APPLICATION FOR ENROLLMENT
BACHELOR’S ESSAY

Student’s Name: JORDAN CARTER
Student’s ID Number: 20055354

Course ID Number: BIOL 499

Total Credit Hours: 6

Credits to be posted*: 3 credit hours in Fall 2017 (yr)
3 credit hours in Spring 2018 (yr)

Faculty Supervisor: DR. MATT RUTTER (COFC); DR. CARMELA REICHET (MUS)

Project Title: Stress and the Neurobiology of Addiction

Bachelor’s Essay Enrollment Checklist for Student (required)

☐ Check with academic department about regulations governing intended Bachelor’s Essays.

☒ Begin a dialogue and have a commitment from the faculty supervisor at least one semester in advance.

☐ Ensure that this form is filled out completely.

☐ Attach a detailed project description and/or syllabus. Faculty supervisor must provide a grading rubric and a plan for assessing the student learning outcome.

☐ Attach Degree Audit. (For Faculty Supervisor Use)

☐ Submit application to your Academic Department.

Bachelor’s Essay Enrollment Policies

➤ This form is to be completed and signed by the student, faculty supervisor, and department chair.
➤ Students enrolling in HONS 499 must obtain the signature of the Honors College Dean in lieu of the department chair.
➤ A detailed project description and/or syllabus must accompany all Application for Individual Enrollment forms. The means by which the faculty supervisor will grade the course must be included in the description or syllabus and a plan for assessing the student learning outcome.
   (This includes zero credit courses.)
➤ Only if the Bachelor’s Essay does not span two terms will the deadline for submission to the Office of the Registrar be the Individual Enrollment Deadline for the specified term.
➤ This is the only Application for Enrollment in the Bachelor’s Essay form that will be accepted by the Office of the Registrar.
➤ This form cannot be submitted by the student.

THE OFFICE OF THE REGISTRAR WILL NOT ACCEPT FAXED APPLICATIONS

*If the Bachelor’s Essay spans two terms, the Office of the Registrar will enroll the student in the consecutive semester. The student is responsible for ensuring that the course is reflected on their degree audit. Contact the Office of the Registrar at registration@cofc.edu if it is not.

APPROVAL SIGNATURES (ALL SIGNATURES REQUIRED FOR PROCESSING)

Student

Faculty Supervisor
(Include a Syllabus and a Plan for Assessing the Student Learning Outcome)

Chair of Department or Dean of Honors College

RO Signature/CRN/Date (fall) 09/12/16

RO Signature/CRN/Date (spring)
Stress and the Neurobiology of Addiction
BIOL 499 Bachelor’s Essay Syllabus and Grading Policy

Course Description: The Bachelor’s Essay is a year-long research and writing project done during the senior year under the close supervision of a tutor from the department. Students must take the initiative in seeking tutors to help in both the design and the supervision of their projects. A project proposal must be submitted in writing and approved by the department prior to registration for the course.

The student will conduct research using rodents to better understand how acute stress and stress disorders (such as PTSD) influence drug seeking behavior. Currently, a PTSD-model using restraint stress is being implemented and tested to better understand how stimuli associated with stress influence seeking behavior. Also, pharmacological substances such as oxytocin are being used to investigate their therapeutic potential and to better elucidate their mechanisms of action.

Prerequisites: Biol 111/111L, Biol 112/112L, Biol 211/211D, and Biol 305. GPA of at least 3.000 in all biology courses. Enrollment by permission of the instructor and approval of the department chair.

Co-requisite or prerequisite: Math 250 or equivalent course in statistics.

Learning outcomes:

In this course, a student will demonstrate the ability to:

- Use scientific literature to understand the context of a biological problem;
- Formulate hypotheses and design appropriate experiments or data collection protocols after consulting scientific literature;
- Collect data;
- Evaluate experimental results and formulate a plan for moving the project forward;
- Defend the results and interpretations of experiments in a written paper with a complete literature background of the project;
- Give an oral presentation (talk or poster) that discusses scientific results.

Requirements:

1) Students who work in a laboratory setting must complete the Department of Biology Research Safety Training, administered by the Lab Manager.
2) Students must commit to a work schedule arranged with the faculty member that corresponds to a minimum of 9 hours per week.

3) Students are expected to participate in the proper care and maintenance of lab facilities, and to abide by safety regulations of the department.

4) Lab notebooks are the property of the faculty mentor and must remain in the laboratory.

5) Student will present a poster at MUSC Research Day in November. A pdf file of the poster must be submitted to the mentor.

6) The student will complete a Bachelor’s Essay detailing the data gathered and the conclusions. The format of the essay will mimic that of a scientific journal with the following sections:

I. Introduction: Places the research in a historical context in the field and a case for the importance of the research is made. It should be clear from reading the introduction that the student is familiar and fluent with published work in the field. A few figures are sometimes helpful here.

II. Research Methods: Details the experimental protocols and materials used in the research. This section should not be bulleted instruction lists---use full sentences. Include details such as model number of instruments, wavelengths used, concentrations used, pH, etc. A lab mate of yours should be able to reproduce your work from what is written.

III. Results: Itemizes experimental results in a logical order so as to build an argument for your interpretations. Graphs, data tables and other illustrations are included here with figure legends. Each figure should be accompanied by an explanation of why you carried out that experiment:---the logic behind performing it and what you hoped to determine.

IV. Conclusion/Discussion: Assembles all the data and interprets how your sequence of experiments has advanced our understanding.

V. References: Lists all literature cited in a format appropriate for the discipline, as stipulated by your mentor.

Due Dates for the Course:

Fall Enrollment: By the last day of class, a draft of the introduction with references and an outline of the experimental plan for the Bachelor’s essay is due to the mentor. The student will also have presented at MUSC Research Day by the end of
the semester.

Spring Enrollment: A first draft of the Bachelor's Essay is due the Monday following spring break. It is expected that there may still be holes in the document if data collection is still underway. The final draft is due to the mentor on the last day of class.

Grading:

I. Oral presentation **(35%)**
II. Bachelor’s essay **(45%)**
III. Attendance, safety requirements, and biweekly progress updates **(20%)**

Grading Scale:

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<tr>
<th>Score Range</th>
<th>Grade</th>
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<tr>
<td>93-100</td>
<td>A</td>
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<tr>
<td>90-92</td>
<td>A-</td>
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<td>87-89</td>
<td>B+</td>
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<td>83-86</td>
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