

An Introduction to Big History, Part I

Spring Semester II, 2023

UMA Brunswick Center, Orion Hall, Room 101
12 Sewell Street, Brunswick

Goal: To create a community of scholars who seek answers to the questions, How is it that we are here, today, in a universe of unimaginably great dimensions and age, replete with stunning diversity at all spatial scales? Given the Second Law of Thermodynamics, why has complexity increased over time, rather than diminished? What does the best research in all fields of human inquiry have to offer, as we undertake this Promethean task?

Scope and Sequence: (6-week course, beginning 12 April, 9:30 - 11:30 a.m.)

1. A History of Big History: David Christian, Bill Gates, and your lead learner;
fundamental concepts: claim testing, complexity, Goldilocks conditions, emergent properties, eight thresholds of complexity, cosmic evolution, energy density rates, collective learning; Big History as an origin story

Threshold 1: Big Bang; inflation, plasma, light; Cosmic Microwave Background

2. Threshold 2: Emergence of stars and galaxies

Threshold 3: Stellar death; new elements and molecular clouds

3. Threshold 4: Origin of our solar system; accretion and differentiation of Earth

4. Threshold 5: [*Flourish. Enter LIFE, stage left, with drums and trumpet.*]

5. Threshold 5 (a): Coevolution of small life and Earth's biosphere

6. Threshold 5 (b): Big life: Cambrian explosion, mass extinctions, mammalian radiation

Textbook: Christian, David. *Origin Story: A Big History of Everything*. Little, Brown & Co., 2018. (paperback: \$17.66, hardcover: \$30.00, bookshop.org; Kindle: \$12.99)

Course Website: <https://midcoastseniorcollege.org/project/big-history-part-i-course-website/>

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