

## College of Science and Mathematics Senate Meeting

Monday, November 14, 2022

2:30 PM – 4:00 PM

Virtual Meeting Using Zoom

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<https://umassboston.zoom.us/j/99693333747>

Meeting ID: 996 9333 3747

Passcode: CSMSenate

### Agenda:

1. Approval of the October 17, 2022, meetings minutes
2. Announcements
3. New business
  - a *Motion to approve new graduate course BIOL 644 - Ecology and Evolution in the Anthropocene*

**Catalog description:** Human disturbances are a defining feature of the Anthropocene. These alterations are expected to have unprecedented consequences at all levels of biological organization, ranging from genes and traits to ecosystems. The goal of this advanced graduate-level seminar is to discuss, test, and generate theory and predictions related to how ecological and evolutionary processes unfold in the face of human disturbances, and their implications for the conservation and maintenance of biodiversity. Topics to be discussed in the course will range from fundamental theory and methods in ecology and evolution to empirical and theoretical studies testing them in anthropogenic contexts. This course is open to all graduate students and advanced undergraduate students.

**Rationale:** a. Why this course and how it will fit into the curriculum?

Human disturbances are altering natural ecosystems at unprecedented rates. These alterations have generated a strong interest in understanding and predicting the ecological and evolutionary consequences of such alterations. However, to my knowledge, there are still very few graduate-level courses dedicated to exploring these issues in the classroom setting. Developing a course on this topic within the Department of Biology will expose our students to this exciting and growing field of scientific inquiry, as well as providing them with the tools to meet the challenges of ecology and evolution in the 21st century. This course will count towards the main requirements of graduate programs in the Department of Biology, including the Master of Science in Biology and the Ph.D. in Environmental Biology, as well as the PhD in Integrative Bioscience. Finally, this course will complement well current courses in our department, by integrating knowledge from

areas such as ecology, evolution, conservation, and genetics to further explore the response of biodiversity to anthropogenic disturbances.

The goals of this course are to:

- i) study fundamental theory in ecology and evolution and to learn how it can be applied in the context of human disturbed environments.
- ii) understand how human disturbances could impact ecological and evolutionary processes in nature.
- iii) generate theory and predictions related to how ecological and evolutionary processes unfold in the face of human disturbances.
- iv) deepen understanding of the implications of human impacts on ecology and evolution for conservation and maintenance of biodiversity.

**Department Graduate Program Committee Comment:** The Graduate Committee has reviewed this proposal and voted unanimously to approve this course. This course has been successfully taught as a Special Topics course. The topic of this course will have broad appeal to students interested in ecology, evolution, and conservation biology. The course is well-designed and includes appropriate assessment strategies that will be beneficial to graduate students.

**College Curriculum Committee Comment:**

The CSM Academic Affairs Committee (AAC) gave a qualified approval at the November 07, 2022, meeting. The AAC recommends that the following areas in the syllabus be addressed before next level approval:

- more details in the syllabus, to help students get a better understanding on what to expect
- excessive bibliography
- a more detailed and transparent grading policy and scale

4. Dean's office

5. Other Business

We will continue our discussion on By-laws.

6. Adjourn