Professors

John Mahoney, Biology (large group and small group OCNL 237)

Tricia Sweet, Literature (small group OCNL 239)

Chris Gaffney, Physics (small group Plumas 102)

Course description:

This seminar is a multidisciplinary exploration of Nature. Using perspectives from cosmology, physics, chemistry, biology, geology, anthropology, philosophy, history, literature, music, and art the course will focus on basic and fundamental questions about Nature.

Course Format

Almost every Tuesday the students in this course will meet in a large group in Plumas 102. The structure of those meetings will vary, but will include elements of lecture, interviewing an expert, discussion panels, interviews, debates and small group or independent work. On most Thursdays, students will meet in their small groups. The small groups will be largely focused on student discussion of course material.

General Education and Pathways

This course is a lower division wildcard for General Education (GE), meeting the goals for Physical Sciences (B1) and Biological Sciences (B2), Humanities (C1), and Lifelong Learning (E). You may use this course to satisfy one of those requirements. You do not need to determine which requirement it satisfies, it can be assigned to any one of the categories. The following GE Student Learning Outcomes (SLOs) will be especially promoted in this course:

Student Learning Outcomes

The Student Learning Outcomes for our General Education program flow from the recognition that certain essential intellectual and practical skills rest at the foundation of a high-quality General Education program. These include effective written and oral communication, critical thinking, and mathematical reasoning skills.

1. **Oral Communication:** Demonstrates effective listening and speaking skills necessary to organize information and deliver it effectively to the intended audience. Students will be exposed to panel discussions, interviews and debates in the large group meetings of the seminar. These methods for carrying out intellectual discourse will be modeled by the students during the small group meetings.

2. **Written Communication:** Demonstrates the ability to question, investigate and draw well-reasoned conclusions and to formulate ideas through effective written communication appropriate to the intended audience. Students will participate in a variety of different kinds of writing. Moreover, students will share some of their work with fellow students. The Honors seminars are exploring the possibility of initiating electronic portfolios for student work. These portfolios will be maintained throughout their undergraduate studies.

3. **Critical Thinking:** Identifies issues and problems raised in written texts, visual media and other forms of discourse, and assesses the relevance, adequacy and credibility of arguments and evidence used in reaching conclusions. Students will be exposed to a variety of epistemological and analytical approaches to the study of Nature.

4. **Mathematical Reasoning:** Demonstrates knowledge of and applies mathematical or statistical methods to describe, analyze and solve problems in context. In particular, the role of mathematics will be explored as a language for both modeling and understanding Nature and the Laws that govern the natural world.

5. **Creativity:** Takes intellectual risks and applies novel approaches to varied domains. This seminar on Nature will highlight the power of consilience when considering complex subjects. Analyses of historical cases of revolutions in science and ways of thinking about Nature should encourage students to be open to skeptical, critical, and creative ways of thinking.

Pathways

This course is associated with the following Pathways: Food Studies, Great Books and Ideas, Science Technology and Values, and Sustainability. You must complete 3 upper division courses in the same Pathway. To earn a GE Minor in a Pathway you must also complete 3 lower division courses associated with that Pathway. The lower division courses do not all have to be Honors courses.

NATURE fulfills any one of the following GE Areas: B1, B2, C1 and E.

Course Topics

- The ‘method’ or what counts as a valid (good) story in science
- Measurements of space, time, mass
- Relativity and Light
- The Very Large: Gravity and Cosmology

- The Very Many: Complexity and Life
- Origins of Life
- Evolution
- Human Origins and Evolution
- Human Nature
- Transhumanism
- Nature Through the Lens of Literature and Art
- Our Uncertain Future

Readings will consist of chapters and excerpts from a wide range of sources. These readings will be available on the Bb Learn site for NATURE in the Readings and Videos folder. Videos will also be assigned during the semester.

The **texts** for the course are **1) Human Universe,** Brian Cox and Andrew Cohen**, 2) Gilgamesh,** anonymous, **3) Arcadia,** Tom Stoppard

Grades will be based on iClicker quizzes, participation in discussions, in class and take home writings, 6 short papers, a take-home mid-semester exam and an in-class final exam.

Large group iClicker quizzes and class participation 10%, attendance in class is required for both large and small groups, you cannot contribute to classroom discussions if you are not present.

Writings, small group 10%, directed writings will be based on the weekly readings and lectures.

Writing, take home 10%

Papers, there will be 6 one page papers 30% more details regarding the short papers will be forthcoming.

Midsemester Exam 20% the exam will be posted on October 21st and will be due on October 28th. Instructions and details will be posted on Bb.

Final Exam 20%, in class during the scheduled final exam time, short answer and essay format

Grading:

The final grade will be assigned based on a standard scale:
93-100 =A

90-92 = A-
87-89 = B+
83-86 = B
80-82 = B-
77-79 = C+
73-76 = C
70-72 = C-
67-69 = D
60-66 = D
< 60 = F
Note: percentage scores will not be rounded up. That is, a score of 82.9 is a B- and a score of 83.0 is a B grade.

Plagiarism will not be tolerated: students who submit essays that include plagiarized material will be assigned an F in the course and reported to Student Judicial Affairs. Note that this policy is not subject to alteration or negotiation. See the document, "What is Plagiarism and Why Is It Important?" in Blackboard Learn, for more information on the definition and nature of plagiarism.

There are <u>no extra credit assignments</u> in this course.

Only in extreme circumstances and with prior notification and permission, and documentation will examinations be rescheduled, extensions on essay assignments be granted, or class participation requirements be modified.

<u>Americans with Disabilities Act</u>

If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Please also contact Accessibility Resource Center (ARC) as they are the designated department responsible for approving and coordinating reasonable accommodations and services for students with disabilities. ARC will help you understand your rights and responsibilities under the Americans with Disabilities Act and provide you further assistance with requesting and arranging accommodations. ARC is in SSC 170 and can be reached at 898-5959.

<u>Confidentiality and Mandatory Reporting</u>

As an instructor, one of my responsibilities is to help create a safe learning environment on our campus. As a Professor, I also have a mandatory reporting responsibility. It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep information you share private to the greatest extent possible. However, please be aware that **<u>I am required to share information regarding sexual misconduct with the University</u>.** Students may speak to someone confidentially by contacting the Counseling and Wellness Center (898-6345) or Safe Place (898-3030). Information on campus reporting obligations and other Title IX related