SYLLABUS
Anthropology 111: EXTINCTION
M W 2:15 pm - 3:35 pm, HCK-138

HOW THIS SYLLABUS IS ORGANIZED

The syllabus is meant to be a complete document and *everything* in the syllabus is important. The *most important* things come first. The syllabus also contains links to more detailed descriptions like this one, http://ctaar.rutgers.edu/integrity/policy.html#Integrity, on academic integrity which is very important.

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BOX 1

Core Curriculum Learning Goals Met by this Course

21C: 21st Century Challenges
- ✓ **Analyze the degree to which forms of human difference shape a person's experiences of and perspectives on the world.**
- ✓ **Analyze a contemporary global issue from a multidisciplinary perspective.**
- ✓ **Analyze the relationship that science and technology have to a contemporary social issue.**

NS: Natural Sciences
- ✓ **Understand and apply basic principles and concepts in the physical or biological sciences.**
- ✓ **Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis.**

SCL: Social Analysis
- ✓ **Identify and critically assess ethical issues in social science and history.**
- ✓ **Apply concepts about human and social behavior to particular questions or situations.**

REQUIRED TEXT

One book is required. It is:

1. "The Sixth Extinction: An Unnatural History" by Elizabeth Kolbert

An i>clicker student remote is also required for the class.

Various required readings are provided on sakai in Resources as pdf documents or as links.

CATALOG DESCRIPTION
This course takes a multi-perspective, interdisciplinary approach to understanding the reality and idea of the extinction process. The specific focus is a critical examination of extinction as a challenge of the 21st century. Topics include extinctions of fossil hominins; extinctions of cultures, religions and ethnic groups; language endangerment and death; extinctions of other organisms caused by humans; and the imagined extinction of our own species.

COURSE STRUCTURE AND ORGANIZATION
This course is organized chronologically. What this means is we begin at the beginning and end by thinking about the future. This is a simple way to structure the course and you might think of it as scaffolding upon which we hang our criticism.

What do we mean by criticism? By criticism, we mean asking interesting, useful, and important questions and making judgments or deciding how we might make judgments about these questions. We will ask similar sorts of questions about extinction as we move chronologically through the course. These include descriptive, causal, semantic, ethical, and political questions.

Don't be fooled by the title. The course is called "Extinction" and is broadly about things dying out and coming to an end. However, we can't study the end of something unless we know about that thing. The woolly mammoth went extinct. That won't be very meaningful unless you know what a woolly mammoth was, what its world was like, and how it came to be. This means that sometimes the course won't seem to be about extinction because we will be talking about what things were like before they went extinct.

You might have noticed the phrase "broadly about things dying out" and have wondered about the word "broadly." What we mean by "broadly" is that the things that go extinct in this course are often pretty different and sometimes scholars don't even think extinction is the right word. Furthermore, sometimes we focus on the extinction itself, sometimes we think mostly about its consequences, and other times we focus on what humans might do to avert or deal with an extinction. One factor that unites what we will be talking about is the notion that all the things that we think of as going extinct are in some way information -- extinction might be seen as a loss of information.

Our plan for the course is that you will learn things that satisfy the learning goals identified on page one of the syllabus. These goals come from the Rutgers SAS Core Curriculum and just the ones that apply to this course appear on page one exactly as they are officially articulated.

QUESTIONS ASKED, JUDGMENTS MADE
Anthropology has been described as the most humanistic of the sciences and scientific of the humanities and there can be real differences between the approaches of cultural and evolutionary anthropologists. One commonality is that we all ask questions about which some kind of judgment or decision might be made. What this means is that we will be asking questions in this course. Our favorite sentences include: "What is your question?" and "The observation is...." These are really prerequisites for some kind of decision.

Previously, five kinds of questions were mentioned. These are: **descriptive**, **causal**, **semantic**, **ethical**, and **political** questions. Below are descriptions and examples of these kinds of questions as they pertain to this course.

Descriptive questions: Good description is critical in the social and natural sciences. We will ask descriptive questions like: "What went extinct? How many went extinct? What was the world like before and after an extinction event?"

Causal questions: Understanding the causes of extinction or the cause of things surviving will be of interest. We ask causal questions like: "Why did the woolly mammoth go extinct? Why did some species survive a mass extinction? What are the usual causes of mass extinctions?

Semantic questions: We will ask questions about meaning (meaning = semantic). As humans, we are fundamentally interested in meaning. We will ask questions like: "What does it mean to people when a language dies? What does it mean to people if the polar bear goes extinct? What would it mean if humans went extinct?" Sometimes the questions will be very humanistic and sometimes they will be more scientific. For example: "What does cultural change mean to people?" and "What does a mass extinction mean for surviving species?"

Ethical questions: What principle should guide us as we respond to extinctions or possible extinctions? Why should we care? What should we care about?

Political questions: We will ask only a fairly narrow set of political questions but these are particularly important. They are in many ways extensions of the ethical questions from the individual level to the collective level. What is the role of governments and non-governmental bodies with respect to collective action concerning extinctions?

DETAILED COURSE DESCRIPTION

Humans are unique in being aware not only of their own inevitable individual deaths but also the possible death of their own culture and way of life and their possible collective extinction as a species. Although the total demise of humans has been a central conception in many religions, it was not until the 19th century that extinction came to be understood as a secular event in the West. With the development of evolutionary and social scientific theories, discoveries of lost species—such as the woolly mammoth—and of societies—such as the Maya—were increasingly understood as the result of natural and cultural processes, not supernatural intervention. The concept of mass extinctions—such as the end of the dinosaurs—caused by catastrophic extraterrestrial impacts entered the popular imagination. These scientific understandings combined with the spread of industrial capitalism, population growth, and innovations in science and technology have given rise to new concerns about human extinction and anthropogenic causes of non-human extinction. The emergent 21st century discourse on the process of extinction has come to be marked by fear and concern over nuclear annihilation, bioterrorism, environmental degradation and habitat destruction, catastrophic climate change, widespread famine, newly drug resistant or revenant plagues, growing political violence, and genocides.

Heated debates rage over the causes and consequences of these possible extinction threats. Some thinkers predict the end of all life while others argue that worries about extinction are unfounded, that what we are witnessing today is no different than what has occurred in the past. How do we make sense out of such differing perspectives? How do we assess current and future extinction threats? How do current and imminent extinctions compare to those of the past? What role do natural, anthropogenic, and cultural processes play in the extinction of human groups and other species? How might extinctions be averted? How do species and cultural extinctions shape cultural identities and practices? How do different human groups construct cultural meanings and practices in response to threats to survival and radical loss? How do extinction experiences influence moral ideas about animal and human rights? What does it mean to be a species that can imagine its own demise, understand its role in the demise of another, or contemplate the end of all life?

GRADING AND ASSESSMENT

BOX 2

Assignment of Grades

Grades will be calculated based on the following:

Assignment, Exercise, or Exam	**Percent of Final Grade**
Midterm Exam (~70 questions)	~20%
Final Exam (~100 questions)	~20%
In-Lecture Pop Quizzes	~10%
Writing Assignments 1-3	~15%
Writing Assignment 4	~15%
Recitation Section Participation	~20%
TOTAL	**100%***

Point Deductions
Points will be deducted from your average due to missed classes on the following basis:

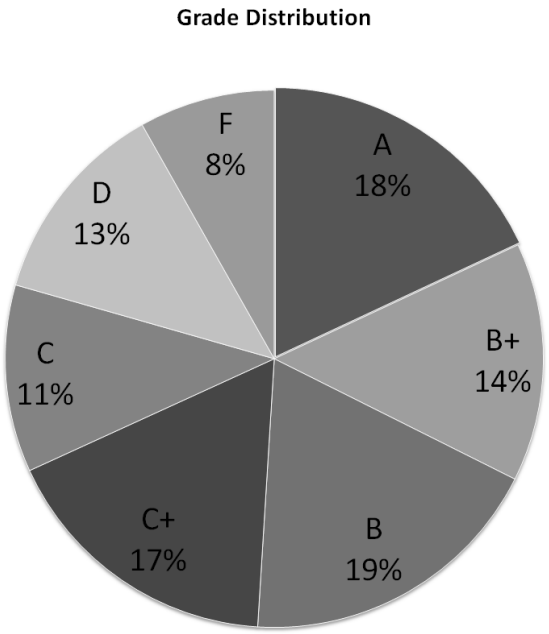
- Your regular and timely class attendance is expected.
- For every missed recitation section without a valid excuse (substantiated with written documentation and reported using the Absence Reporting System: https://sims.rutgers.edu/ssra/), you will lose 2 points. If you have more than 2 unexcused absences you should see the Dean of Students. Late arrival or early departure, without prior permission from your TA is considered an unexcused absence. You may not make up missed in-class writing assignments due to an unexcused absence.

***Extra Credit**
You may earn 2 points of extra credit by attending an additional outside University-sponsored lecture approved by your TA and writing a one paragraph thesis and significance statement. Similarly, you will be awarded 2 points of extra credit for attending one Monday night movie and turning in a similar paragraph detailing the thesis and significance of the movie. Finally, you may earn up to 4 points of extra credit by playing the ExinctionGo game and answering the associated questions.

Students are often interested in the questions "How will my grade be assigned?" and "What will be on the test?" The answer to both of these questions relates to Rutgers SAS Core Curriculum Learning Goals fulfilled by this course. Your grade will be higher if course assignments show your achievement of Core Curriculum Learning Goals is higher. All exam questions and writing assignments are explicitly tied to one or more learning goals.

Final grades are assigned at or just slightly below the standard Rutgers cut-offs (90%, 85%, 80%, 75%, 70% and 60%). There is no "curve" or "rounding-up." Requests for higher grades after grades have been assigned are denied except in the case of genuine errors in assigning of grades.

In some cases, students may have cause to quibble about issues and some random noise creeps into grades. These issues are dealt with and remedied on a course-wide basis. Indeed, remedies are already built into the syllabus: the outside lecture extra credit option already exists and exams include some extra credit questions. Other remedies could include dropping the lowest quiz grade or setting grade cut-offs just slightly below the standard Rutgers cut-offs.



The pie chart at the right is the final distribution of grades in this course previously. The 8% of students who received F's were nearly universally students who simply did not turn in work, come to exams, take quizzes, or show up to recitation. It is very easy to avoid falling in that 8%.

Two other important points can be drawn from this data:

1. More than half of the class will likely earn a B or better.
2. Of those who 'show up' – more than one in five will likely earn an A.

BOX 3

Assessment of Core Curriculum Learning Goals Met by this Course

Learning Goals can be assessed because writing assignments and exam questions are linked and built around at least one learning goal. The overall degree to which this course achieves the core curriculum leaning goals will be determined using evaluative rubrics applied to the final writing assignment.

Sub-samples of students will be evaluated for each learning goal with **rubrics** for Writing Assignment # 4.

GRADED COURSE WORK

Exams

There will be two exams, a midterm and final, which will test students' substantive knowledge of the class material including lectures (both inside and outside of class), films, and readings. To pass the course both exams must be taken. The final will be cumulative in that the second part of the course builds on the first part.

In a course such as this with an enrollment exceeding 400 students, we are forced to rely on Scantron, multiple choice type exams. This means that in total you will answer between 150 and 200 of these style questions over the course of the mid-term and final. Each question is explicitly linked to a learning goal (see Box 1 on page 1) and you will answer about ten questions on each learning goal over the course of the mid-term and final (see https://sakai.rutgers.edu/portal for more about this).

Writing Assignments

A series of four short (some of them very short) writing assignments will be due in recitation section. Sometimes a rough draft will be due in one week and will be shared with a small group in class with a final draft due the following week. The writing assignments will be:

1. A **one page summary** of a scientific paper. This will be completed in conjunction with a "how to read primary scientific literature" exercise in recitation section. It will begin with in-class writing and a final version will be due the following week. (1 page)
2. A short **thesis-and-significance** paper on an assigned reading. (2 pages)

3. A short piece of **speculative fiction** in the style of "Futures" in *Nature*.
4. A **short critical essay** on a contemporary extinction issue. (3 to 5 pages)

All writing assignments must be formatted with 1.5-spaced 12 pt Times New Roman font and 1 inch margins. Punctuation must also have the same formatting. Writing assignments are due on sakai on **Fridays at noon**. More details on the writing assignments will be made available on https://sakai.rutgers.edu/portal and in recitation section.

Recitation Section Participation
Active participation in weekly 55 minute recitation sections, supervised by teaching assistants, is **mandatory**. Your participation grade will be based on your ***active*** and ***informed*** participation in class discussions. Attendance will be recorded.

In-Lecture Pop Quizzes
You will only succeed in this course if you come to lecture and recitation, pay attention and participate in class, and prepare for class. Short pop quizzes will be given in lecture and will cover previous lectures and required readings.

Optional Co-Curricular Movie Night
Monday Movie Night is a co-curricular movie night sponsored by the Department of Anthropology and this course. Over the course of the Fall semester, we will screen fourteen movies on Monday Nights in ARH 100 starting at 7:15 pm.

COURSE POLICIES

Academic Integrity
All students must strictly adhere to the Rutgers Academic Integrity Policy, which identifies and defines violations including cheating, fabrication, facilitating academic dishonesty, plagiarism, and denying others access to information or material. Full definitions of each of these violations, as well as the consequences of violating the Academic Integrity Policy, are available as part of the student handbook. For details see: http://ctaar.rutgers.edu/integrity/policy.html#Integrity. ***You are responsible for knowing what constitutes plagiarism and academic dishonesty.***

Attendance
You are required to attend all class meetings (lecture and recitation). If you expect to miss one or two lectures or one recitation section, please use the University absence reporting website https://sims.rutgers.edu/ssra/ to indicate the date and reason for your absence. An email is automatically sent to me. ***Do not email me about absences outside of this system.*** If you expect to miss more than two lectures or more than one recitation section, you must see the Dean of Students who will verify any special circumstances. If you have reported two or more absences and expect another, use the Absence Reporting System and also make an appointment with the Dean of Students. This class operates according to the ***notify and document principle.*** What this means is that you must **notify** the appropriate person or persons (professor and/or teaching assistant) of any circumstance which could require some special permission. In the case of absences, notification must be via the University-wide Absence Reporting System (https://sims.rutgers.edu/ssra/) prior to the absence and **documentation** must be available after the absence. Please note that notification of the absence must be ***prior to the absence and retroactive notifications are not acceptable. Without notification (before) and documentation (after), a missed pop quiz or missed recitation section will not be excused.***

Late Work
Papers are due electronically to your TA no later than **noon** on the day that they are due. No late papers will be accepted except under very unusual circumstances and with a valid excuse, which must be documented in writing by an appropriate authority (e.g., physician). The occurrence of such unusual circumstances must be brought to the attention of your TA within **48 hours** of the missed deadline. If lateness of work also involves absence from class you must also use the Absence Reporting System (https://sims.rutgers.edu/ssra/). Course

policy with respect to religious holidays and missed or late work (including papers and quizzes) conforms with Rutgers' policy (see http://scheduling.rutgers.edu/religious.shtml).

Lateness
Please come to class on time – it is very disruptive to professor and classmates when students arrive late to class.

Exams
No make-up exams will be given except under very unusual circumstances and with a valid excuse, which must be documented in writing by an appropriate authority (e.g., physician). Since a missed exam also involves a missed class period, you must use the Absence Reporting System (https://sims.rutgers.edu/ssra/) to provide notification of any special circumstances. In addition, contact us (your TA and Prof. Scott) by email within 48 hours of any missed exam. Such very unusual circumstances will need to be verified later and in a timely fashion with appropriate documentation. On exam days, you are **required** to bring **your student ID** and a **pencil**. NO CHEATING will be tolerated, and anyone found cheating will receive an "F" grade for the exam.

Courtesy
You are expected act with courtesy in lecture and recitation. This includes:

- All cell phones must be turned off (***no texting***)
- Address Prof. Scott as "Professor Scott or Dr. Scott" (not as "Professor") and address guest lecturers by the appropriate **title** and **name**
- Learn your TA's name and address them accordingly
- Behave respectfully to instructors and other students
- No Facebooking
- No playing games or cards
- No headphones or listening to music
- Be prepared to discuss
- No reading the newspaper or other non-course material
- Be polite to instructors and other students
- No use of Google Glass

Laptop Policy
Laptops for the purpose of taking notes are permitted in **the first two rows of the center aisle only**. "Facebook" or other online activities are prohibited.

Lecture Schedule

DATE	Lecture	Guest Speakers/Films	Reading Assignment		In Recitation / Writing Assignment
7-Sep	Course overview, anthropological perspectives, and 21st century challenges	regular class	"The Extinction Tales" by T. C. Boyle "A Faustian bargain" by Gregory Petsko "Prologue" and "Ch. 1: The Sixth Extinction" in "The Sixth Extinction"	1.	bring an extinction story for active discussion, let me know about it by tweeting @RobScottAnthro review evolution by natural selection
12-Sep	What is life?; What is extinction?	regular class	"Almost All Species Are Extinct" in "Extinction: Bad Genes or Bad Luck?" by David Raup "The Mathematics of Human-Vampire Conflict" by Dino Sejdinovic "Ch. 2: The Mastodon's Molars" in "The Sixth Extinction"	2.	how to find, read, and criticize a scientific paper find a paper on Neanderthal extinction using *Web of Science*

14-Sep	The origin of life; Genes and information	regular class	"Ch. 3: The Original Penguin" in "The Sixth Extinction"		
19-Sep	Geologic time; The tree of life (and its history)	regular class	"Extraterrestrial Cause for the Cretaceous-Tertiary Extinction" by Luis Alvarez et al.	3.	discuss the role of University in society
21-Sep	Mass extinctions	regular class	Ch. 4: The Luck of the Ammonites" in "The Sixth Extinction" "Asymmetrical warfare" by S. R. Algernon		
26-Sep	Mass extinctions continued	regular class	"Gambler's Ruin and Other Problems" in "Extinction: Bad Genes or Bad Luck?" by David Raup "Ch. 5: Welcome to the Anthropocene", "Ch. 6: The Sea Around Us", and Ch. 7: Dropping Acid" in "The Sixth Extinction"	4.	discuss "Sixth Extinction" **scientific paper summary** due
28-Sep	Causes, consequences, and survivors	regular class	"Periodicity of Extinctions in the Geologic Past" by David Raup and Jack Sepkoski		
3-Oct	The "bushy" hominin family tree; extinction in human evolution; the turnover-pulse hypothesis	regular class	"Ch. 8: The Forest and the Trees", Ch. 9: Islands on Dry Land", and Ch. 10: The New Pangaea" in "The Sixth Extinction" "Are We Not Men?" by Henry Gee in *Futures from Nature*	5.	discussion of Neanderthal extinction ideas
5-Oct	Neanderthals and anatomically modern humans	regular class	"Ch. 11: The Rhino Gets an Ultrasound", "Ch. 12: The Madness Gene", and "Ch. 13: The Thing with Feathers" in "The Sixth Extinction"		
10-Oct	End Pleistocene Extinction	regular class	"Ecosystem Collapse in Pleistocene Australia and a Human Role in Megafaunal Extinction" by Gifford H. Miller et al. "Flood vs. Overgrill: aDNA sheds light on the demise of the Unicorn (*Unicornis bibilico*)" by Isaiah bin Amoz, Pliny T. Elder, and Henry Potter in Beer'N'Bones 6.1	6.	discussion of different restoration ideas and their supporting narratives
12-Oct	Restoration, and Resurrection	regular class	"Prologue", "Restoration" and "Resurrection" from *Twilight of the Mammoths* by Paul S. Martin		
17-Oct	Sixth Extinction	regular class	"Which species will live?" by Michelle Nijhuis "Biodiversity loss and its impact on humanity" by Bradley Cardinale et al.	7.	discuss conservation biology **thesis and significance paper** due

			"A Modest Proposal for the Perfection of Nature" by Vonda N. McIntyre in *Futures from Nature*		
19-Oct	The Lemurs of Madagascar	Guest speaker (tentative): Rachel Jacobs	"Not by science alone: why orangutan conservationists must think outside the box" by Erik Meijaard et al. "Daddy's slight miscalculation" by A. Pellegrino		
24-Oct	Existential Risks	regular class	"On Fairy Stories" by J.R.R. Tolkien "Existential Risk and Existential Hope: Definitions" by O. Cotton-Barratt & T. Ord "Global Challenges: 12 Risks that threaten human civilization" from the Global Challenges Foundation and Future of Humanity Institute	8.	discuss existential risk
26-Oct	Catch-up lecture	regular class	"How To Configure Your Quantum Disambiguator" by S.C. Baker		
31-Oct	**MID-TERM EXAM**	**In-class EXAM**		9.	discuss "Futures" stories
2-Nov	Genocide	regular class	"Toward an Anthropology of War Propaganda" by J. Kiper "An Isolated Tribe Emerges from the Rain Forest" by J. Anderson		
7-Nov	Language Death	regular class	"All Is Not Lost" by Scott Westerfeld in *Futures from Nature* "Words, Words, Words"" by Elisabeth Malarte in *Futures from Nature* "Co-occurrence of linguistic and biological diversity in biodiversity hotspots and high biodiversity wilderness areas" by L.J. Gorenflo et al.	10.	discuss language death **"Futures" story** due
9-Nov	FILM: The Linguists	In-class film	"A World of Many Fewer Voices" by D. Harrison "A Loss for Words: Can a dying language be saved?" by J. Thurman		
14-Nov	The atom bomb; atomic aftermaths	regular class	"Life Underground", "Atomic Times in the Pacific," "I Saw the Ash Fall on Him," and "Nuclear Payouts," all in *Anthropology Now: Atomic Issue* "Thank you Vasili Arkhipov, the man who stopped nuclear war" by E. Wilson	11.	TBD – atom bomb or population growth discussion

			"The Russell-Einstein Manifesto" by Bertrand Russell and Albert Einstein Excerpts from "*Expert Judgement on Markers to Deter Inadvertent Human Intrusion into the Waste Isolation Pilot Plant*, Sandia National Laboratories report SAND92-1382 / UC-721" "Quality Control" by Marissa Lingen		
16-Nov	7 billion and counting	regular class	"Securing natural capital and expanding equity to rescale civilization" by Paul Ehrlich et al.		
21-Nov	Climate change: evidence		"Approaching a state shift in Earth's biosphere" by Anthony Barnosky et al. "Climate Change: Are We on the Brink of Pronounced Global Warming" by W.S. Broecker "Perceptions of Climate Change: The New Climate Dice" by James Hansen et al.		no recitation; Thanksgiving break
23-Nov	No Class	no class because Friday class meets Wednesday			
28-Nov	Climate change: consequences	regular class	"The Deadly Combination of Heat and Humidity" by R. Kopp, J. Buzan, and M. Huber "When Last I Saw the Stars" by J. Hecht	12.	discuss climate change
30-Nov	Climate change: responses	regular class	"Food-Miles and the Relative Climate Impacts of Food Choices in the United States" by Christopher Weber and H. Scott Matthews		
5-Dec	Evolutionary and anthropological insights into emerging diseases	regular class	"A Kiss Isn't Just A Kiss" by Steve Carper in *Futures from Nature* "The social origins and expressions of illness" by Merrill Singer "Evolution of virulence, environmental change, and the threat posed by emerging and chronic diseases" by Paul Ewald	13.	discuss artificial intelligence
7-Dec	Evolutionary and anthropological insights into emerging	regular class	"The Ecology of Poverty: Nutrition, Parasites, and Vulnerability to HIV/AIDS" by Eileen Stillwaggon		

	diseases continued		"Pathogens Gone Wild: Medical Anthropology and the "Swine Flu" Pandemic" by Merrill Singer		
12-Dec	Brave New World: Synthetic biology		"A Life Of It's Own" by Michael Specter "EvoSoap" by Elizabeth Farnsworth, Aaron M. Ellison and Nicholas J. Gotelli in *Futures from Nature*	.	no recitation, **critical essay** due Friday Dec 16
14-Dec	Our robot overlords	regular class	"Is artificial intelligence really an existential threat to humanity?" by E. M. Geist "The empty brain" by R. Epstein "The security implications of Nanotechnology" by M. Kosal "Your Application for Eternal Life Has Been Partially Approved" by J.W. Rogers "The Rise of Artificial Unintelligence" by I. Frazier		
21-Dec	**FINAL EXAM**	8:00 am–11:00 am		(check time at: https://finalexams.rutgers.edu/)	