.00**	**$244,079.00**	**$0.00**	**$250,693.00**	**$0.00**
OPERATING EXPENSES								
Instructional Resources	$20,000.00		$20,000.00		$20,000.00		$20,000.00	
Other (office supplies)	$14,050.00		$14,050.00		$14,050.00		$14,050.00	
Total Operating Expenses	**$34,050.00**	**$0.00**	**$34,050.00**	**$0.00**	**$34,050.00**	**$0.00**	**$34,050.00**	**$0.00**
CAPITAL								
Facilities								
Equipment	$5,000.00		$5,000.00		$6,000.00		$7,000.00	
Other								
Total Capital	**$5,000.00**	**$0.00**	**$5,000.00**	**$0.00**	**$6,000.00**	**$0.00**	**$7,000.00**	**$0.00**
NET STUDENT ASSISTANCE								
Assistantships								
Fellowships								
Stipends/Scholarships								
Total Student Assistance	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
TOTAL EXPENDITURES	**$221,299.00**	**$50,000.00**	**$225,649.00**	**$0.00**	**$284,129.00**	**$0.00**	**$291,743.00**	**$0.00**

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.

ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance. **Page 3 of 3**

	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024
BUDGET SUMMARY OF COMBINED EXISTING AND NEW PROGRAM				
Total Revenue	$766,610.00	$1,910,140.00	$4,051,540.00	$6,946,780.00
Total Expenses	$271,299.00	$225,649.00	$284,129.00	$291,743.00
Excess/Deficiency	**$495,311.00**	**$1,684,491.00**	**$3,767,411.00**	**$6,655,037.00**
BUDGET SUMMARY OF EXISTING PROGRAM ONLY				
Total Revenue	$0.00	$0.00	$0.00	$0.00
Total Expenses	$50,000.00	$0.00	$0.00	$0.00
Excess/Deficiency	**-$50,000.00**	**$0.00**	**$0.00**	**$0.00**
BUDGET SUMMARY OF NEW PROGRAM ONLY				
Total of Newly Generated Revenue	$766,610.00	$1,910,140.00	$4,051,540.00	$6,946,780.00
Total of Additional Resources Required for	$221,299.00	$225,649.00	$284,129.00	$291,743.00
Excess/Deficiency	**$545,311.00**	**$1,684,491.00**	**$3,767,411.00**	**$6,655,037.00**

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.

Interdisciplinary Neuroscience Program - Combined graduate and undergraduate expenses

Fund 100

Year 1

0.5 FTE for Director, also include summer stipend and work load adjustment to allow time for administration of the INP

0.5 Associate Director

1.0 Advisor; Grade 10 with a master's degree or 5 years of advising experience

Expenditures from current resources in year one is the transfer of Assoicate Director funds from the Graduate School

Instructional resources include $5,000 for a lab course, $10,000 for experiential learning (25 students/yearX$400), and $5,000 for lab supplies

Other operating expenses include office supplies $5000 since the program has no department infrastructure for a copier, paper, etc. . .

Other operating expenses also include: SfN institutional membership $550; Out-of State travel to meetings $4000, Grad Student Asst $1500, Speaker honoraria $1500, Special services for catering and attending events $1500

Year 2

0.5 FTE for Director, also include summer stipend and work load adjustment to allow time for administration of the INP

0.5 Associate Director

1.0 Advisor; Grade 10 with a master's degree or 5 years of advising experience

Instructional resources include $5,000 for a lab course, $10,000 for experiential learning (25 students/yearX$400), and $5,000 for lab supplies

Refer to Year 1 for operating expenses explanation

Year 3

0.5 FTE for Director, also include summer stipend and work load adjustment to allow time for administration of the INP

1.0 Associate Director - Increase based on expected increase in enrollment that will necessitate greater administrative responsibilities

1.0 Advisor; Grade 10 with a master's degree or 5 years of advising experience

Instructional resources include $5,000 for a lab course, $10,000 for experiential learning (25 students/yearX$400), and $5,000 for lab supplies

Refer to Year 1 for operating expenses explanation

Year 4

0.5 FTE for Director, also include summer stipend and work load adjustment to allow time for administration of the INP

1.0 Associate Director

1.0 Advisor; Grade 10 with a master's degree or 5 years of advising experience

Instructional resources include $5,000 for a lab course, $10,000 for experiential learning (25 students/yearX$400), and $5,000 for lab supplies

Refer to Year 1 for operating expenses explanation

Instructional Resources include materials for the classroom and laboratory fees to support required experiential learning (NEU 410)

Fringe benefits were calculated for the Associate Director and Advisor with the assumption that the Director fringe will continue to be paid by the home department.

Fringe assumptions:

Nonclassified

Union - not known

Individual health plan

TIAA retirement

26 pay periods

(Associate Director is half-time)

Advisor = $18,571

Associate Director = $13,678

Student Learning Outcomes
Program Assessment Curriculum Map

Curriculum maps illustrate the link between the courses and requirements in a program, to the program learning outcomes. Maps represent where students are given the opportunity to achieve the outcomes, from introduction to mastery, as they proceed through the curriculum.

To complete the matrix:
- Across the top: List all the courses and other program requirements (e.g., internships, service-learning, portfolios), developmentally/sequentially when possible.
- Down the side: List your Program Student Learning Outcomes.
- Use the Map Key below: Indicate the degree to which an outcome will be taught and practiced by students (I-R-E); consider the goal of **key** assignments and activities before assigning a code. (Courses often scaffold several outcomes, but may focus assignments on specific areas.)

(Form expands to accommodate program outcomes; add lines as necessary.)

Academic Program: Interdisciplinary Neuroscience Undergraduate Program   **Reporting Year:**   2022

Program Student Learning Outcomes:
Explicit statements of observable, measurable results that specify what a student is expected to know or be able to do as a result of their participation in an academic program. Statements should be detailed and meaningful enough to guide decisions in program planning, improvement, pedagogy, and practice.

Map Key
I = Outcome Introduced for Mastery
R = Outcome Reinforced for Mastery
E = Outcome Emphasized for Mastery

Course Numbers/Program Requirements
Program requirements can include internships, service learning, portfolios, comprehensive exams, seminars, and requirements that may not be associated with a course number.

Course Numbers/Program Requirements:

	Program Student Learning Outcomes:	NEU 101	NEU 110	NEU 210	NEU 262	NEU 230	NEU 301	NEU 310	NEU 320	NEU 410	NEU 460	STA 307	BIO 220/221	CHM 101/102						
#1	1.1 Demonstrate knowledge of the development, structure, and function of the human nervous system. 1.2 Integrate knowledge of neuroscience principles and practice with fields that intersect with neuroscience.	I	I, R				E	E	E	E, R			I	I						
#2	2.1 Critically evaluate evidence-based literature related to data analysis.				I, R						E	I, R								
#3	3.1 Identify responsible and ethical behavior related to neuroscience research and practice.			I, R		E			E											

Student Learning Outcomes
Program Assessment Curriculum Map

Academic Program Proposal Cover Page

1. Name/Contact Information: Leslie Mahler/lmahler@uri.edu/874-2490

2. Originating from (please fill in all that apply): Interdisciplinary Neuroscience Program

Multiple Departments   CHS, CELS, & COP
    (Department)   (School/College)   (Division)

3. Program type: Undergraduate ✔ (attach Curriculum Sheet) Graduate ☐ (attach List of Requirements)

4. Proposing **New** ✔ or **Change** ☐ to the following (see **Instructions** for definitions): (select all that apply)

Department: ☐ Degree: ☐ Program: ✔ Major: ✔ Sub plan: ✔ Other: ☐
                                           (option, track, concentration)

Title/name of proposed Department: This will be an interdisciplinary program

Title/name of proposed Degree: BS in Interdisciplinary Neuroscience

Title/name of proposed Program: Interdisciplinary Neuroscience Program

Title/name of proposed Major: Neuroscience

Classification of instruction program (CIP) code: CIP Index 26.1501

Title/name of proposed Sub plan: There will be 3 degrees; one each in CHS, CELS, & COP

      CIP code (if different from above): CIP Index

Other: CHS: Clinical 26.1501; CELS: Molecular 26.1503; COP Neuropharm 26.1003

5. Proposed Degree(s) (BS, BA, BFA, MA, MS, Ph.D, etc.): BS

6. Intended initiation date: Term Fall   Year 2020

7. Anticipated date of granting first degree: May 2023

8. Intended location of program: Kingston ✔ Providence ☐ Narragansett Bay Campus ☐

9. Total Credits Required for Graduation: (120, 130, etc) 120

10. Certification/Licensing Requirements: Yes ☐ (provide brief description) No ✔

Joint Committee on Academic Planning Pre-Proposal for New Programs
12-7-18

Program Name: Undergraduate Neuroscience

Degree Type: Bachelor of Science

Proposer: Neuroscience Implementation Task Force

Courses included in this proposal are offered by the following Departments: Biology, Biomedical and Pharmaceutical Sciences, Cell and Molecular Biology, Chemistry, Computer Science and Statistics, Mathematics, Interdisciplinary Graduate Program in Neuroscience, Pharmacy Practice, Psychology, Statistics, and Engineering.

College(s): Recommendation included below

Part 1. Briefly describe program
This proposal is for the creation of an undergraduate neuroscience major at URI that will be integrated with the existing graduate Interdisciplinary Neuroscience Program (INP). An undergraduate neuroscience program will leverage our existing academic graduate programs in neuroscience (masters and Ph.D.), and expertise in neuroscience research across the campus and via the George and Anne Ryan Institute for Neuroscience. The presence of a variety of research labs on campus and state-of-the-art neuroscience research conducted at the George and Anne Ryan Institute for Neuroscience.is a benefit to undergraduates seeking laboratory experience. An additional benefit to undergraduate students is that INP affiliated faculty, postdoctoral researchers and graduate students can serve as mentors to undergraduate neuroscience majors. Curricular requirements for the major will include a core of general neuroscience courses and two specialized tracks designed to foster knowledge and experience in molecular and clinical neuroscience. It is recommended that the proposed undergraduate program be integrated with the existing administrative structure of the INP that includes representation across five colleges.

Administrative Structure
The Neuroscience Implementation Task Force unanimously recommends housing undergraduate and graduate neuroscience programs within the same organizational structure for several important reasons:
  • To promote retention of the top undergraduate students who decide to pursue graduate studies at URI
  • To enable efficient coordination of teaching responsibilities across undergraduate and graduate curriculum

- To maximize economic efficiency: faculty and administrative resources will serve dual purposes for undergraduate and graduate students
- To allow seamless administrative coordination for teaching, research, and advising
- To offer an accelerated Bachelor's to Master's program for select undergraduate students
- To provide students with a sense of belonging and community identity
- To provide opportunities for INP graduate students to teach neuroscience courses
- To increase communication and interactions between students at different levels of training

It is recommended that the INP Director, who is elected by the INP faculty, continue to provide leadership for both programs. The director will report to Deans from three colleges: College of Pharmacy, College of Health Sciences and the College of Environment and Life Sciences. These colleges will be impacted the most by students pursuing an undergraduate neuroscience major, hence each college should contribute to the administration of the undergraduate and graduate programs. The INP Director will report to one of the three Deans on a two-year rotating basis. The INP Executive Committee will continue to function as the program's decision-making body and the INP Curriculum Committee will be comprised of six members with faculty representing the three colleges overseeing the program and will continue to make curriculum decisions for the program. This curriculum committee will make decisions for the graduate and undergraduate programs and obtain approval from the INP Executive Committee before submitting to graduate council for graduate curriculum decisions and the Curriculum and Standards Committee for undergraduate matters.

Although oversight of the undergraduate and graduate programs will come from three Deans, the administrative home of the graduate and undergraduate programs will need to be in one of the degree granting colleges. The administrative structure of the neuroscience programs will consist of a single Director, Associate Director, and a professional advisor. The task force recommends housing the administrative component of the undergraduate and graduate program within the College of Pharmacy for several reasons:
- To maximize economic efficiency: existing faculty and administrative resources within the College of Pharmacy can serve the neuroscience program more efficiently than recreating these structures anew
- To capitalize on the expertise of the faculty of the Ryan Institute, the majority of whom have appointments in the College of Pharmacy
- To ensure that undergraduate neuroscience students are given ample opportunities to gain experience in neuroscience research already taking place in the COP
- To promote interactions between neuroscience faculty whose primary appointments are in the COP and are research-focused, and currently involve graduate neuroscience students
- To maintain the interdisciplinary nature of neuroscience: the COP has demonstrated enthusiasm and flexibility in working with administration and faculty from different colleges across campus to help build the neuroscience program that exists at URI today.

Curriculum
The required core curriculum for all neuroscience majors includes preparation courses and core courses with a minimum of 15 credits in one of three tracks. Preparation courses currently exist at URI in chemistry and biology, as well as computer programming and math. Core courses are in molecular biology, pharmacy, statistics and neuroscience. In addition to completing core and foundational courses, students will select 15 credits (or more) from courses organized into three tracks designed to customize learning towards professional goals. Undergraduates will initially matriculate through University College for one to two years and through advising will choose the neuroscience track that best suits their career goals. The three tracks include:
1.   General Neuroscience
2.   Molecular Neuroscience
3.   Clinical Neuroscience

All undergraduate students will receive a BS in neuroscience with a sub-program designation in one of the three tracks. The College of Pharmacy will grant the undergraduate degree to students in the general neuroscience track. The College of Environmental Life Sciences will grant the undergraduate degree to students in the molecular neuroscience track and the College of Health Sciences will grant the undergraduate degree to students in the clinical neuroscience track. (Please refer to the attached curriculum sheet for details.)

Benefits to Undergraduate Students
Establishing an undergraduate neuroscience program is consistent with national trends indicating that neuroscience is a current and growing focus of both research and employment. Neuroscience has also been a strategic focus at URI for seven years beginning with the formation of the INP in 2011 and strengthened by the creation of the Ryan Institute for Neuroscience in 2015. Creating an undergraduate neuroscience major at URI will make neuroscience accessible to our undergraduates and leverage our existing expertise in basic and applied neuroscience with curricular innovations in data science and engineering. The proposed undergraduate major will prepare students for multiple future career options including; neuroscience research, clinical work, teaching in neuroscience, medical and graduate school, biotechnology and pharmaceutical industries, public health, and technical writing among others. Feedback from the URI Office of Admissions indicates that students applying to URI are specifically interested in selecting a neuroscience major, and that URI is losing applicants because this undergraduate major is not currently offered.

Benefits to URI
Neuroscience is a highly attractive major among undergraduate students where these programs are available. URI is lagging behind and needs a neuroscience undergraduate major to attract high performing high school and undergraduate students. Studies by Ramos et al., (2011 and 2016) identified the unprecedented growth of undergraduate neuroscience in the US and the number of institutions offering neuroscience majors has risen from <10 in 1986 to 157 in 2014. Their data extend an emerging literature demonstrating growth in undergraduate neuroscience education that prepares students for

graduate and professional studies in basic science research and health care professions. Based on these findings, the creation of a new undergraduate neuroscience program will successfully attract additional, highly qualified students to URI.

As the landscape shifts in biomedical education and job markets, URI has a unique opportunity to design a forward-thinking and innovative major in neuroscience that produces graduates possessing skills valued by employers in a variety of sectors.

Part 3. Signatures:

Proposers: _____

_____

_____

_____

_____

_____   **Date: _____**

Chair(s):   _____   **Date: _____**

Dean(s):   _____   **Date: _____**

Attachments:
      Consultant Report; Gary Dunbar, PhD, Executive Summary
      Proposed curriculum

THINK BIG   WE DO™

Final

**Joint Committee on Academic Planning
December 7, 2018
MINUTES**

Committee Roster:

Donald DeHayes, Provost and VP for Academic Affairs, Chair
Bahram Nassersharif, Vice Chair, Faculty Senate
Marilyn Barbour, Chair, Academic Program Review Committee
Laura Beauvais, Vice Provost for Faculty Affairs
Audrey Cardany, Fac Sen, Curriculum & Standards Comm., Chair
Nick Constant, President, Graduate Students Association
Mayrai Gindy, Faculty Senate Executive Committee member
Dan Graney, Dean of Students

Michael Honhart, Faculty Senate Executive Committee member
Patricia Morokoff, Faculty Senate Executive Committee member
Ann Morrissey, Special Assistant for Academic Planning
Nedra Reynolds, Associate Dean, College of Arts and Sciences
Peter Snyder, Vice President, Research and Economic Development
Adriana Wilding, President, Student Senate
Nasser Zawia, Dean, Graduate School

Approval of Minutes
The minutes from the November 8, 2018, meeting were approved.

Pre-Proposal: Bachelor of Science in Neuroscience
Professors Leslie Mahler, Lisa Weyandt and Alycia Mosley Austin, Associate Director, INP, presented a pre-proposal for a Bachelor of Science in Neuroscience. They explained that they represent the existing structure of the current graduate program in Neuroscience, and they place a high value on the interdisciplinary nature that distinguishes our program at URI. They said that Neuroscience is growing as field of study and professional expertise – students are asking for an undergraduate program. The task force proposing this new degree has put a great deal of work and research into planning the new structure, including consulting with an external reviewer – they plan that the program director will report to the deans of Pharmacy, CELS and Health Sciences in rotation, and students will select one of three tracks: general neuroscience, molecular neuroscience or clinical neuroscience.

After discussion, the committee voted unanimously that the degree plan is encouraged to move forward, with the following important feedback:

- Consider the needs of students transferring into the program.
- Consider alternative reporting models to the rotating of the deans.
- Provide additional justification for the three separate tracks, especially the General Track.
- Consider letting students choose to declare a track or not.
- Highlight the market demand in materials, and be aware that the Pre-Med piece could prove to be very popular.
- Consider adding the Graduate School Dean to the coordinating committee.
- Consider cross-listing courses in the sophomore year.
- Consider naming the track in Pharmacy something other than "General."

Pre-Proposal: Master of Science in Healthcare Management
Professor Kathryn Jervis, from the College of Business, described the proposed degree. She said that an interdisciplinary committee, working from two student surveys, have put together 12 courses to make two stackable certificates in Healthcare Management, and are now proposing a full degree (30 credits) and to move the program online in the 7-week module delivery system.

After discussion, the committee agreed that this degree will be ideal for online and voted unanimously that the degree plan is encouraged to move forward, with the following important feedback:
- Add a practicum element.
- Add more electives – flesh out the details in this area.
- Plan stackable certificates.
- Consider calling this a professional masters.
- Consider adding the health economics course.
- Consider that there may be an expanded opportunity depending on whether this program is coming out of the business school or the AHC.

The Role of the Committee
Provost and Chair Don DeHayes and the committee agreed that the discussion of this topic will continue at the next meeting. The committee will consider adding clear guidelines to the JCAP web page and agreed that each of the colleges' curricula committees need to be fluent in which courses need to come to JCAP and which do not.

The meeting adjourned at 1:35pm. The next JCAP meeting will be held on Thursday, January 10, 2019, 3pm-4:30pm.

THE **UNIVERSITY**
OF RHODE ISLAND

GRADUATE SCHOOL
Leslie Mahler, PhD, CCC-SLP, MBA, Director
INTERDISCIPLINARY NEUROSCIENCE PROGRAM
Quinn Hall, 55 Lower College Road, Kingston, RI 02881 USA   p: 401.874.2490   lmahler@uri.edu

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MEMORANDUM OF UNDERSTANDING
Interdisciplinary Neuroscience Program
Undergraduate and Graduate Majors

The purpose of this Memorandum of Understanding (MOU) is to affirm a partnership and commitment of the parties involved in the creation of a freestanding Interdisciplinary Neuroscience Program to include a new academic undergraduate major in Neuroscience with degree granting tracks through three Colleges along with the existing graduate program in neuroscience (INP). The parties include the College of Pharmacy (COP), College of Health Sciences (CHS), and College of Environmental and Life Sciences (CELS), and the Office of the Provost.

The terms described in this MOU provide a broad base of support for administration of the program and to foster success of the students enrolled. This MOU is consistent with the University of Rhode Island's goal to facilitate interdisciplinary teaching and research, and provide supportive processes that will advance these important endeavors.

Current Model: The current Ph.D. and Master's programs in Interdisciplinary Neuroscience (INP) are housed within the Graduate School, not within a department, for the purpose of supporting the interdisciplinary nature of the program. This structure creates challenges in negotiating interdepartmental resources, workload expectations, co-teaching, and collaboration on research proposals.

Proposed Model: Create a freestanding Interdisciplinary Neuroscience Program (INP) to include a new undergraduate neuroscience major affiliated with COP, CELS, and CHS and the existing INP graduate program. All undergraduate students will receive a BS in Neuroscience in the major with a sub-plan designation in one of three tracks; students in

1

the clinical neuroscience track will graduate with a major in Neuroscience from CHS, students in the molecular neuroscience track will graduate with a major in Neuroscience from CELS, and students in the neuropharmacology neuroscience track will graduate with a major in Neuroscience from COP. Both the major and the track will be designated on student transcripts. The INP graduate program, which involves faculty from several colleges, will move from the Graduate School to become part of the freestanding INP program. Faculty affiliated with the INP will continue to mentor, advise, and interact with INP graduate students and efforts will be made to bring greater identity and opportunity to the program and the students. The INP program will be led by a Director and will include other support as necessary and affordable and consistent with the growth of the program.

The parties recognize and agree to the following:

Faculty and Teaching:

- INP faculty have their academic appointments in various academic departments across several colleges at URI. These faculty wish to contribute to the INP because of their academic interests and expertise in neuroscience. Faculty seeking membership in the INP are required to send a CV to the Executive Committee along with a brief statement describing their teaching and/or research. The INP Executive Committee will evaluate the qualifications of the applicants then submit the list to the core INP faculty for a vote. Faculty who are approved and their respective Dean will receive a letter of confirmation and their participation in the INP will be reviewed every three years. Faculty approved by the INP Executive committee become core faculty when they are actively engaged in the INP through teaching, mentoring, or service. Core faculty are eligible to serve on the INP Executive Committee and all standing committees of the INP.

- The Deans of each college with core INP faculty nominate members to the Executive Committee for a term of three years. Nominees must have been Core members of the INP for a minimum of one year. No more than two members from any one college may serve on the Executive Committee at any given time. A

representative of the Graduate School will also serve on the Executive Committee to represent the graduate programs.

- Appropriate departmental and college support is needed for faculty to teach courses in the INP at the graduate and undergraduate levels. It is understood that faculty who teach neuroscience courses will incorporate those courses into their expected workload and these teaching commitments will count toward promotion and tenure expectations. Credit hours generated will be attributed to the faculty and their home department and colleges. The expectation is that INP undergraduate courses will be given equal weight with existing college programs and departments.

- An increased demand for teaching assistants to support curricular demands created by new undergraduate neuroscience students will likely occur as the number of students and courses in the program increase. INP graduate students who are awarded a teaching assistantship will be given priority consideration for large enrollment and/or lab undergraduate courses related to the neuroscience major.

- Department chairs, in consultation with their Dean of the College, will determine how to cover existing departmental courses when faculty teach in the INP undergraduate and/or graduate neuroscience program a process that is consistent with current practice at URI. This process may include strategic reassignment of some teaching responsibilities within departments as appropriate and/or requests by Deans for resources to cover courses when no alternative viable options exist.

Experiential Learning:

One of the hallmarks of a thriving neuroscience program is offering students the opportunity to be involved in experiential learning opportunities, such as undergraduate or graduate student research, and internships in clinics, companies, or non-profits, etc. Internships may be identified by departments and/or in collaboration with the URI Center for Career and Experiential Education (CCEE). The academic internship program of the CCEE provides students with experiential learning opportunities throughout the year. The
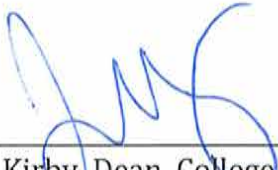
parties agree to:

- o Support faculty who express an interest in mentoring undergraduate or graduate INP students, including the possibility of hosting students in a laboratory for a specified period of time.
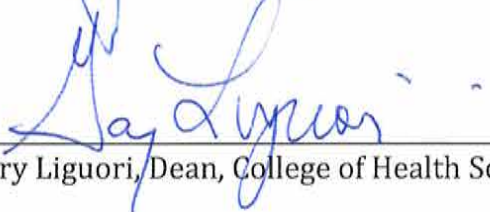
Administrative Structure and Budget:

- The INP will be a freestanding program at the University of Rhode Island that is administered by the Deans' Oversight Committee (DOC) comprising the Deans of the COP, CHS, and CELS. One Dean, to be selected by the Provost, will serve as Coordinating Dean on a 3-year rotating basis.

- The INP Director is a faculty member at the Associate or Full Professor level who has served on the INP Executive Committee and is elected by the INP core faculty with input from the DOC and concurrence of the INP Executive Committee. The Director will provide leadership for both the graduate and undergraduate programs. The INP Director will report to the DOC and will meet with that Committee no fewer than one time per semester and once over the summer for the purposes of reporting on progress of the program, any challenges that emerge, and the overall direction of the program.

- The INP Director will have overall responsibilities for the INP program. The INP Director does not have annual review responsibilities for INP faculty but may provide input as to the teaching, research, and service contributions of INP faculty participating in the INP program if requested.

- The Provost will provide financial support for the INP Director and a full-time professional advisor who will be recruited specifically for the program. The advisor will report directly to the INP Program Director.

- The INP Director will receive compensation and a workload adjustment to allow time for administrative responsibilities. Compensation will be an appropriate salary supplement and summer salary.

- The 0.5 FTE Associate Director and the funds to support this position will be transferred from the Graduate School. The Associate Director will report to the Director of the INP.
- Given the multi-college pathway of the program and the requirement for experiential learning opportunities for all students, the Provost's Office will fund a professional advisor position dedicated to the INP program.
- The INP will have its own unique operating budget (chartfield string) that resides within the Provost's office. However, as with all other academic programs at URI, any annual budget changes or requests must be proposed by the Director to the DOC and, if deemed appropriate and cost effective, the priorities will be included in the budget requests from the three Deans to the Provost's Office.
- All three colleges, as well as Art & Sciences and Engineering, will have representation on the INP committees that administer the INP program including:
  - Executive committee
  - Curriculum committee
  - Admissions and advising committee

_____

John Kirby, Dean, College of Environmental and Life Sciences

_____

Gary Liguori, Dean, College of Health Sciences

_____

Paul Larrat, Dean, College of Pharmacy

_____

Donald DeHayes, Provost

The Collection Management Officer will complete this form as requested, assessing library materials and collections as detailed below, returning. Subject selectors who receive requests for Library Impact Statements for new programs should forward those requests to the CMO.

Program: BS in Neurosciences_____

Department, College: various/ COP, CELS, CHS_____

Faculty Member: Leslie Mahler_____

Date returned to Faculty: _9/17/19_____

Librarian Completing Assessment: Joanna M. Burkhardt_____

Collection Management Officer: Joanna M. Burkhardt_____

Assessment of:

• Suitability of existing library resources;
• New library resources required to support the program;
• Information skills education required by the students; and
• Funds needed for library materials and services.

Please include:

1. What library holdings already exist in relevant subject categories? How much money is now allocated in the program subject area?

   The University libraries have a current and robust collection in relevant subject categories. Money is allocated to subject areas for the purchase of monographs and other non-journal materials to support the program. There is plenty of funding for the purchase of monographic materials to support courses in the program, should the need arise. The cost of journal subscriptions is not broken out by department or college.

2. Does URI have the essential journals as noted in the Faculty Questionnaire?

   The Libraries subscribe to most of the journals noted on the Faculty Questionnaire. No specific title is listed as essential. The library subscribes to journal databases that provide access to journals in the relevant subject categories.

3. What new resources are required to support the program (including media, electronic, or other non-print materials)?

   No new library materials are required to support this program.

4. What information mastery sessions will be required for the students?

    Instructors for individual courses may request a library instruction session at any time.

5. What is the approximate cost to acquire the materials necessary? Which of these will be continuing costs?

    There are no new or ongoing costs to the library for the support of this program.

rev 3-2-17

UNIVERSITY OF RHODE ISLAND NEUROSCIENCE IMPLEMENTATION TASK FORCE

NEUROSCIENCE B.S

STUDENT:
2020-2021
STUDENT ID:
Revised 9-13-19
ADVISOR:
* Course approved for General Education
(Medical school does not accept transfer credits from high school.

Preparation Courses

Course Code	Course Name			Credits	Semester	Grade
CHM 101*	General Chem I			3	Freshman Fall	
CHM 102*	General Chem I Lab			1	Freshman Fall	
CHM 112	General Chem II			3	Freshman Spring	
CHM 114	General Chem II Lab			1	Freshman Spring	
CHM 124 OR CHM 227	Organic Chemistry			3	Sophomore Fall	
Math 103 and/or Math 131	Applied PreCalculus and/or Applied Calculus I			3	MTH 103 is prerequisite for MTH 131; some students may have HS credit for MTH 103	
PSY 113	General Psychology			3	Sophomore Year	
BIO 101*	Biology I			3	Freshman Fall	
BIO 103*	Biology I Lab			1	Freshman Fall	
BIO 102*	Biology II			3	Freshman Spring	
BIO 104*	Biology II Lab			1	Freshman Spring	
BIO 220	Fundamentals of Anatomy and Physiology I			3	Sophomore Fall	
BIO 221	Fundamentals of Anatomy and Physiology lab			1	Sophomore Fall	
BIO 222	Fundamentals of Anatomy and Physiology II			3	Sophomore Spring	
BIO 223	Fundamentals of Anatomy and Physiology lab			1	Sophomore Spring	
Preparation Courses Subtotal				**33**		

Core Courses

Course Code	Course Name			Credits	Semester	Grade
NEU 101	Foundations of Neuroscience (NEW)			3	Freshman Spring	
NEU 110	Neurosciences Seminar (NEW)			1	Sophomore Fall or Spring	
NEU 210	Neuroethics and Diversity (NEW)			3	Sophomore Spring	
NEU 262	Neuroscience Research Methods (NEW)			4	Sophomore Spring	
NEU 230	Neuroscience Professional Development (NEW)			1	Sophomore Fall	
NEU 301	Cellular & Molecular Neuroscience (NEW)			3	Junior Fall	
NEU 310	Developmental Neurobiology (NEW)			3	Junior Spring	
NEU 320	Clinical Neurosciences (NEW)			3	Junior Fall	
STA 307	Biostatistics			3	Junior Spring	
PHY 111/185	General Physics			4	Sophomore Fall	
NEU 410	Experiential Neuroscience (NEW)			1-6	Senior Fall	
NEU 460	Neurosciences Journal Club (NEW)			1	Senior Spring	
Core Courses Subtotal				**29**	23 credits of new courses	

Molecular Neuroscience Major Requirements: Choose 15 credits from the following list.

Course Code	Course Name			Credits	Semester	Grade
CSC/DSP 310	Programming for Data Science			4		
CMB 311	Biochemistry			3		
CMB/BIO 352	Genetics			4		
CMB/BIO 341	Cell Biology			3		
BIO/CMB 437	Fundamentals of Molecular Biology			3		
CMB 460	Experimental Approaches in Molecular and Cell Biology			3		
PHY 112	Physics II lecture			3		
PHY 186	Physics II lab			1		
Track Subtotal						

Molecular Neuroscience Major Electives: Choose a minimum of 3 credits from the following list.

Course Code	Course Name		Credits		
CMB 333	Immunology and Serology		3		
CMB 312 or 412	Advanced Biochemistry Lab		2		
CMB 320	Computational Biology		3		
CMB 353	Genetics Laboratory		1		
BIO/CMB 452	Advanced Topics In Genetics		3		
CMB 435	Introduction to the Biology and Genetics of Cancer		3		
CMB 482	Proteins and Enzymes: Mechanisms of Disease		3		
Track Subtotal					

Clinical Neuroscience Major Requirements: Choose 15 credits from the following list.

Course Code	Course Name		Credits	Semester	Grade
CMD 280G	The Real Reason for Brains		3		
BPS/PSY 205G	The Challenged Brain		3		
BPS 321	Principles of Pharmacology and Autonomic Pharmacology		2		
PSY 232*	Developmental Psychology		3		
PSY 254	Behavior Problems and Personality Disorders		3		
PSY 301	Research methods and Design in the Behavioral Sciences		4		
PSY 381	Physiological Psychology		3		
PSY 384	Cognitive Psychology		3		
PSY 385	Perception		3		
PSY 434	Psychological Testing		3		
HDF 357	Family and Community Health		3		
KIN 300	Physiology of Exercise		3		
Track Subtotal					

Clinical Neuroscience Major Electives: Choose a minimum of 3 credits from the following list.

Course Code	Course Name	Credits		
CMB 210	Biochemical Aspects of Nutrition and Physiology	3		
CMD 377	Functional Neuroanatomy	3		
CMD 494	Autism and Pervasive Developmental Disorders	3		
CMD 492	Interprofessional Clinical Research of Neurological Disorders	3		
BPS 313	Principles of Medicinal Chemistry	2		
BPS 401	Pharmaceutical Pharmacology I	3		
PSY 261	The Alcohol-Troubled Person: Introductory Concepts	3		
PSY 275	Alcohol Use and Misuse	3		
PSY 460	The Substance Troubled Person	3		
PHP 336G	Exploring Interdisciplinary Healthcare Solutions for Opioid Use Disorde	3		
PHP 405	Epidemiology in Health Care	4		
Track Subtotal				

Neuropharmacology Major Requirements: Choose 15 credits from track requirements from the following list

Course Code	Course Name	Credits	Semester	Grade
BPS 313	Principles of Medicinal Chemistry	2		
BPS 321	Principles of Pharmacology and Autonomic Pharmacology	2		
BPS 345	Introduction to Pharmaceutical Research	3		
BPS 401	Pharmaceutical Pharmacology I	3		
BPS 432	CNS Drug Pharmacology and Medicinal Chemistry	2		
BPS 442	Pharmacogenomics and Pharmacogenetics	3		
BPS/CMB 450	Practical Tools for Molecular Sequence Analysis	3		
CMB 311	Biochemistry	3		
CMB 426	Structural Biochemistry	3		
BIO/CMB 437	Fundamentals of Molecular Biology	3		
CMB 460	Experimental Approaches in Molecular and Cell Biology	3		

Neuropharmacology Major Electives: Choose a minimum of 3 credits from the following list.

Course Code	Course Name	Credits		
BIO 482G*	Evolutionary Medicine of Human Health and Disease	3		
BME 281	Biomedical Engineering Seminar II	3		
BME 307	Bioelectricity	3		
BME 360	Biomeasurement	3		
BPS 201	How Drugs Work	3		
BPS/PSY 205G	The Challenged Brain	3		
BPS 402	Pharmaceutical Pharmacology II	3		
BPS/PSY 436	Psychotropic Drugs and Therapy	3		
CMB 464	Biochemistry of Metabolic Disease	3		
CMB 482	Proteins and Enzymes: Mechanisms of Disease	3		
CMD 280G	The Real Reason for Brains	3		
NEU 502	Introduction to Neurobiology	4		
NEU 503	Introduction to the Neurosciences	3		
PSY/NEU 381	Physiological Psychology	3		
PHP 336G	Exploring Interdisciplinary Healthcare Solutions for Opioid Use Disorde	3		
PHP 405	Epidemiology in Health Care	4		
PHP 555	Advanced Neuropsychiatric Pharmacotherapy	3		
Electives Subtotal				

The general education requirement is 40
No more than twelve credits can have the same course code.
A single course may meet more than one General education courses may also be used to meet requirements of the major or minor when appropriate.

General Education Courses and Outcomes (40 credits required)

Course	Credits	Grade	Outcome	
WRT 104*	3		B1. B4	**KNOWLEDGE**
COM 100 *	3		B2. C1	A1. STEM
CHM 101*	3		A1	A2. Social & Behavioral Sciences
BIO 101*	3		A1	A3. Humanities
BIO 103*	1		A1	A4. Arts & Design
BIO 102*	3		A1	**COMPETENCIES**
BIO 104*	1		A1	B1. Write effectively
PHY 111*	3		A1, B3	B2. Communicate effectively
PHY 185*	1		A1, B3	B3. Mathematical, statistical, or computational strategies
CMD 280G*	3		D1 G	
CSC 201	4		B3	B4. Information literacy
PSY/BPS 205G*	3		A1, B4, G	**RESPONSIBILITIES**
BIO 482G*	3		B1, D1, G	C1. Civic knowledge & responsibilities
PHL 215*	3		A1, B1	C2. Global responsibilities
PSY 232*	3		A2	C3. Diversity & Inclusion
PHP 336G	3		D1. C1	
PHP 405	3		D1, B4	
				INTEGRATE & APPLY
In selected tracks				D1. Ability to Synthesize
MTH 111*	3		A1, B3	**GRAND CHALLENGE**
MTH 131*	3		A1, B3	G. Grand Challenge
PHY 186*	1		A1, B3	
PHY 112*	3		A1. B3	
Total Gen Ed Credits	**40**			