

# Experimental

According to College legislation, the student-faculty Committee on Educational Research and Development has the authority to recommend experimental courses and programs to Academic Council. Faculty members and students are invited to submit their ideas to the committee. In 2009-10 the following experimental courses will be offered:

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## **ASTR 104/PHIL 104 Stars and the Sages: Philosophy and the Cosmos**

*de Warren (Philosophy), French (Astronomy)*

This first-year seminar explores the changing views of the universe from the ancient Greeks, through the emergence of the scientific revolution to the startling advances in cosmology during the twentieth century, and includes visits to Wellesley College Library's Special Collections and observations from the Whittin Observatory; no particular competence in mathematics is required. We begin with readings from Plato, Aristotle and ancient Greek astronomers and their concern to understand the inherent rationality of the universe. We next turn to the discoveries of Copernicus, Kepler, Galileo, and Newton. Our exploration of philosophy and astronomy will then address Einstein's theories of special and general relativity, evidence for the Big Bang, and contemporary perplexity regarding the presence of dark matter and dark energy. *Students may register for either ASTR 104 or PHIL 104 and credit will be granted accordingly*

Prerequisite: None. Open only to first-year students.

Distribution: Epistemology and Cognition

Semester: Spring

Unit: 1.0

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## **CS 114 The Socio-Technological Web**

*Metaxas*

As more and more people use the technologies and services made available from computer science, online environments like Facebook, Second Life, MySpace, Wikipedia, blogs, and open source development communities, have been flourishing. It is becoming clear that problems existing in our real world transfer and become amplified in the virtual world created by our interconnectivity. This course will start by studying the structure of the traditional Web and its recent successor, the Social Web, and will focus on issues of virtual identity, personal and group privacy, trust evaluation and propagation, online security, critical thinking, online propaganda, googlearchy, fraud and manipulation, restricted resources, class differences, self-perception, and decision-making. *Students are required to attend an additional 70-minute discussion section each week. Students can receive Mathematical Modeling distribution credit for only one of 110 and 114.*

Prerequisite: None

Distribution: Mathematical Modeling

Semester: Fall

Unit: 1.0

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## **EXP 105 The Nuclear Challenge**

*Kolodny (Chemistry)*

Since the discovery of nuclear fission in the 1930s, the potential of nuclear energy both for war and for peace has presented an ongoing challenge to humanity. Daily newspaper accounts of developments on Iran and North Korea, and of the need for sources of energy other than fossil fuels highlight the importance of understanding the potential of the nucleus. This course will examine the development of nuclear weapons and the treaties limiting them, as well as the ongoing danger of nuclear terrorism. It will also examine peaceful uses of nuclear energy for the generation of electricity and for medical diagnosis and treatment, as well as the waste disposal problems that result from these uses. Course materials will include primary and secondary historical documents, literature and films. No scientific background required.

Prerequisite: Open to first-year students only.

Distribution: Historical Studies

Semester: Fall

Unit: 1.0

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## **PHIL 104/ASTR 104 Stars and the Sages: Philosophy and the Cosmos**

*de Warren (Philosophy), French (Astronomy)*

This First Year Seminar explores the changing views of the universe from the ancient Greeks, through the emergence of the scientific revolution to the startling advances in cosmology during the twentieth century, and includes visits to Wellesley College Library's Special Collections and observations from the Whittin Observatory; no particular competence in mathematics is required. We begin with readings from Plato, Aristotle and ancient Greek astronomers and their concern to understand the inherent rationality of the universe. We next turn to the discoveries of Copernicus, Kepler, Galileo, and Newton. Our exploration of philosophy and astronomy will then address Einstein's theories of special and general relativity, evidence for the Big Bang, and contemporary perplexity regarding the presence of dark matter and dark energy. *Students may register for either PHIL 104 or ASTR 104 and credit will be granted accordingly*

Prerequisite: None. Open only to first-year students.

Distribution: Epistemology and Cognition

Semester: Spring

Unit: 1.0