BIO 399: Biology Capstone

Course Description:

This course allows students to synthesize their understanding of biology through exploration of contemporary issues in biology across multiple biological scales. Students will also explore case studies related to ethical practice in science and develop skills necessary to transition to future careers in biology. Four hours lecture/discussion, may be taught in a hybrid format.

This course brings together several aspects of your professional training at Carroll. You will explore and develop:

1) Ethics related to the practice of biology
   - Identify stakeholders and conflicts
   - Negotiate competing interests
   - Separate scientific problems from those of philosophy, ethics and policy
   - Express professional and personal stances on relevant topics

2) Integration of disparate fields of biology
   - Explain the connections between biological disciplines
   - Map out and discuss complex biological problems and phenomena
   - Identify and address ethical dilemmas associated with biological problems and phenomena
   - Explain biological problems and phenomena to professional audiences
   - Explain biological problems and phenomena to lay audiences
   - Prepare simple, accessible summaries of complex biological problems and phenomena

3) Professional preparation
   - Clearly explain your knowledge and preparation
   - Clearly state your goals and expectations
   - Express yourself and professional positions on difficult subjects
   - Critically evaluate peer performance and support improved outcomes for peers

Online discussions will be on-going throughout the semester and you are expected to participate several times each week.
Required Textbook
No textbook is required. Readings will include internet articles, movies and videos, peer-reviewed journal articles and biographies.

Course Goals and Assessments
Professional Preparation Objectives:
- Articulate a set of personally-appropriate career options in the biological sciences and outline an individual development plan to work toward such career goals (assessed via Career Development Assignments)
- Prepare a formal resume and demonstrate interviewing skills appropriate for applying for a biology-related career or graduate program (assessed via Career Development Assignments)
- Analyze research-based case studies to identify potential ethical concerns and develop an appropriate course of action to avoid ethical lapses (assessed via Ethics Assignments)
- Demonstrate effective time management, organizational, and team skills (Assessed throughout course)

Synthesis and Integration of Biological Disciplines Objectives:
- Integrate and synthesize biological information relevant to a contemporary issue, across multiple levels of biological analysis to create original insights (assessed via Biology Integration Assignments, Oral Exam, Book Discussions)
- Effectively present scientific information related to such an issue (assessed via Biology Integration Assignments, oral exam)
- Conduct library research for pertinent supportive evidence related to such an issue (assessed via Biology Integration Assignments)
- Appropriately describe the ethical context of biological topics and research and evaluate the impact of research on individuals as well as on human and natural communities (Assessed in Ethics Discussions and Case Studies)
- Demonstrate effective time management, organizational, and team skills (Assessed throughout course)

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<th>Grade</th>
<th>Points</th>
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<tr>
<td>A</td>
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Points Distribution:
- Ethics: 250 Section Total
  - discussions & debates: 250
- Integration of Biological Disciplines: 250 Section Total
  - Preparation for semester project: 50
  - Semester Project: 100
  - Oral Exams: 100
  - Total points: 500
To pass this course, you must successfully complete the following assignments. In addition, the quality of these assignments as well as your behavior and engagement in class may be grounds to modify your final grade one letter grade higher or lower. Additional assignments may be added to this list during the semester based on opportunity (e.g. speaker followups) or need (e.g. low participation in discussions).

**Personal statement**

**Resume or CV**

**OREC or alternate ethics assignment**

**Mock interview and follow up assessment**

**Class behavior and decorum**
Mutual respect for other students’ sensibilities and ideas is expected and will be enforced in this course. Arrive on-time, attend all class sessions, be attentive and engaged in all classes. In addition, anything that distracts students (e.g., use of cell phones, checking Facebook, playing computer games, etc.) is prohibited in class. Students who choose not to abide by these rules pertaining to class decorum may receive grade reductions (above and beyond that affecting participation), be required to leave a class session, and/or be dropped from the course.

**Accommodation for disabilities**
All requests for accommodation of disabilities must be made to Marty Bledsoe (mbledsoe@carrollu.edu, 524-7335), Director of Services for Students with Disabilities at Carroll University. After hearing from Marty, I will then make any necessary accommodations.

*If you suspect that you may have a disability that affects your learning, please pursue your options, even if you do not yet have a formal diagnosis. I cannot make exceptions without an appropriate and professionally verified basis.

**Plagiarism and academic dishonesty**
Plagiarism is using someone else’s ideas or work and presenting it as your own ideas or work. Plagiarism – in any form – will not be tolerated in this course. For this course the sanction imposed by the instructor on a student who plagiarizes may be 0 points for the assignment for the first offense and automatic failure of the course for the second offense. Students who are observed looking at another student’s paper, a cheat-sheet, or any other information not allowed during quizzes or exams may receive 0 points for that quiz or exam. A student who copies another student’s work and the student who allowed the other student to copy her/his work may each receive 0 points for that assignment. A student who uses an author’s words as her/his own may receive 0 points for that assignment. If you copy more than two or three consecutive words from an author, then you are plagiarizing that author.

To avoid plagiarizing an author, read the author’s writing, step away and reflect on the writing for several moments, and then paraphrase the author using your own words. Do not quote another author in your scientific writing. There will be no exceptions to the plagiarism rule; if you are caught plagiarizing, you will very likely receive 0 points for the assignment.
Unless specified by the instructor, all student assignments in this course are to be completed independently. This does not preclude discussion of course material during or outside of lecture or lab by two or more students, but it does require students to write and complete all assignments independently. If there is any question in a student’s mind whether she/he might be inadvertently plagiarizing, the student should contact the instructor and ask for clarification for that particular instance. The penalties for plagiarism are severe, and no exceptions will be granted to any student who plagiarizes or allows another student to copy her/his work.

For more information on Carroll University’s policies and procedures on plagiarism and student academic integrity, plagiarism is defined on page 40 to 44 of the 2014-15 Student Handbook (http://www.carrollu.edu/campus/safety/pdfs/studentHandbook.pdf) as:

“Committing plagiarism, is seeking to claim credit for the work or effort of another without authorization or citation. This includes both appropriation and imitation of another person’s writings or ideas. For example, using another person’s ideas, words, or research and presenting it as one’s own by not properly crediting the originator. This applies to materials obtained through both traditional and electronic means.”

Plagiarism in groups is also taking individual credit for another person’s work on a group project.

Contacting the instructor

The best way to contact my is via email. I will check my email at least once each day during the week between Monday and Thursday (I am often in the field on Fridays preparing for field trips). Responses to emails may take 48 hours during the week and likely longer over weekends, however we try to respond to emails before the next class period. If you have not received a response by the next class period, please speak with me in person.

Syllabus modification

This syllabus may be modified by the instructor at any time. Students will always be notified at least one class meeting in advance, both in class and via email, of any modifications to the syllabus.

Please note that an electronic syllabus will be available on the Learning Management System, where it will be updated with additional information as necessary.

eLearning and email

I will use eLearning and email frequently to disseminate information to the class. It is the responsibility of the student to check her/his email and eLearning at least once every weekday in order to retrieve learning guides or receive notice of any modifications to the syllabus for the next few class meetings.
Late assignments

I do not accept late assignments. If you fail to submit an assignment on time, you will earn 0 points for the assignment. I reserve the right to permit a late submission under certain circumstances (instructor’s judgment) ONLY WHEN I AM NOTIFIED AT LEAST 48 HOURS PRIOR TO THE ASSIGNMENT DUE DATE AND YOU PROVIDE EVIDENCE OF A DOCUMENTED EMERGENCY. If a late assignment is accepted, it may lose up to 10% per day after the assignment is due.

Course Content is outlined in separate appendixes:
Professional Development
Biological Integration