

# First-Year Courses

The following courses are intended for first-year students. Enrollment is limited to a small number of first-year students, and the courses include introductions to such topics as research skills and campus resources, in addition to their specific content.

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

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

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 the Special Collections Library and observations from the Whitin 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: Open to first-year students only.

Distribution: Epistemology and Cognition

Semester: Spring

Unit: 1.0

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## **ASTR 108 Discovering Our Universe with Laboratory**

*McLeod (Astronomy)*

This course leads first-year students through hands-on exploration of the structure of the universe and our place within it. We will measure the size, shape, and spin of the earth by using simple homemade instruments to observe the sky. We will learn to use Wellesley's own telescopes to explore the arrangement and contents of our own Solar System. Finally, we will determine our place within the Milky Way galaxy and the universe using data obtained from the National Virtual Observatory. No prior experience in astronomy is required, but algebra and trigonometry will be used. *Evening laboratory at the observatory. Mandatory credit/noncredit.*

Prerequisite: Fulfillment of the basic skills component of the Quantitative Reasoning requirement. Open only to first-year students. Students who take ASTR 108 may not take ASTR [109].

Distribution: Natural and Physical Science or Mathematical Modeling

Semester: Fall

Unit: 1.0

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## **ECON 101F Principles of Microeconomics**

**NOT OFFERED IN 2009-10.** This first course in economics introduces students to the market system. Microeconomics considers the decisions of households and firms about what to consume and what to produce, and the efficiency and equity of market outcomes. Supply and demand analysis is developed and applied. Policy issues include price floors and ceilings, competition and monopoly, income distribution, and the role of government in a market economy.

Prerequisite: Open to first-year students only. Fulfillment of the basic skills component of the Quantitative Reasoning requirement.

Distribution: Social and Behavioral Analysis

Semester: N/O

Unit: 1.0

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## **EDUC 117 Diversity in Education**

*Darer (Spanish)*

An introduction to issues in diversity and multicultural education. We will examine rationales for diversity and multicultural education and some of the effects of these policies. We will analyze implications of diversity for teaching and learning, and study the influences of race, ethnicity, gender, language, socioeconomic status, and religion on schools and school curricula, with a focus on tensions surrounding increasing diversity in American education.

Prerequisite: Open to first-year students only.

Distribution: Social and Behavioral Analysis

Semester: Spring

Unit: 1.0

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## **ES 111/GEOS 111 The Yucca Mountain Problem: Where Should We Put Nuclear Waste?**

*Besancon (Geosciences)*

Choices about disposal of radioactive materials will affect countless future generations. Focusing on the proposed storage facility at Yucca Mountain, Nevada, we will examine the important scientific questions that must be answered for long-term safety of a nuclear repository. Students will learn the scientific principles governing risk assessment, groundwater movement, volcanism, earthquakes, and the groundwater properties of the repository rocks, and how each affects the safety of the proposed containment facility. We will also examine the evidence and methods used to predict how the waste and the containers designed to hold it will behave for long periods. Students will identify key issues and produce small group projects examining some of the scientific issues raised by this controversial proposal. *Students may register for either ES 111 or GEOS 111 and credit will be granted accordingly.*

Prerequisite: Open to first-year students only.

Distribution: Natural and Physical Science

Semester: Spring

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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**EXTD 102 Humanity 101: Origins; Ethics; Destinations***Rogers (History)*

How did human life come about? Did a god or gods create us? Are we an evolutionary adaptation? What are the potential ethical implications if humanity was created by some divine force or by accident? How might the origins of human life affect our understanding of death or any possible afterlife? This course invites first-year students to read, discuss, and compare influential works of literature, art, and music from antiquity to the present that raise similar questions about humanity's origins, the ethical implications of those origins, and death. The objective of this course is to provide first-year students with a broader framework of profound reflection upon humanity's existential questions before they have embarked upon their disciplinary paths.

Prerequisite: Open to first-year students only.

Distribution: Historical Studies

Semester: Spring

Unit: 1.0

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**EXTD 106 Women in Science: Their Lives and Work***Wolfson (Chemistry)*

This course will explore the pursuit of science by women in the twentieth and twenty-first centuries. We will focus on women's participation in specific areas of science and their day-to-day experiences. Among the issues to be addressed—through biographies, oral histories, statistics, and scientific papers—are the nature of scientific work and differences among fields, women's accomplishments and recognition in the sciences, and barriers to success. We will consider theories concerning women's involvement in the scientific enterprise and how these theories have changed over time.

Prerequisite: Open to first-year students only.

Distribution: Social and Behavioral Analysis

Semester: Fall

Unit: 1.0

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**GEOS 110 The Coastal Zone: Intersection of Land, Sea, and Humanity with Laboratory***Argow (Geosciences)*

This first-year course focuses on physical processes that frame ecological and human interactions within the dynamic coastal environment. At local field sites, students will observe, sample, and measure coastal processes in action to answer such questions as: Why do some beaches lose sand, where does it go, and what should we do about it? What are coastal wetlands, and how do they form and function? Field trips will be supplemented by information drawn from popular and scientific literature and media. Students will participate in ongoing research to learn how scientific data is generated, analyzed, and applied. Final project involves field and laboratory research on a local coastal issue, including management implications. Weekend field trip required.

Prerequisite: Open to first-year students only. Preference will be given to students considering science majors. By permission of the instructor.

Distribution: Natural and Physical Science

Semester: Fall

Unit: 1.25

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**GEOS 111/ES 111 The Yucca Mountain Problem: Where Should We Put Nuclear Waste?***Besancon (Geosciences)*

Choices about disposal of radioactive materials will affect countless future generations. Focusing on the proposed storage facility at Yucca Mountain, Nevada, we will examine the important scientific questions that must be answered for long-term safety of a nuclear repository. Students will learn the scientific principles governing risk assessment, groundwater movement, volcanism, earthquakes, and the groundwater properties of the repository rocks, and how each affects the safety of the proposed containment facility. We will also examine the evidence and methods used to predict how the waste and the containers designed to hold it will behave for long periods. Students will identify key issues and produce small group projects examining some of the scientific issues raised by this controversial proposal. *Students may register for either GEOS 111 or ES 111 and credit will be granted accordingly.*

Prerequisite: Open to first-year students only.

Distribution: Natural and Physical Science

Semester: Spring

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 the Special Collections Library and observations from the Whittin Observatory; no particular competence in mathematics is required. We begin with readings from Plato, Aristotle

As of 8/10/09

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: Open to first-year students only.

Distribution: Epistemology and Cognition

Semester: Spring

Unit: 1.0

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### **POL 108 State and Society in Contemporary China**

**NOT OFFERED IN 2009-10.** This course will use the case of contemporary China to introduce students to the discipline and major subfields of political science. To illustrate the subfield of comparative politics, our analysis of modern China's political development and government will be placed in the context of the experiences of other developing nations and (former) communist party-states. Political theory will be a thread throughout the course as we explore ideas from Confucianism to Communism that have shaped political life in China. For international relations, we will look at China's recent rise as one of the world's great powers. As an example of American politics in action, we will study the various influences that go into the making of U.S. China policy.

Prerequisite: Open to first-year students only.

Distribution: Social and Behavioral Analysis

Semester: N/O

Unit: 1.0

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### **SOC 105 Doing Sociology—Applying Sociological Concepts to the Real World**

*Levitt (Sociology)*

The goal of this course is to learn to analyze real-life situations using sociological tools. The course is organized around a series of exercises that will teach students different analytical techniques and explore sociological theories and concepts. Projects may include reading novels, analyzing films, working with census data, interviewing, conducting surveys, participant observation, debating, and a small independent research project. Each project will focus on a subfield in the discipline and will serve as a platform from which students can explore basic theories, analytic categories, and methods. Students will work individually, in pairs, and in small groups.

Prerequisite: Open to first-year students only.

Distribution: Social and Behavioral Analysis

Semester: Spring

Unit: 1.0

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### **THST 101 Can We Have an Argument? Understanding, Employing, and Delivering Sound Rhetoric**

*Arciniegas (Theatre Studies)*

This course will apply theatrical performance training to the art of public speaking or rhetoric. One of the three original Liberal Arts, the art of discourse has long been recognized as fundamental to the creation of knowledge, and the development of thought. Employing dramatic and nondramatic texts, original student-written work, and an occasional *Saturday Night Live* sketch, students will discover the power of words to change hearts and minds, as well as their ability to undercut the speaker who does not know how to use them properly. The course is intended to develop communicative and expressive skills in students, who might not be drawn to the fine arts, but who might benefit from theatrical training to become more effective thinkers, writers, and speakers.

Prerequisite: Open to first-years only, or by permission of the instructor.

Distribution: Arts, Music, Theatre, Film, Video

Semester: Fall

Unit: 1.0

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### **WGST 121 Reading Elvis Presley and 1950s America**

*Creef (Women's and Gender Studies)*

Some have argued that Elvis Presley was the greatest cultural force in twentieth-century America. This course will consider the early career of Elvis Presley as a unique window for the study of race, class, gender, and heteronormative sexuality in postwar popular American culture. Specifically, we will look at the blending of African-American and other forms of musical styles in Presley's music, the representation of masculinity and sexuality across a sampling of his films and television performances, at key cultural film texts from the 1950s, and end with evaluating Presley's lasting impact as a unique icon in American cultural history.

Prerequisite: Open only to first-year students.

Distribution: Arts, Music, Theatre, Film and Video

Semester: Fall

Unit: 1.0

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All **WRIT 125** classes, including those that satisfy requirements within majors, are intended for First-Year students. Please refer to the section of the catalog for the Writing Program's offerings.

Many departments and programs recommend specific courses as entryways into their majors. Some are limited to first-years and sophomores; others reserve seats for first-year students. Please consult the first-year program Web site at <http://www.wellesley.edu/FirstYear/> or the relevant department for more information.