

Instructors: [Charles Marshall](#) ([Integrative Biology](#) and [UC Museum of Paleontology](#)) and [Eliot Quataert](#) ([Astronomy](#) and [Physics](#))

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Class Description:

Many of the most important scientific breakthroughs in history have dramatically reshaped humankind's understanding of our place in the universe. Examples include the Copernican revolution, evolution by natural selection, the Big Bang theory of the origin and evolution of the universe, and the molecular and genetic basis of evolution. In addition to their intrinsic scientific importance, these ideas also have far reaching implications for other aspects of people's lives (e.g., philosophical, religious, and political). This course will cover the modern understanding of origins, from the Big Bang through to the evolution of our own species. This is arguably the single most important set of scientific ideas that non-science majors should be introduced to in their time at Berkeley. We will cover the Big Bang and the origin of the elements, the formation of the Earth and the solar system, the discovery of planets around other stars, the origin of life, the evolution of complex life, and the origin of humans. A major theme of the course will be the scientific method and how we know what we know. The course is intended for non-science majors. Although we will only make modest use of math, you will continually be grappling with complex and conceptually difficult material.

[A weekly breakdown of lecture and section topics.](#)

As Part of the [Big Ideas](#) Program, C13 Fulfills the L&S Breadth Requirement.

Lectures: T, Th 2-3:30 2040 Valley LSB

Discussion Sections (=Labs): W 2-4, 4-6 Th 9-11, 11-1 3003 Valley LSB

The sections/labs are an integral part of the course. Attendance is mandatory and your participation and engagement in section will factor into your course grade. Each week in section you will study a single topic in depth to get a more detailed "hands-on" understanding of the science of origins and scientific methods more generally.

Texts & Readings: A Short History of Nearly Everything by Bill Bryson (the [Special Illustrated Edition](#) is outstanding). In addition, we will provide scanned pdfs of additional readings.

Grading:

- Lab Attendance and Participation: 10%
- Weekly Homework: 40%
 - Some questions each week will draw on the section/lab material that week.
- Midterm: 20% Th 10/10 (in class)
- Final: 30% Exam Group 5; Tue. 12/17 8-11 AM

If you miss an exam, you will receive zero credit for that portion of the course-grade. No make-up exams will be given. In exceptional cases (e.g., you miss the midterm for a well-documented medical reason), we will not count the midterm when calculating your grade. If you miss the final exam for a very good well-documented reason, your grade will be an incomplete.

Please let us know immediately if you cannot make one of the exams.

Homework: Homework is due at 4 PM on Mondays starting Monday 9/9. It should be placed in the special boxes marked C13 next to B-30 in Hearst Field Annex. Do not place your homework in any of the many other boxes. Write your name and section (date & time) on each homework and staple your sheets together. **The homework questions can be discussed with your classmates but you must write up your solutions individually.** Late homework will not be accepted (the HWs will be picked up by the grader soon after the deadline on Monday). Your lowest homework grade will, however, be dropped in determining your final grade.