Are We Alone?
CAT3 Spring 2017 – Prof. Adam Burgasser

Web page: http://www.tritoned.edu

Instructor: Prof. Adam Burgasser
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OH: Tuesdays 11am-12pm in SERF 340

Course Manager: Dr. Amanda Solomon
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Class Schedule
Lectures:
  TuTh 9:30am-10:50am in Pepper Cnyn 109
Discussion Sections:
  C01: TuTh 8:00am-8:50am in York 4050B, TA Anton Prokopyev
  C04: TuTh 6:00pm-6:50pm in Pepper Cnyn 240, TA Ryan Braun
  C05: TuTh 7:00pm-7:50pm in HSS 1106A, TA Ann Thresher
  C06: TuTh 8:00pm-8:50pm in HSS 1106A, TA Ann Thresher
  C07: TuTh 2:00pm-2:50pm in York 4050B, TA Anton Prokopyev
  C08: TuTh 5:00pm-5:50pm in Pepper Cnyn 240, TA Ryan Braun
  C09: TuTh 6:00pm-6:50pm in York 4050B, TA Kim Schreiber
  C10: TuTh 7:00pm-7:50pm in York 4050B, TA Kim Schreiber
  C11: MW 8:00am-8:50am in SSB 106, TA Travis Holtby
  C12: MW 9:00am-9:50am in SSB 106, TA Travis Holtby

COURSE SYLLABUS (subject to change)

Week	Lecture 1	Lecture 2	Events
1	**Are we alone?** From SETI to the Great Silence, Course Details	**Do you Believe?** Fake news, conspiracy theories, Bayesian analysis	
2	**What is life?** Definition and origins of life on Earth	**What does life do?** Life's influence on planets, search for life in the Universe	Rae Armantrout & the poetry of physics (Apr 13 6pm)
3	**Who are we?** What is the self? From cells to conciousness	**Who are we really?** The great bottleneck and the rise of humans, our genetic beings, human microbiome	Sound Meditation (Apr 18) Guest speaker: Prof. Jeffrey Bada (Apr 20)
4	**Who are they?** Alienism & racism, first contact and the uncontacted	**What are they?** Origins of ET, body structures and planetary environments, life as we don't know it	
5	**What's out there?** Overview of the universe, patterns of time & space	**What worlds?** Exoplanets and habitable zone, why Earth is (not?) special	
6	**Are they smart?** Measuring intelligence, human exceptionalism	**Should we listen?** SETI & METI	Guest lecture, Prof. Shelley Wright (May 11)
7	**Can we talk?** The problems of communication	**Let's go!** Conquest, colonialism and cosmic limits	
8	**Where are they?** The timespans of civilization, Kardashev scale, climate change	**Where are we?** The world without us, post-humanism, leaving artifacts	
9	**Final project presentations**	**Final project presentations**	
10	**Final project presentations**	**Are we alone?** Summative reflections	

Final Projects are due on Tuesday June 13 at 9am

COURSE INFORMATION

CAT 3: Are We Alone? explores one of our most fundamental questions as a species and as residents of the Universe. For over 2000 years humans have considered the existence of extraterrestrial life, and philosophers, scientists, theologians, writers, filmmakers and dreamers have explored the characteristics and consequences of exolife, and whether or not it can/must/may exist. With recent advances in astronomical technologies, the discovery of thousands of other planetary systems (including potentially habitable worlds), and new understanding of the origins of life on Earth, are we poised—and prepared—to answer this question?

In this course, you will compare and synthesize scientific theory, philosophy, history, religion, art, literature, media, technology and self-reflection to explore how "Are We Alone" has guided journeys of geographic, scientific and religious discovery; shaped our relationships with and ethical responsibilities to other lifeforms; stimulated searches for the origins of life on Earth and extraterrestrial life on other planets; molded our representations of aliens in literature and popular culture; prompted thought on the technical, judicial and moral implications of who we are as an interstellar species; refined notions of "self" and "other"; driven approaches to race, gender, class, sexuality, age, status and ability; and stoked the tension between hyperconnectivity and isolation, man and machine, in an increasingly networked, crowded and environmentally stressed planet.

The goal of this course is to explore the making of knowledge around this question from multiple sources and cultural perspectives. Building from CAT 1 and CAT 2, you will continue intensive writing instruction, with an emphasis on the production of an independent research project integrating multiple creative modalities.

The course grade will be determined through a combination of weekly and in-lecture writing, active participation in discussion sections, and midterm and final projects. There will also be the opportunity for extra credit through special event assignments (see syllabus for schedule).

All reading and video materials will be provided on the course website, during lecture, and/or during special events.

GRADING

Your course grade will be determined as follows:

Grading Component	Fraction of Course Grade
Lecture prompts writing during lecture; lowest 2 dropped	10%
Weekly writing assigned online, due in discussion	10%
Participation in Discussion assessed by the TAs	10%
Midterm project	25%
Final Project	45%
Extra Credit Assignments	up to +5%

Your final letter grade will be based on your cumulative course average, with schema mappings as follows:

Letter Grade	% Range
A+	≥ 97
A	94-97
A-	90-94
B+	87-90
B	84-87
B-	80-84
C+	77-80
C	74-77
C-	70-74
D+	67-70
D	64-67
D-	60-64
F	<60%
I	Incomplete
TII	Not turned in

All assignments (except lecture prompts) must be turned in electronically on the course TED website for credit. TAs may

additionally require written copies for editing.

Late Submissions of major written assignments (Midterm & Final projects) are permitted, but are penalized as follows:

- Up to 24 hours after deadline: 50% deduction
- Up to 48 hours after deadline: 75% deduction
- Past 48 hours: no credit

Attendance: On-time attendance in lecture and section is **required**. Please notify your TA if you must be absent for illness or family emergency. **Excessive absences**—more than six (6) class sessions, either lectures or sections—**may be grounds for failing the course**. Excessive tardiness will also impact your grade and may be grounds for failure.

Electronic Policy: **computers and phones must be turned off and put away during lecture** unless explicitly approved for class activities. If you require electronic devices for note taking or accessibility reasons, these must be cleared with the instructor in advance. Use of electronic devices for activities outside the scope of the class during lecture time may lead to your expulsion from class and loss of credit on assignments.

Use of electronic devices in discussion section is up to your individual section TA.

As per University policy, **all medical excuses must be accompanied by a physician's note**. Make-ups will be considered on a case-by-case basis, but due to staffing limitations these are not guaranteed.

Scheduling conflicts due to **athletic or artistic performance** must be reported at least **two weeks in advance** and must be accompanied with a letter from coach/instructor.

Add/Drop:

Deadlines: Last day to Add: April 14th (Week 2)
                 Drop w/o "W" or change grade option: April 28th (Week 4)
                     Note: this is before the midterm!
                 Drop without "F": June 2nd (Week 9)

EQUITY & INCLUSION

Disability Accommodation: The UCSD Office for Students with Disabilities (OSD) is available to work with students to facilitate accommodations due to disabilities. These include adaptive software and technologies, captioning and interpreters, AS and peer notetakers and exam modifications. Students requesting these services must obtain and submit an **Authorization for Accommodation (AFA) letter to the instructor no later than one (1) week prior to receiving accommodations** (i.e., the first exam date). For more information, see the OSD website (http://disabilities.ucsd.edu).

Equity and Inclusion: UC San Diego considers the diversity of its students, faculty, and staff to be a strength, and critical to its educational mission. It expects every member of the university community to contribute to an inclusive and respectful culture for all in its classrooms, work environments, and at campus events. Dimensions of diversity can include sex, race, age, national origin, ethnicity, gender identity and expression, intellectual and physical ability, sexual orientation, income, faith and non-faith perspectives, socio-economic class, political ideology, education, primary language, family status, military experience, cognitive style, and communication style. The individual intersection of these backgrounds and characteristics are and must be valued in our community. **If you experience discrimination or harassment, or witness someone experiencing discrimination or harassment, you are encouraged to report this to the Office for the Prevention of Harassment & Discrimination (OPHD) at http://ophd.ucsd.edu/report-bias/index.html.**

Title IX prohibits sex discrimination, including sexual misconduct, sexual violence, sexual harassment, and retaliation. If you or someone you know has been harassed or assaulted, you can find resources available to support the victim, including confidential resources, advocacy, and information concerning reporting options, at the **Sexual Assault Resource Center (https://students.ucsd.edu/sponsor/sarc).**

If there are aspects of the design, instruction, and/or experiences within this course that create barriers to your inclusion or accurate assessment of your achievement, please notify the instructor as soon as possible so that we may remedy these.

ACADEMIC INTEGRITY

UCSD has a strict and detailed policy on what constitutes academic integrity and misconduct. Academic misconduct is not just blatant cheating (e.g., copying off another student during an exam), but what you might have thought of as "minor cheating" in high school, for example:

- Copying other students' papers or homework;
- Copying or using old papers/reports;
- Working with others on *individual* assignments;
- Neglecting to cite material you used/reproduced from an outside resource (this includes Wikipedia);
- Turning in work completed in whole or part by someone else as your own.

The Policy on Integrity of Scholarship
(http://academicintegrity.ucsd.edu) lists some of the standards by which you are expected to complete your academic work, but your good ethical judgment (or asking the instructor for advice) is also expected as we cannot list every behavior that is unethical or not in the spirit of academic integrity.

Those students found to have committed academic misconduct will face administrative sanctions imposed by their college Dean of Student Affairs and academic sanctions imposed by the instructor. The appropriate sanctions are determined by the egregiousness of the violation. Students who assist in or are complicit with cheating could also be in violation of the Policy. **This policy will be strictly enforced**.

TurnItIn: Students agree that by taking this course all required papers will be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the terms of use agreement posted on the Turnitin.com site.