

COURSE TITLE: ECOL195? The edges of life
Spring 2008

Instructor:

Dr. Anna Dornhaus

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Office Hours by appointment

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Course description

This course will be taught in conjunction with the College of Science's public lecture series on 'The Edges of Life'. Similar to the lecture series, the course will discuss (1) what is life, (2) how did life originate here and possibly on other planets, (3) where is evolution going, if anywhere, (4) what differentiates humans from other life, if anything, and (5) how has technology changed what we view as life. We will also discuss the role of science and particularly the life sciences in society. This is a First-Year Colloquium Course.

Objectives and learning outcomes

The objective of the course is that students learn about the scientific process, what the frontiers in life science research are today, and how these are relevant for our understanding of ourselves and the world around us. Students will also practice their skills in understanding scientific talks across a wide spectrum of topics, and reading some scientific literature.

Class Outline

1. What is life, what is biology, what is science?
2. Life's Molecular Edge: What separates chemistry from life? How does life begin?
3. Life's Extreme Edge: The limits of organic life on Earth and on other planets.
4. Life's Final Edge: The roles of adaptation, diversity and extinction in survival.
5. Life's Cognitive Edge: The role of the mind and what it means to be human.
6. Life's Human Edge: Changing perspectives on what constitutes death.
7. Life's Technological Edge: The singularity is near: when humans transcend biology.
8. Discussions
9. Science and society

Grading

Students are required to attend the accompanying public lecture series and submit a 300-word written summary of each of these lectures. Grades will be based on attendance at the public lectures and in class (30%), the written summaries (30%), and contributing to class discussions (30%).

Grade Scale

A: 90-100 %

B: 80-89 %

C: 70-79 %

D: 60-69 %

E (fail): 0-59 %

Readings

In weeks that don't have a public lecture, students will be given a current paper or similar to prepare on the discussion topic.

Course website

You will be able to obtain readings and check the current class schedule at the course website:

<http://eebweb.arizona.edu/Faculty/Dornhaus/courses/ecol195.html>

Policy on Expected Classroom Behavior

Enrollment in the course signifies that a student will participate to the best of his or her abilities in each class session. No electronic communication devices should be used during the class session. Each student is expected to attend every class session; however, all holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion, and absences pre-approved by the UA Dean of Students (or Dean's designee) will be honored.

Policy Against Plagiarism

<http://dos.web.arizona.edu/uapolicies>

Policy Against Threatening Behavior

<http://policy.web.arizona.edu/~policy/threaten.shtml>.

Academic Integrity

Integrity is expected of every student in all academic work. The guiding principle of academic integrity is that a student's submitted work must be the student's own. This principle is furthered by the *Student Code of Conduct* and disciplinary procedures established by ABOR Policies 5-308 - 5-403, all provisions of which apply to all University of Arizona students. For further information, please see: <http://w3.arizona.edu/~studpubs/policies/cacaint.htm>.

Special Needs and Accommodations Statement

Students who need special accommodation or services should contact the SALT (Strategic Alternatives Learning Techniques), the Center for Learning Disabilities (SALT Center, Old Main, PO Box 210021, Tucson, Arizona 85721-0021, (520) 621-1242, FAX (520) 621-9448, TTY (520) 626-6072), <http://www.salt.arizona.edu/>, and/or the Disability Resources Center, 1540 E. 2nd Street, PO Box 210064, Tucson, Arizona 85721-0064, (520) 621-3268, FAX (520)621-9423, <http://drc.arizona.edu/>. The appropriate office must document the need for accommodations.