

TOHONO O'ODHAM COMMUNITY COLLEGE



Syllabus: PHI 123 Philosophy of Science

Course Information

Course Prefix/Number: PHIL 123

Semester: Fall 2017

Class Days/Times: Monday / Wednesday

12pm - 1:15pm

Credit Hours: 3

Course Title: History / Philosophy of Science

Room: MB 23

Instructor Information:

Dr. Sharon Parker

Phone: 520 282 1670 (cell)

520 393 3422 (home)

Email: sparker@tocc.edu

Office location: No office space for Adjunct Faculty; meeting place to be made by arrangement.

Office hours: By arrangement.

Course Description:

Discussion and analysis of the development of scientific discovery, methods and approaches including brief descriptions of approaches used in prehistoric, classical, preindustrial, industrial/pre digital, and digital societies with particular focus on the scientific revolution from the 16th through the 19th centuries. Special focus on differences between epistemological approaches of indigenous peoples with the Western "scientific method." Special topics may include Astronomy, Agriculture, Medicine, and/or Genetics.

Course Objectives:

During this course students will: 1. Investigate the nature and status of scientific knowledge. 2. Identify key scientific issues, concepts, and methodologies from 1572 to the present. 3. Demonstrate understanding of the philosophical questions brought to scientific inquiry through 1704; shifts in understanding of climate and other issues in contemporary science, and more recently in cognitive ethology.

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Himdag Cultural Component:

The Tohono O'odham core beliefs frame the discussion of topics such as astronomy, agriculture, medicine and cognitive ethology. **Himdag Cultural Component:**

We will explore the way in which cultural issues are addressed in particular scientific, social and historical contexts. In particular we will examine the way in which past and current cultural and scientific discourse related to discovery, environmental issues, and ethics is situated within the Himdag of the Tohono O'odham nation.

1. Through the application of *T-Wohocudadag* we will compare and contrast the understanding and application of scientific and environmental theories, broadly constructed, of Western and Indigenous peoples from the 16th century to the present with that of the Tohono O'odham.
2. *T-Apedag*: Reflecting on the culture and well being of others, particularly in the area of physical and spiritual health and healing practices, provides us an additional way to reflect on our own historical place and healing practices.
3. Respectively studying other sentient beings, such as elephants, wolves, birds and dolphins, leads to a deeper understanding and respect for all including ourselves: *T-Pi:K Elida*.
4. Working with other classmates provides the opportunity to share skills with each other. *I-We:mta*, and the way other Native peoples share with each other, is reflected in the way in which core issues are discussed and shared between and among various groups.

Handouts that contain specific information about the requirements and possible topics for the Reserch Proposal and Research Paper will be provided to students. Students are encouraged to bring any concerns they may have about the course and course content to the attention of the instructor

Texts: Okasha, Samir. *Philosophy of Science: A Very Short Introduction*. Oxford: Oxford UP, (2016); Wulf, Andrea. *The Invention of Nature: Alexander Von Humboldt's New World*. Excerpts from: Safina, Carl. *Beyond Words: What Animals Think and Feel*. New York: Henry Holt & Co. (2015); Excerpts from Wootton, David. *The Invention of Science: A New History of the Scientific Revolution*. Harper Collins (2015); (1992); & Other selected readings from the Instructor Packet.

Policies and expectations:

Except in the case of an emergency students are expected to attend each class. Students must read the material and access any videos prior the the class in which they will be discussed. No cell phone use is allowed during class. Plagiarism (that is using another's work without appropriate citation) is a serious offense. Plagiarism will lead to the loss of all points for that particular project.

ADA Statement:

The Tohono O'odham Community College seeks to provide reasonable accommodations for all qualified individuals with disabilities. The College will comply with all applicable Tohono O'odham Nation, federal, state and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to

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provide an equal educational opportunity.

Evaluation and Grading & Assignments:

Grades are cumulative and the total number of points determines your final grade. There are 1000 points possible in this course.

900 and above is an A,

800 – 890 is a B,

700 – 790 is a C,

600 – 690 is a D,

under 600 is Failing.

4 Quizzes (100 pts ea) based on information from each of the textbooks and from a selection of the additional readings. 400 points

7 to 10 page Research Paper (Times New Roman; 12 font; double space; 3150 - 4500 words) 500 points

Field Trip Response Paper 50 points

Attendance and Participation (including being present for other student's Presentations) 50 points

This is a discussion-based class; Students are expected to attend class meetings prepared to engage in critical analysis of the materials / reading in class discussions.

The course sessions will consist of lectures and discussion of readings, images, and videos, some of which will be exhibited on line. Students will be examined based on their comprehension of the readings, participation and preparation for small group discussions on particular topics, and application of themes / theory in their projects.

Texts: Okasha, Samir. *Philosophy of Science: A Very Short Introduction*. Oxford: Oxford UP, (2016); Wulf, Andrea. *The Invention of Nature: Alexander Von Humboldt's New World*.

Excerpts from: Safina, Carl. *Beyond Words: What Animals Think and Feel*. New York: Henry Holt & Co. (2015); Excerpts from Wootton, David. *The Invention of Science: A New History of the Scientific Revolution*. Harper Collins (2015); (1992); & Other selected readings from the Instructor Packet.

Course Outline:

1. Course Introduction and Overview.
2. The Invention of the Field of Science: The Scientific Revolution
3. Scientific Methods and Aims of Science; Social Dimensions of Science
4. Cognitive Ethology
5. Science and Human Futures

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Course Outline cont.:

1. Introduction to the course.
2. Videos: The Ice Man; Sythian Woman
3. **Chapter 1. pgs. 1-15 in *Philosophy of Science: A Very Short Introduction*.**
4. **"Modern Minds" in *The Invention of Science*, pgs. 3-14**
5. **"The Idea of the Scientific Revolution" in *The Invention of Science*, pgs. 15-54**
6. **"Inventing Discovery" in *The Invention of Science*, pgs. 56-109**

Quiz 1

7. **Chapters 2-7 in *Philosophy of Science: A Very Short Introduction*, pgs. 16-130**

Quiz 2

Course Outline To Be Continued.

DISCLAIMER: This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur.