

ANTHROPOLOGICAL SCIENCES SEMINAR

**ASM 300 – SPRING 2018, 1:30-2:45 TTH, SHESC 341
SEE MYASU FOR COURSE BLACKBOARD SITE**

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Course Overview

This undergraduate seminar exposes students in the BS program in Anthropology to the breadth and depth of the anthropological science, as illustrated in the empirical and hypothesis-driven research on the human condition carried out by the SHESC's faculty. A primary goal of the seminar is to introduce students to the diversity of theoretical frameworks and research practices that are used in anthropological science to arrive at explanations for human biology, society, and culture and their changes. Attention is also paid to the articulation between anthropological sciences and other social, life, and physical sciences, as well as an emphasis on the value of quantitative methodologies.

Not all anthropologists employ a scientific approach to learning about humanity. However, this course focuses on how science is done in anthropology, from research design to data collection to hypothesis testing or interpretation of data. Lectures and discussions will cover a wide range of topics in anthropology, as well as theories and methods employed by SHESC faculty in their research.

Learning outcomes

By the end of the course, students should be able to:

- articulate what constitutes scientific explanations in anthropology;
- understand and critically evaluate the variety of the scientific methods used in anthropology, including their assumptions, pros and cons, and relevance to different kinds of questions and data;
- be aware of the diversity of theories, approaches, and transdisciplinary teamwork involved in problem-oriented anthropological research; and
- construct an original scientific research proposal relevant to anthropology.

Pre-requisites

- BS in Anthropology major;
- any two of the following courses with a C grade or better: ASB 102, 222 (or 223), AML 100, ASM 104.

Course Format

This course is conducted as a seminar, and all participants are expected to contribute constructively and significantly as professionals. Student-led discussions on the assigned readings will constitute a significant portion of the course, as well as your grade. The first quarter of the course will be led by the instructor.

For most of the remainder of the course, guest speakers from SHESC will discuss how they approach anthropological questions from a scientific perspective in their research. Except where noted, each Tuesday, students will lead a discussion of the readings assigned by the guest speaker, both to prepare for the speaker and to stimulate discussion on the scientific aspects of the topics in general. Again, it is

imperative that readings are done prior to class so that the entire class can participate in the discussions and make it a more stimulating and valuable experience.

Guest lectures will be given on Thursdays, and students are strongly encouraged to ask questions at the end. It should go without saying that during both student-led discussion and guest lectures, students are expected to act professionally and with consideration toward others.

Course Reading Materials

There is no textbook for this course. Readings will be posted on the course Blackboard site (accessible via <http://my.asu.edu>). Guest speakers will assign many of the readings, so they will be posted as the semester progresses, but at least one week in advance. **Readings should be done before class** and brought to class so that they can be discussed intelligently. As this is a seminar style course, class participation in discussions are a major component of the course and will be counted towards your grade.

Expectations and Grading

You will be responsible for material that is covered in class, both in lectures and in discussion. Additionally, each week you will be responsible for assigned readings. Your grade in this course will be based on multiple factors, listed below.

Class Participation (20%)

As this is a seminar course, class participation will likely contribute more to your overall grade compared to other courses. Students are expected to show up for class on time, prepared, and actively and thoughtfully participate in discussions. Your preparation and participation will make the difference in determining whether we sit around in an awkward silence during class, or engage in stimulating discussions on the intersection of science and anthropology. Please note that class participation and class attendance are not synonymous for grading purposes.

Student-led Discussion (10%)

Two or three students (depending on class size) will be responsible for leading the discussion of readings prior to each of the guest lectures. We will establish the order of discussion leading in the first two weeks of class. Discussion leaders will be responsible for briefly summarizing the assigned readings, coming prepared with questions to stimulate discussions, and helping to moderate discussions in general.

Four Reaction Papers (20%)

Students will be responsible for writing 4 “reaction papers” over the course of the semester, selected from any of the guest lecturers. These papers should be 2-3 pages each (double-spaced), and are intended to capture your initial response/reaction to our guest speakers. The focus should be on the content, and not on the person or the presentation style (e.g., he talked too fast, her slides had too much text). For example: How “scientific” do you view the work discussed? Were the interpretations based firmly on the data collected? How well does it fit into your (or traditional) views of the field of anthropology? What aspects did you find most interesting? Papers will be graded on a 6-point scale where 0 is unsatisfactory, 5 is acceptable and 6 is exceptional. Four acceptable reaction papers will get you the full 20% and any 6-point papers will give you extra credit (for a possible 24 out of 20). As reaction papers are intended to capture your initial reaction to a speaker, papers are due by class time, within 3 weeks after the lecture discussed.

Research Project Proposal (30%)

You will prepare one research proposal that will be **due on the last day of regular class**. The topic of your project proposal is your choice, but you must clearly lay out the rationale for the project through reference to literature and background, provide a clear description of:

1. the **methods** to be employed,

2. the **hypotheses** to be tested or **research questions** to be answered, and
3. discussion of **how data you collect** will **test your hypotheses** or **address your questions**.

The scope of the proposal is defined as a project suitable for undergraduate research, such as an honor's thesis, and should be 6 pages of text (figures, tables, etc. are additional). The proposal should emphasize clarity of thought, plan, and significance, and be well written. You are welcome, and strongly encouraged, to discuss the topic of your research proposal with your instructor prior to the due date.

Poster presentation (20%)

You will prepare a poster, in professional meeting format, to be presented as a final exercise for the class. The poster will summarize your research proposal. It should clearly illustrate your methods, hypotheses/research questions, and possible results. Each student will give a brief, 5-minute presentation on the poster and proposal to the class. The poster can be prepared in digital format rather than paper so that it can be projected. Presentations will take place during the regularly scheduled final exam period for the class.

Late Assignments

Unexcused late assignments will not be accepted. Excuses for an assignment must be made and approved in advance of the due date of the assignment. Requests for excuses must be written, either on paper or by email, and approval must be obtained, either by an email reply or by having the paper excuse signed.

Incompletes

A mark of "I" (incomplete) is given by the instructor when you have completed most of the course and are otherwise doing acceptable work but are unable to complete the course because of illness or other conditions beyond your control. You are required to arrange with the instructor for the completion of the course requirements. The arrangement must be recorded on the Request for Grade of Incomplete form you can obtain at: <http://students.asu.edu/forms/incomplete-grade-request>.

Grade Appeals

ASU has formal and informal channels to appeal a grade. If you wish to appeal any grading decisions, please see <http://catalog.asu.edu/appeal>.

You should keep your graded assignments at least until grades are finalized at the end of the semester in the event you wish to appeal any grades.

Professionalism

It is probably unnecessary to mention this to most of you, but I expect students to act professionally and with consideration toward other participants in the class at all times. Those students enrolled in this class did so because they want to learn about archaeological science. They have a right to the opportunity to do so and deserve to be treated with respect. Guest speakers volunteer their time to discuss their research with you. Because SHESC faculty are internationally recognized scientists, it is a unique opportunity for you to meet and hear from these individuals first hand. They have a right to be treated with respect and deserve your full attention.

This also means that you must turn off/mute all cell phones or anything else that makes noise during class. Similarly, refrain from using your cell phone (including texting) and non-course related computer activity (e.g., e-mail, IM, Facebook, etc.) during class. Do not show up late to class, or leave early unless you have previously asked and received permission from me.

Note: this syllabus is not a contract. It is subject to further change or revision, to best realize the educational goals of the course. Revisions will be announced in class or in course materials online with appropriate prior notice.

Email Communications

All email communication for this class will be done through your ASU email account. You should be in the habit of checking your ASU email regularly as you will not only receive important information about your class(es), but other important university updates and information. You are solely responsible for reading and responding if necessary to any information communicated via email. For help with your email contact the help desk. Your email communications should be professional and succinct. General guidelines for email include:

- Expect faculty to respond to emails between 9am and 5pm on Monday through Friday with a forty-eight hour lag time.
- For any concerns about grades, meet with your professor or TA face-to-face.
- Before sending questions via email, make sure that your question is not answered on the course syllabus or website.
- Be specific about the subject of the email in the mail subject heading and use proper salutation (e.g. Dear Professor XXXX) and check spelling, grammar, and punctuation.

Student Standards and Academic Integrity

Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal.

All students are required to read and act in accordance with university and Arizona Board of Regents policies, including:

- the Arizona Board of Regents Code of Conduct (ABOR Policies 5-301 through 5-308): <https://students.asu.edu/srr>,
- ASU's policies on academic integrity: <http://provost.asu.edu/academicintegrity>, and
- ASU's Computer, Internet and Electronic Communications Policy: <http://www.asu.edu/aad/manuals/acd/acd125.html>

If you fail to meet the standards of academic integrity in any of the criteria listed on the university policy website, sanctions will be imposed by the instructor, school, and/or dean. Academic dishonesty includes borrowing ideas without proper citation, copying others' work (including information posted on the internet), and failing to turn in your own work for group projects. Please be aware that if you follow an argument closely, even if it is not directly quoted, you must provide a citation to the publication, including the author, date and page number. If you directly quote a source, you must use quotation marks and provide the same sort of citation for each quoted sentence or phrase.

You may discuss assignments with other students. However, anything that you turn in must be done independently. If you have any doubt about whether the form of cooperation you contemplate is acceptable, ask the instructor in advance of turning in an assignment. Please be aware that the work of all students submitted electronically can be scanned using **SafeAssignment**, which compares them against everything posted on the internet, online article/paper databases, newspapers and magazines, and papers submitted by other students (including yourself if submitted for a previous class).

Note: Turning in an assignment (all or in part) that you completed for a previous class is considered self-plagiarism and falls under these guidelines. Any infractions of self-plagiarism are subject to the same penalties as copying someone else's work without proper citations. Students who have taken this class

previously and would like to use the work from previous assignments should contact the instructor for permission to do so.

Prohibition of Commercial Note Taking Services

In accordance with *ACD 304-06 Commercial Note Taking Services*, written permission must be secured from the official instructor of the class in order to sell the instructor's oral communication in the form of notes. Notes must have the notetaker's name as well as the instructor's name, the course number, and the date.

Sexual Violence/Harassment

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <http://sexualviolenceprevention.asu.edu/faqs/students>.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish discuss any concerns confidentially and privately.

Student Support and Disability Accommodations

In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990, professional disability specialists and support staff at the **Disability Resource Center (DRC)** facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities.

Qualified students with disabilities may be eligible to receive academic support services and accommodations. Eligibility is based on qualifying disability documentation and assessment of individual need. Students who believe they have a current and essential need for disability accommodations are responsible for requesting accommodations and providing qualifying documentation to the DRC. Every effort is made to provide reasonable accommodations for qualified students with disabilities. Qualified students who wish to request an accommodation for a disability should contact their campus DRC at: <http://www.asu.edu/studentaffairs/ed/drc/>

If you are a student in need of special arrangements for we will do all we can to help, based on the recommendations of these services. For the sake of equity for all students, we cannot make any accommodations without formal guidance from these services.

Other Campus Resources

As an ASU student you have access to many resources on campus. This includes tutoring, academic success coaching, counseling services, financial aid, disability resources, career and internship help and many opportunities to get involved in student clubs and organizations.

- Tutoring: <http://studentsuccess.asu.edu/frontpage>
- Counseling Services: <http://students.asu.edu/counseling>
- Financial Aid: <http://students.asu.edu/financialaid>

- Disability Resource Center: <http://www.asu.edu/studentaffairs/ed/drc/>
- Major/Career Exploration: <http://uc.asu.edu/majorexploration/assessment>
- Career Services: <http://students.asu.edu/career>
- Student Organizations: <http://www.asu.edu/studentaffairs/mu/clubs/>

For more information about the School of Human Evolution and Social Change, including our degree programs, research opportunities and advising information, please go to: <http://shesc.asu.edu/undergraduate/undergraduate-studies>. Our advisors are always willing to discuss career and guidance options with you.

COURSE OUTLINE AND SYLLABUS

Jan. 9Introduction – What is science?

Marks J (2007) On rescuing science from scientists. In: Rice PC, Kottak CP, McCurdy DC (eds) *Joys of teaching anthropology*. Boston: McGraw Hill, pp 55–62

Excerpts on the scientific method

Jan. 11Science practice

Bauer HH (1992) *Scientific literacy and the myth of the scientific method*. University of Illinois Press. **Chapters 2 & 3.**

Chamberlin TC (1897) The Method of Multiple Working Hypotheses. *The Journal of Geology* 5:837–848.

Sagan C (1996) Does Truth Matter? Science, Pseudoscience, and Civilization. *Skeptical Inquirer* 20.2:

Shermer M (1997) Why people believe weird things: Pseudo-science, superstition, and bogus notions of our time. New York: MJF Books (excerpt). **Optional**

Jan. 16Scientific explanation

Dunnell RC (1982) Science, social science, and common sense: the agonizing dilemma of modern archaeology. *Journal Anthropology Research* 38:1–25.

Ruse M (1999) *Mystery of mysteries: is evolution a social construction?* Harvard University Press Cambridge, Massachusetts. **Chapter 1**

Wylie A (2000) Questions of evidence, legitimacy, and the (dis)union of science. *American Antiquity* 65:227–238.

Dennett DC (1995) Darwin's Dangerous Idea. *The Sciences* 35:34–40. doi: 10.1002/j.2326-1951.1995.tb03633.x. **Optional**

Jan. 18Science and social science

Bernard, H. R. (2012). The science in social science. *Proceedings of the National Academy of Sciences*, 109(51), 20796–20799. <https://doi.org/10.1073/pnas.1218054109>

Diamond JM (1987) Soft sciences are often harder than hard sciences. *Discover* 8:34–39.

Diamond, J. (2014). Reversals of national fortune, and social science methodologies. *Proceedings of the National Academy of Sciences*, 111(50), 17709–17714. <https://doi.org/10.1073/pnas.1415280111>

Jan. 23No class: Read papers for Ian Gilby's presentation

Jan. 25Guest speaker and topic: Ian Gilby, Chimpanzee Behavioral Ecology

Jan. 30Guest speaker and topic: Kostalena Michelaki, Taskscapes

Feb. 1Discussion of papers:

Feb. 6Guest speaker and topic: Chris Morehart, Paleoethnobotany

Feb. 8Discussion of papers:

Feb. 13Guest speaker and topic: Matt Peeples, Networks and Interaction

Feb. 15Discussion of papers:

Feb. 20Guest speaker and topic: Katie Hinde, Communicating Science

Feb. 22Discussion of papers:

Feb. 27Guest speaker and topic: Tom Morgan, Evolution, Culture and Cognition

Mar. 1Discussion of papers:

Mar. 4-11 Spring Break—no classes

Mar. 13Guest speaker and topic: Michael Barton, Modeling Complex Systems

Mar. 15Discussion of papers:

Mar. 20Guest speaker and topic: Polly Wiessner, Human Ecology

Mar. 22Discussion of papers:

Mar. 27Guest speaker and topic: Dan Hruschka, Health and Disease

Mar. 29Discussion of papers:

April 3.....Guest speaker and topic: Shauna Burnsilver, Sharing and Social Networks

April 5.....Discussion of papers:

April 10.....Discussion of papers: *** Note switch in presentation and discussion

April 12.....Guest speaker and topic: Abby York, Policy and Governance

April 17Guest speaker and topic: Bill Kimbel, Human Evolution

April 19Discussion of papers:

April 24Guest speaker and topic: Kaye Reed, Paleoecology

April 26The future of science and anthropology [RESEARCH PROPOSALS DUE]

FINAL POSTER PRESENTED AT REGULARLY SCHEDULED FINALS DAY AND TIME