

**Anthropology of Science  
Department of Anthropology  
Lakehead University  
ANTH-4813  
Winter 2024**

**Instructor:** Frederico Oliveira, PhD  
**Email:** foliveir@lakeheadu.ca  
**Dates of Appointments:** January 9 to April 4, 2024  
**Classes Hours:** Tuesdays and Thursdays, 4 pm to 5:30 pm  
**Office Hours:** Tue & Thu (1 pm – 2 pm) or by appointment

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**Land Acknowledgment:**

Lakehead University respectfully acknowledges its campuses are located on the traditional lands of Indigenous peoples.

Lakehead University acknowledges the history that many nations hold in the areas around our campuses, and is committed to a relationship with First Nations, Métis, and Inuit peoples based on the principles of mutual trust, respect, reciprocity, and collaboration in the spirit of reconciliation.

**Course Description and Objectives:**

This fourth-year course in advanced anthropological theory and practice has the anthropology of science as its focus. In the past 40 years, sociocultural anthropologists have taken the ethnographic methods they systematized for studying exotic peoples in remote localities and applied them to scientific communities and practice. Social scientists have attempted to focus at the socioeconomic and political perspectives within which scientists are made and within which scientific facts and discoveries are constructed. Science and Technology Studies (STS) is an interdisciplinary and vast field in many ways, and we are going to attempt to read in a variety of directions within it.

Given the interdisciplinary nature of this course, we will make an effort to focus on *some* of the key theoretical texts and ethnographic products that have appeared within the fields of knowledge that interconnect with the Anthropology of Science – Sociology of Science, Science and Technology Studies, Philosophy of Science, etc. This course is expected to provide the students with the intellectual tools to understand the essential principles of STS and the kinds of ethnographic “insights” that support the study of science as a social and political phenomenon.

The course is divided into two main topics. One topic is the history of the discipline, including some anthropological precedents and the ongoing and controversial legacy of French philosopher and

anthropologist Bruno Latour. Latour's *Laboratory Life* (with Steve Woolgar) symbolized one of the first ethnographic investigations of scientific practice, but Latour's more recent work has extended into political philosophy and efforts to reorganize fundamental categories and methods of social science. The second topic is the result of approaches derived from ethnographic studies of science "beyond the laboratory" to more "field-based" scientific subjects outside the conventional scrutiny of science studies.

### **Course Reading:**

No textbook is required for this course. There are a number of articles and book chapters that are required reading and are listed below for each week. All are available electronically at the course website.

### **Course Requirements and Grading:**

**Class Participation (20% of the final grade)** – Students are expected to attend all classes, critically read the assigned materials prior to class, and participate in class discussions and assignments. Since this is a fourth-year advanced seminar course, it relies upon the participants' capacity to contribute to a fruitful discussion in the seminar meetings. This means that each student should be familiar with the central arguments of the required readings and be able to develop opinions on the connections/disconnections in the larger body of readings for the week and across the term. Missing more than two classes for reasons other than justified emergencies and illness will result in a participation grade deduction for each absence.

**Seminar Facilitation (20% of the course grade):** Students will be responsible for facilitating a brief debate during the second class of each week (Thursday). These students will be pre-selected in the previous week and asked to present and expand their Critical Review to the class. Here are some of the requirements of this assignment:

- Each student is required to participate two times in the debate facilitations during the semester.
- Besides discussing the week's readings, the students will propose at least three questions to their classmates to motivate discussion.
- Visuals are encouraged (slide shows, short videos, pictures, real-life examples) but not mandatory.
- Each student will have 15-20 minutes for their presentations. The incorrect use of time for more or less will affect the marks for this assignment.

Here you have some suggestions to improve the quality of your presentations.

Try to get the big picture.

What is the phenomenon being explained?

What is the explanation offered?

How does this apply to a specific observable phenomenon in social relations? In other words, what examples can you generate to illustrate the explanation offered?

Close textual reading.

Find some portions of the text you want us to discuss for close reading and interpretation.

Find portions that are difficult or unclear to you.

Find portions that you think exemplify the author's most important insights.

**Quizzes (30% of the final grade):** Three quizzes will be applied to verify the comprehension of basic concepts discussed in class. The First Quiz is scheduled for January 25, the Second Quiz is scheduled for February 29, and the Third Quiz is scheduled for March 21.

**Final Project (30% of the final grade):** A 4,000 - 5,000 word final paper must be delivered, providing a critical and reflexive assessment. Students are expected to write a research paper unpacking a scientific discovery or the development and use of a new technology using the "black box" terminology used by Bruno Latour.

It is mandatory that students use and make appropriate correlations with at least three authors (readings) seen during the course.

During the final week of the course, students will present their final projects to the class.

More information will be provided for this assignment.

### **Class Format**

The first class of the week (scheduled for Tuesday at 4 pm) will cover the content of that week's readings. Primary concepts and the guiding ideas will be explained.

The second class of the week (scheduled for Thursday at 4 pm) will be exclusively dedicated to the students' seminar facilitation, discussing the essential concepts and expanding on the central issues regarding the reading material.

## **Policies and Procedures:**

### *Grading Policy:*

1. Avoid disrupting class by arriving late or leaving before the end of the class. Disruptions will result first in a warning and then in a 5% penalty to the student's final grade. If the student's behaviour is disturbing the learning environment of the class, he/she will be asked to leave.
2. It is expected that students will be respectful of their fellow students, their instructor, and cultures and traditions which are not their own.
3. Plagiarism consists of passing off as one's own the ideas, words, writings, etc., that belong to someone else. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. This is a serious issue. Violation of the university's policy will result in a grade penalty or failure of the course. This type of violation will stay on your academic record.
4. Students will be allowed to take a make-up exam only in the case of documented emergencies. Each situation will be analyzed on a case-by-case basis. If you miss a test for an emergency reason, approach the instructor as fast as possible to discuss your situation. It is at the instructor's discretion to select the format of the make-up exam that will be held in the final week of classes.
5. Students are responsible for taking their own lecture notes. Course outline and class slides will be posted online on Desire2Learn at least one week prior to the due date.
6. The primary communication tool between the instructor and students is Lakehead University's e-mail account. Students are asked to check regularly (including before the class) their LakeheadU e-mail account and Desire2Learn for unforeseen changes to the class due to weather conditions or other reasons. As a general rule, student questions sent 24 hours prior to an assignment or test will not be replied. Grades are supposed to be returned to the students for a maximum period of two weeks after the assignment is delivered.
7. Students are welcome to schedule appointments to discuss any topic related to their academic progress or course content.
8. This syllabus is subject to minor changes during the course of the semester.

## Course Schedule

### **Week 1: Introduction to the Course / Film Exhibition**

(Jan-9)  
(Jan-11)

### **Week 2: Cultural Relativism**

(Jan-16)  
(Jan-18)

Moore, Jerry. (2009). Franz Boas: Culture in Context (Chapter 3, Moore)  
In: *Visions of Culture*. Lanham: Altamira Press.

Benedict, Ruth. "The Individual and the Pattern of Culture [1934]" in History of Anthropological Theory (Paul Erickson & Liam Murphy, eds. pp. 134-145).

Mead, Margaret. "Introduction, Coming of Age in Samoa [1928]" in History of Anthropological Theory (Paul Erickson & Liam Murphy, eds. pp. 128-133).

### **Week 3: Anthropological Precedents (Classical Authors)**

(Jan-23)

Evans-Pritchard, Edward. (1937). "Witchcraft is an Organic and Hereditary Phenomenon" (Chapter 1 from *Witchcraft, Oracles and Magic Among the Azande*).

Evans-Pritchard, Edward. (1937). "The Notion of Witchcraft Explains Unfortunate Events" (Chapter 4 from *Witchcraft, Oracles and Magic Among the Azande*).

Lévi-Strauss, Claude. (1977). "The Effectiveness of Symbols" (from *Structural Anthropology*, Vol.1).

(Jan-25)

**\*\* First Quiz \*\*** (covering the content of Weeks 2 and 3)

### **Week 4: Philosophy of Science and the early years of Science and Technology Studies**

(Jan-30)  
(Feb-1)

Sismondo, Sergio. 2004. *An introduction to science and technology studies*. London: Blackwell (Chapter: 1 – The Prehistory of Science and Technology Studies and Chapter 2 – The Kuhnian Revolution), pp. 1-22.

Clarke, Desmond. 2006. "Descartes Philosophy of Science and the Scientific Revolution". In: John Cottingham (ed.), *The Cambridge*

*Companion to Descartes*. New York: Cambridge University Press, pp. 258-285

**Week 5:**                    **Anthropology discovers science and laboratory**

(Feb-6)

(Feb-8)

Sismondo, Sergio. 2004. *An introduction to science and technology studies*. London: Blackwell (Chapter 10: Studying Laboratories), pp. 106-119.

Latour, Bruno, and Steve Woolgar. 1979. *Laboratory Life: The Construction of Scientific Facts*. Princeton, New Jersey: Princeton University Press (Introduction and Chapter 1).

Latour, Bruno. *Science in Action*. 1986. Cambridge MA: Harvard University Press. (Introduction: Opening Pandora's Black Box).

**Week 6:**                    **Science and Traditional Ecological Knowledge**

(Feb-13)

(Feb-15)

Nadasdy, Paul. (2003). *Hunters and Bureaucrats: Power, Knowledge and Aboriginal-State Relations in the Southwest Yukon*. Vancouver & Toronto: UBC Press (Chapter TBD).

Wynne, B. 1996. "Misunderstood Misunderstandings: Social Identities and the public uptake of science". In: *Misunderstanding science? The public reconstruction of science and technology*. Alan Irwin and Brian Wynne (eds.). Cambridge University Press, pp. 19-46.

**Week 7:**                    **Reading Week**

(No Class: Family Day & Winter Reading Week, Feb 19-23)

**Week 8:**

(Feb-27)

**Film Exhibition**

(Feb-29)

**\*\* Second Quiz \*\*** (covering the content of Weeks 4, 5, 6 and the film)

**Week 9:**                    **When Objects Object**

(Mar-5)

(Mar-7)

Sismondo, Sergio. 2004. *An introduction to science and technology studies*. London: Blackwell (Chapter 12: Standardization and Objectivity), pp. 136-147.

Latour, Bruno. 2000. "When things strike back: a possible contribution of

'science studies' to the social sciences". In: *British journal of sociology* 51(1), pp. 107-123.

Mosse, David. 2006. "Anti-social anthropology? Objectivity, objection, and the ethnography of public policy and professional communities". In: *Journal of the Royal Anthropological Institute* (NS) 12, pp. 935-956.

**Week 10:**

**Medical Sciences and Rationality**

(Mar-12)

(Mar-14)

Good, Byron. (1994). "How Does Medicine Construct Its Objects?" In: *Medicine, Rationality, and Experience*. Cambridge: Cambridge University Press, pp. 65-87.

Rosenberg, Charles. (2007). "The Tyranny of Diagnosis: Specific Entities and Individual Experience". In: *Our Present Complaint: American Medicine, Then and Now*. Baltimore: Johns Hopkins University Press, pp. 13-37.

**Week 11:**

**New Technologies Kinship, and the Boundaries of Difference**

(Mar-19)

Janet Carsten. (2004). "Introduction". In: *After Kinship*: 1-6.

Marcia Inhorn. (2003). "The Worms Are Weak". Male Infertility and Patriarchal Paradoxes in Egypt". In: *Men and Masculinities*, 5(3): 236-256.

Strathern, Marilyn. (2005). *Kinship, Law and the Unexpected: Relatives are Always a Surprise*. New York: Cambridge University Press (Chapter 1: Relatives Are Always a Surprise: Biotechnology in an Age of Individualism).

(Mar-21)

**\*\* Third Quiz \*\*** (covering the content of Weeks 9, 10, and 11)

**Week 12:**

**Cyborgs: beneath and beyond the anatomical borders**

(Mar-26)

(Mar-28)

Haraway, Donna. 1991. "Cyborg Manifesto". In: *Simians, Cyborgs and Women: The Reinvention of Nature*. London: Routledge, pp. 147-181.

Gusterson, Hugh. 1996. *Nuclear Rites: A Weapons Laboratory at the End of Cold War* (Chapter 5: Bodies and Machines). Berkeley and Los Angeles: University of California Press.

**Week 13:**

**\*\* Final Project Presentations \*\***

(Apr-2)

(Apr-4)

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## Desire2Learn

The course uses Desire2Learn for its course website. To access the course website or any other Desire2Learn-based course website, go to the LU portal login page at <https://myinfo.lakeheadu.ca/> and log in using your LU username and password. Once you have logged in to the portal, look for the **mycourse** link module, where you'll find the link to our course website along with the link to all other Desire2Learn-based courses you are registered.

## Use of AI

Generative artificial intelligence (Generative AI or GenAI) is a category of AI systems capable of generating text, images, or other media in response to prompts. These systems include ChatGPT and its variant Bing (built by OpenAI) and Bard (built by Google), among several others. Other Generative AI models include artificial intelligence art systems such as Stable Diffusion, Midjourney, and DALL-E. **Any use of GenAI systems to produce assignments for this course is not permitted.** All work submitted for evaluation in this course must be the student's original work. The submission of any work containing AI-generated content will be considered a violation of academic integrity ("Use of Unauthorized Materials").

## Accessibility Needs

Lakehead University is committed to accessibility. If you require accommodations for a disability or have any accessibility concerns about the course, the classroom or course materials, please contact Student Accessibility Services as soon as possible.