

RECEIVED

MAR 31 2015

OFFICE OF THE
SENATE COUNCIL**1. General Information**

1a. Submitted by the College of: ARTS & SCIENCES

Date Submitted: 12/22/2014

1b. Department/Division: Biology

1c. Contact Person

Name: Ruth E Beattie

Email: rebeat1@uky.edu

Phone: 257-7647

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

1d. Requested Effective Date: Semester following approval

1e. Should this course be a UK Core Course? No

2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: BIO 394

2c. Full Title: Research in Neuroscience

2d. Transcript Title: Research in Neuroscience

2e. Cross-listing:

2f. Meeting Patterns

LABORATORY: 3-9

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 1-3

2i. Is this course repeatable for additional credit? Yes

If Yes: Maximum number of credit hours: 12

If Yes: Will this course allow multiple registrations during the same semester? No

2j. Course Description for Bulletin: An independent research project in an area of neuroscience under the direction of a faculty mentor. A research contract signed by the student and the faculty research mentor must be approved by the Director of Undergraduate Studies (Neuroscience). May be repeated to a maximum of 12 credits, but a maximum of only 6 credits may be used to satisfy the requirements of the minor or major in Neuroscience. Prereq: BIO 152 and BIO 302 or PSY 312

2k. Prerequisites, if any: Prereq: BIO 152 and BIO 302 or PSY 312

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Summer,

Will the course be offered every year?: Yes

If No, explain:

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: 35 - 50

7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: Yes

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: The course may be of interest to students majoring in Biology or Psychology

8. Check the category most applicable to this course: Traditional – Offered in Corresponding Departments at Universities Elsewhere,

If No, explain:

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program?: Yes

If YES, name the proposed new program: Neuroscience - paperwork for program approval has been submitted.

b. Will this course be a new requirement for ANY program?: No

If YES, list affected programs:

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: No

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached: Yes

Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6. How do course requirements ensure that students make appropriate use of learning resources?

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)?

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10. Does the syllabus contain all the required components? NO

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|VCASS2|Vincent Cassone|BIO 394 NEW Dept Review|20141222

SIGNATURE|ACSI222|Anna C Harmon|BIO 394 NEW College Review|20150202

SIGNATURE|JMETT2|Joanie Ett-Mims|BIO 394 NEW Undergrad Council Review|20150331

Courses	Request Tracking
---------	------------------

New Course Form

<https://myuk.uky.edu/sap/bc/soap/rfc?services=>

[Open in full window to print or save](#)

Generate R

Attachments:

Upload File

ID	Attachment
Delete 4223	BIO 394 syllabus Template.docx
Delete 4432	BIO 394 UGC Review Checklist.docx

1

Select saved project to retrieve...

(*denotes required fields)

1. General Information

- a. * Submitted by the College of: Submission Date:
- b. * Department/Division:
- c.
- * Contact Person Name: Email: Phone:
- * Responsible Faculty ID (if different from Contact): Email: Phone:
- d. * Requested Effective Date: Semester following approval OR Specific Term/Year
- e.
- Should this course be a UK Core Course? Yes No
- If YES, check the areas that apply:
- Inquiry - Arts & Creativity Composition & Communications - II
- Inquiry - Humanities Quantitative Foundations
- Inquiry - Nat/Math/Phys Sci Statistical Inferential Reasoning
- Inquiry - Social Sciences U.S. Citizenship, Community, Diversity
- Composition & Communications - I Global Dynamics

2. Designation and Description of Proposed Course.

- a. * Will this course also be offered through Distance Learning? Yes No
- b. * Prefix and Number:
- c. * Full Title:
- d. Transcript Title (if full title is more than 40 characters):
- e. To be Cross-Listed ² with (Prefix and Number):
- f. * Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours² for each meeting pattern type.
- | | | | |
|---------------------------------------|----------------------------------------------------------|---------------------------------|---------------------------------|
| <input type="checkbox"/> Lecture | <input type="text" value="3-9"/> Laboratory ¹ | <input type="text"/> Recitation | <input type="text"/> Discussion |
| <input type="checkbox"/> Indep. Study | <input type="text"/> Clinical | <input type="text"/> Colloquium | <input type="text"/> Practicum |
| <input type="checkbox"/> Research | <input type="text"/> Residency | <input type="text"/> Seminar | <input type="text"/> Studio |
| <input type="checkbox"/> Other | If Other, Please explain: <input type="text"/> | | |
- g. * Identify a grading system:
- Letter (A, B, C, etc.)
- Pass/Fail
- Medicine Numeric Grade (Non-medical students will receive a letter grade)
- Graduate School Grade Scale
- h. * Number of credits:
- i. * Is this course repeatable for additional credit? Yes No
- If YES: Maximum number of credit hours:
- If YES: Will this course allow multiple registrations during the same semester? Yes No

j. * Course Description for Bulletin:

An independent research project in an area of neuroscience under the direction of a faculty mentor. A research contract signed by the student and the faculty research mentor must be approved by the Director of Undergraduate Studies (Neuroscience). May be repeated to a maximum of 12 credits, but a maximum of only 6 credits may be used to satisfy the requirements of the minor or major in Neuroscience. Prereq: BIO 152 and BIO 302 or PSY 312

k. Prerequisites, if any:

Prereq: BIO 152 and BIO 302 or PSY 312

l. Supplementary teaching component, if any: Community-Based Experience Service Learning Both3. * Will this course be taught off campus? Yes No

If YES, enter the off campus address:

4. Frequency of Course Offering.

a. * Course will be offered (check all that apply): Fall Spring Summer Winter

b. * Will the course be offered every year? Yes No

If No, explain:

5. * Are facilities and personnel necessary for the proposed new course available? Yes No

If No, explain:

6. * What enrollment (per section per semester) may reasonably be expected? 35 - 50

7. Anticipated Student Demand.

a. * Will this course serve students primarily within the degree program? Yes No

b. * Will it be of interest to a significant number of students outside the degree pgm? Yes No

If YES, explain:

The course may be of interest to students majoring in Biology or Psychology

8. * Check the category most applicable to this course:

Traditional – Offered in Corresponding Departments at Universities Elsewhere

Relatively New – Now Being Widely Established

Not Yet Found in Many (or Any) Other Universities

9. Course Relationship to Program(s).

a. * Is this course part of a proposed new program? Yes No

If YES, name the proposed new program:

Neuroscience - paperwork for program approval has been submitted.

b. * Will this course be a new requirement⁵ for ANY program? Yes No

If YES⁵, list affected programs:

10. Information to be Placed on Syllabus.

a. * Is the course 400G or 500? Yes No

If YES, the *differentiation for undergraduate and graduate students must be included* in the information required in 10.b. You must include: (i) Ident additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR

b. * The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if appl 10.a above) are attached.

⁵ Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.
⁶ The chair of the cross-listing department must sign off on the Signature Routing Log.

!!! In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, requires two hours per week for a semester for one credit hour. (from SR 6.2.1)
!!! You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.
!!! In order to change a program, a program change form must also be submitted.

Rev 8/09

Submit as New Proposal Save Current Changes

SYLLABUS

BIO 394 - Research in Neuroscience

Instructor of Record: TBA

Office: TBA

Telephone: TBA

E-Mail: TBA

Office Hours: TBA

Class Time and Location: To be determined with your Research Mentor

Texts: To be determined with your Research Mentor

Course Description: An independent research project in an area of neuroscience under the direction of a faculty mentor. A research contract signed by the student and the faculty research mentor must be approved by the Director of Undergraduate Studies (Neuroscience). May be repeated to a maximum of 12 credits, but a maximum of only 6 credits may be used to satisfy the requirements of the minor or major in Neuroscience. Prereq: BIO 152 and BIO 302 or PSY 312

BIO 394, Independent Research, is designed to provide students with an intensive experience in neuroscience laboratory or field research. The student is expected to devote at least 2-3 hours per week for each credit hour enrolled to laboratory work, although often more time is necessary. Participants should take an active role in the design and execution of experiments and in the analysis and interpretation of data. They should be capable of "independent research" in the sense that they can conduct the experiments with little direct supervision. Students are expected to become familiar with related research in the current literature by regularly reading scientific journals.

Course Objectives:

- To design and conduct an original research project
- To develop experience with experimental techniques in the research area
- To develop a working knowledge of relevant research literature
- To be able to discuss the research and topic with other neuroscientists
- To learn the proper keeping of a lab notebook that clearly documents experimental procedure and the thought process leading to it

Student Learning Outcomes: By the end of the course, students will be able to

- Develop (with guidance) and conduct a research project.

Disabilities/ Medical Conditions: If you have a documented disability that requires academic accommodations, please see me as soon as possible. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Attendance and make-up opportunities:

Attendance in the laboratory is required. Absences (excused or unexcused) could severely compromise a research project so it is important to keep your Research Mentor informed of all absences. Make-up opportunities will be provided for **DOCUMENTED** excused absences **as defined by the University (Senate Rule V.2.4.2)**. Missed laboratory work/assignments will result in a score of zero for that work/assignment, unless

an acceptable written excuse is presented within one week of the missed laboratory time/ assignment deadline. Make-up opportunities will be determined by your Research Mentor.

Reading Assignments

Reading assignments will be assigned by your research mentor.

Grading:

The grade for Biology 394 is assigned by the Research Mentor, in consultation with the Director of Undergraduate Studies for Neuroscience

Grades are based on three aspects of a student's performance:

- (a) Fulfillment of required hours in the laboratory. Students are expected to spend on average 2-3 hours per week for each credit hour enrolled. Failure to complete the expected number of hours will reduce the grade.
- (b) Performance in the laboratory context. Biology research courses are meant to promote student creativity and initiative even in projects that are already well-defined. At a minimum, students should seek to confirm their understanding of the project through discussions and readings, and should learn how to troubleshoot basic problems.
- (c) Final report. The format of the final report (written or oral) will be determined by the Research Mentor.

The Research Mentor will determine the exact weighting of each of these activities in the determination of your final grade. These weightings will be detailed on your BIO 394 Research Contract

Grading scale:

A = 90 – 100%, B = 80 – 89%, C = 70 – 79%, D = 60 – 69%, E < 60%

Midterm grades will be available no later than the last day to submit midterm grades.

Identify a faculty mentor

The first step to doing undergraduate research is to find a faculty mentor. Choosing the right mentor and laboratory will have a large impact on your research experience and deserves serious effort and preparation on your part. Faculty do not generally advertise undergraduate research positions and, therefore, you will have to actively seek out a mentor. You do not need to have a particular research project in mind, just the desire to do research. Your faculty mentor can be someone from the Department of Biology or someone in a neuroscience-related discipline outside the department.

To identify a potential faculty mentor we suggest talking to professors from whom you have taken classes and scanning individual faculty web pages to identify a research program in an area of particular interest to you. (See these listings of faculty on the Biology Undergraduate Program webpages). Ideally, you will identify several possible mentors. Contact the individual faculty member(s) in person, by phone, or by e-mail to set up an appointment to talk about the possibility of undertaking an undergraduate research project in their laboratories. Professors are generally more than willing to talk with students about their research programs. However, students should recognize that not all faculty have the space, time, or resources to mentor every interested undergraduate, and some faculty may not be able to consider you for a position in their laboratories. Therefore, it is advisable to consider multiple faculty members. Perseverance in finding a mentor will almost always be rewarded. We suggest that you start looking for a mentor one semester before you would like to begin a research project.

Completion of BIO 394 Contract.

BIO 394 Contracts can be obtained from BS 101. This contract must be completed by both student and Research mentor and returned to the Director of Undergraduate Studies (Neuroscience) in room BS 101. Once the contract has been approved, the student will be informed by e-mail that he/she can now register for the course.

Course Policy on Classroom Civility and Decorum:

The university, college and department all have a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right -- and the responsibility -- to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.

*****A Note Concerning Academic Offenses (READ THIS INFORMATION CAREFULLY)**

PLAGIARISM and CHEATING are serious academic offenses.

The following is an excerpt taken from the "*Students Rights and Responsibilities Handbook, University of Kentucky*" regarding cheating.

"Cheating is defined by its general usage. It includes, but is not limited to, the wrongful giving, taking, or presenting any information or material by a student with the intent of aiding himself/herself or another on any academic work which is considered in any way in the determination of the final grade."

The following is an excerpt taken from the "*Students Rights and Responsibilities Handbook, University of Kentucky*" regarding plagiarism.

"All academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression."

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

*Plagiarism includes reproducing someone else's work..... If the words of someone else are used, the student **MUST** put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic."*

Charges of an academic offense will be made against any student that cheats or commits plagiarism. Penalties for such an offense will be assessed according to University Regulations regarding Academic Offenses. The most severe penalties include suspension or dismissal from the University. **I have a zero-tolerance policy regarding academic offenses.**

DUS ONLY
 Date Received:
 Approved/Disapproved
 Signature:

BIO 394 Independent Work in Neuroscience (1-3 Hours)

Research Contract

In order to receive credit for BIO394, students and their research mentors must complete a contract. *If a contract is not completed each semester by the add/drop date YOU WILL NOT BE ABLE TO REGISTER FOR THIS CLASS.* If the contract is NOT approved, we will contact you and/or your research mentor. Disapproved projects are often more appropriate for EXP 396 (Experiential Education; 257-3632). **Return completed contract to BS101**

Academic session in which the research will take place:

(Circle one) Fall Spring 4-week 8-week **YEAR:** _____

Credit Hours: _____

Research mentors may be any research-active neuroscience faculty member at the University of Kentucky. A campus-wide list of faculty willing to mentor undergraduates can be obtained in the Biology Department office. This list is not exclusive; many others can serve as mentors. Junior and senior Neuroscience majors are the primary intended BIO394 participants. Participants should be above average students making substantial progress towards a degree. Please enter grades in those courses that you have completed:

BIO152 _____, BIO 302 _____ or PSY 312

Research mentors agree to provide lab space, resources (eg. chemicals), and guidance. Guidance includes safety training as well as training in scientific method, technique, and presentation. Mentors will be asked to grade the student's independent work.

Please provide the following information:

Your Name	Student ID	Email	Telephone
Mentor Name	Department	Email	Telephone

Your signature: _____

Mentor's signature: _____

This section to be filled in by the Mentor. Please indicate what activities (and their weighting) will be used in the determination of the student's grade in the course. (ex. Attendance 25%, oral reports 25%, final paper 50%, etc). The contract will not be approved if this information is missing/incomplete.

A= 90-100; B= 80-89; C=70-79; D=60-69; F= 59 and below

Please attach to this form a description of the proposed research work: You must follow the indicated 3-point format. If your project is a continuation from a previous semester of BIO 394 you should provide a short description of the results of the previous semester's work and indicate that it is a continuation. **Complete this section in consultation with your mentor.**

1. State your hypothesis or driving principle.
2. Briefly describe the sorts of experiments you intend to perform, including brief technical details.
3. What might the results of these experiments be and how could these results support or refute your hypothesis?

For additional information contact Jacqueline Burke, jjburk3@uky.edu, 257-7140 or Dr. Liz Debski, debski@uky.edu, 323-9537

We will contact you ONLY if we have questions regarding your research.

General Course Information

- Full and accurate title of the course
- Departmental and college prefix
- Course prefix, number and section number
- Scheduled meeting day(s), time and place

Instructor Contact Information (if specific details are unknown, "TBA" is acceptable for one or more fields)

- Instructor name
- Contact information for teaching/graduate assistant, etc.
- Preferred method for reaching instructor
- Office phone number
- Office address
- UK email address
- Times of regularly scheduled office hours and if prior appointment is required

Course Description

- Reasonably detailed overview of the course (course description should match on syllabus and eCATS form)
- Prerequisites, if any (should match on syllabus and eCATS form)
- Student learning outcomes
- Course goals/objectives
- Required materials (textbook, lab materials, etc.)
- Outline of the content, which must conform to the Bulletin description
- Summary description of the components that contribute to the determination of course grade
- Tentative course schedule that clarifies topics, specifies assignment due dates, examination date(s)
- Final examination information: date, time, duration and location
- For 100-, 200-, 300-, 400-, 400G- and 500-level courses, numerical grading scale and relationship to letter grades for undergraduate students
- For 400G-, 500-, 600- and 700-level courses, numerical grading scale and relationship to letter grades for graduate students. (Graduate students cannot receive a "D" grade.)
- Relative value given to each activity in the calculation of course grades (Midterm=30%; Term Project=20%, etc.)
- Note that undergraduate students will be provided with a Midterm Evaluation (by the midterm date) of course performance based on criteria in syllabus
- Policy on academic accommodations due to disability. Standard language is below:
 If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Course Policies

- Attendance
- Excused absences
- Make-up opportunities
- Verification of absences
- Submission of assignments
- Academic integrity, cheating & plagiarism
- Classroom behavior, decorum and civility
- Professional preparations
- Group work & student collaboration

<p>UGE Review ()</p> <p>Include boilerplate Excused Absences policy, or at least a link to it if syllabus will be distributed electronically</p>
<p>Committee Review ()</p> <p>Comments</p>