

# Chapman University

## University Honors Program Course

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University Honors Program: HON-286

### **Origins**

Syllabus - Spring 2020

When & Where: T - TH 10:00 - 11:15 AF 205

*Course Description: Prerequisite: acceptance to the University Honors Program, or consent of instructor. This course will address the topic of the origin of various aspects of the universe, life, humanness, and consciousness. Attendance and class participation is essential. (Offered as needed.) 3 credits.*

### **Instructor: Jack Horner, Professor, MacArthur Fellow, Presidential Fellow, Honors Program**

[jhorner@chapman.edu](mailto:jhorner@chapman.edu)

Office Hours:

By appointment.

Honors Program Coordinator, Ashley Cosgrove (714) 744-7646 [cosgrove@chapman.edu](mailto:cosgrove@chapman.edu)

GE Natural Science Inquiry Learning Outcome:

Students engage in scientific investigation to explore the knowledge produced by scientific processes.

Course Learning Objectives:

- \* Apply the scientific method to evaluate the observations, measurements, and predictions used to determine origins.
- \* Learn the difference between scientific theory and popular opinion.
- \* Understand reductionism and outside the box thinking.
- \* Evaluate the science interpreted by various scientific arguments based on physical evidence.
- \* Learn how to write a scientific paper

Honors Program Learning Outcomes:

Upon completing a course in the University Honors Program students will have:

1. Obtained a starting point for integrative exploration of the development of cultures and intellectual achievements through a variety of disciplinary and interdisciplinary perspectives;
2. Sharpened their ability to critically analyze and synthesize a broad range of knowledge through the study of primary texts and through engagement in active learning with fellow students, faculty, and texts (broadly understood);
3. Understood how to apply more integrative and interdisciplinary forms of understanding in the advancement of knowledge and in addressing complex challenges shaping the world; Developed effective communication skills, specifically in the areas of written and oral exposition and analysis.

Textbooks:

No textbooks required

Grading:

Points:

Group Projects

50

Active and appropriate participation (class attendance; focused and meaningful involvement in class activities)

50

TOTAL POINTS

100

- All students are encouraged to attend every class meeting. Poor attendance will affect your grade. Absences exceeding 20% normally result in the student receiving a grade of “NP” unless he/she withdraws officially (2 “tardies” constitute an absence). Active and appropriate participation (class attendance; focused and meaningful involvement in class activities). Each student is required to take an active part in class discussions.
- All cell phones must be off and put out of reach during class time. Side chatting or cell phone use in class is unacceptable, and offenders will be asked to leave and marked absent.

Chapman University’s Academic Integrity Policy:

Chapman University is a community of scholars that emphasizes the mutual responsibility of all members to seek knowledge honestly and in good faith. Students are responsible for doing their own work and academic dishonesty of any kind will be subject to sanction by the instructor/administrator and referral to the university Academic Integrity Committee, which may impose additional sanctions including expulsion. Please see the full description of Chapman University’s policy on Academic Integrity at [https://www.chapman.edu/academics/academic-integrity/\\_files/academic-integrity-policy.pdf](https://www.chapman.edu/academics/academic-integrity/_files/academic-integrity-policy.pdf)

Chapman University’s Students with Disabilities Policy

“In compliance with ADA guidelines, students who have any condition, either permanent or temporary, that might affect their ability to perform in this class are encouraged to contact the Disability Services Office. If you will need to utilize your approved accommodations in this class, please follow the proper notification procedure for informing your professor(s). This notification process must occur more than a week before any accommodation can be utilized. Please contact Disability Services at (714) 516–4520 or visit [www.chapman.edu/students/student-health-services/disability-services](http://www.chapman.edu/students/student-health-services/disability-services) if you have questions regarding this procedure or for information or to make an appointment to discuss and/or request potential accommodations based on documentation of your disability. Once formal approval of your

need for an accommodation has been granted, you are encouraged to talk with your professor(s) about your accommodation options. The granting of any accommodation will not be retroactive and cannot jeopardize the academic standards or integrity of the course.”

Chapman University’s Equity and Diversity Policy

Chapman University is committed to ensuring equality and valuing diversity. Students and professors are reminded to show respect at all times as outlined in Chapman’s Harassment and Discrimination Policy.

Any violations of this policy should be discussed with the professor, the Dean of Students and/or otherwise reported in accordance with this policy.

Student Support at Chapman University. Over the course of the semester, you may experience a range of challenges that interfere with your learning, such as problems with friend, family, and or significant other relationships; substance use; concerns about personal adequacy; feeling overwhelmed; or feeling sad or anxious without knowing why. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. You can learn more about the resources available through Chapman University’s Student Psychological Counseling Services here:

<https://www.chapman.edu/students/health-and-safety/psychological-counseling/>

Fostering a community of care that supports the success of students is essential to the values of Chapman University. Occasionally, you may come across a student whose personal behavior concerns or worries you, either for the student’s well-being or yours. In these instances, you are encouraged to contact the Chapman University Student Concern Intervention Team who can respond to these concerns and offer assistance:

<https://www.chapman.edu/students/health-and-safety/student-concern/index.aspx>. While it is preferred that you include your contact information so this team can follow up with you, you can submit a report anonymously. 24-hour emergency help is also available through Public Safety at 714-997-6763.

Topics to be covered with proposed visuals (Syllabus) based on a two 75 minute class per week schedule.

Feb. 4 US Who are we - why are we here - what are our expectations // (K1) Tools and Terms. What is this class about.

Feb. 6 Naught to Cipher: A whole universe from absolutely nothing (K2)

Feb. 11 Origin of Atoms: What are atoms made of and why did they form? // Apothegm to Axiom: Origin of universal rules. (K3)

Feb. 13 Origin of stars and galaxies (K4)

Feb. 18 Origin of complexity: How did we get what we got? (K5)

Feb. 20 Origin of pattern: How did we get what we see? (K6)

Feb. 25 Origin of molecules: Why molecules and biomolecules: what are their limits? (K7)

Feb. 27 DISCUSSION: What is life & Why did it originate? (K8)

Mar. 3 Origin of Life: How, where and why (K9)

Mar. 5 Prokaryotes: Origin & diversity (K10)

Mar. 10 Prokaryote complexes: How and why do bacteria form complex structures and what are the limitations? (K11)

Mar. 12 Origin of the Eukaryote Cell: why eukaryotes? Eukaryote protist diversity (K12)

Mar. 17 Origin of sex: How and why did sex evolve? (K13)

Mar. 19 MID TERM DISCUSSION (K14)

Mar. 24 - 28 SPRING BREAK

Mar. 31 Eukaryote Complexes (K15)

Apr. 2 Origin of multicellularity: What did viruses have to do with it? Bacteria? (K16)

Apr. 7 Origin of plants: Role of viruses and bacteria (K17)

Apr. 9 Origin of animals (metazoa) Why animals? (K18)

Apr. 14 Invertebrate diversity (K19)

Apr. 16 No Class (photograph an interesting metazoan)

Apr. 21 Vertebrate diversity (K20)

Apr. 23 SKULL LAB (K21)

Apr. 28 Origin of Mammals (K22)

Apr. 30 Origin of Homo sapiens (K23)

May 5 Origin of humanness (K24)

May 7 Origin of death (K25)

May 12 Project Presentations

May 14 Project Presentations

FINAL