

ENVS Minor Course Descriptions

ENVS 204 - Evolution & Genetics

Requirement: UCSF 137 for students admitted to Loyola University for Fall 2012 or later. No requirement for students admitted to Loyola prior to Fall 2012 or those with a declared major or minor in the Department of Anthropology, Department of Biology, Department of Chemistry, Department of Environmental Science, Department of Physics, Bioinformatics, Forensic Science or Neuroscience.

Examines the mechanisms responsible for the diversity of life while focusing on the major scientific discoveries that form the underpinnings of evolutionary theory.

Outcome: Students will develop skill in critical reasoning and methods of inquiry, and demonstrate understanding of genetics, gene expression, mutations, cell reproduction, and biogeography and use this knowledge to assess evidence for, and mechanisms of, evolution.

ENVS 207 - Plants and Civilization

Requirement: UCSF 137 for students admitted to Loyola University for Fall 2012 or later. No requirement for students admitted to Loyola prior to Fall 2012 or those with a declared major or minor in the Department of Anthropology, Department of Biology, Department of Chemistry, Department of Environmental Science, Department of Physics, Bioinformatics, Forensic Science or Neuroscience.

Examines the structure, function, ecology, and diversity of plants, their importance to human civilization, and the impact of societal decisions regarding their use and exploitation.

Outcome: Students will demonstrate an understanding of the critical role of plants in the biosphere, their physiological processes, adaptations for specialization, and linkages to humans including agroecology

ENVS 213 - Earth Sci-The Changing Planet

Requirement: UCSF 137 for students admitted to Loyola University for Fall 2012 or later. No requirement for students admitted to Loyola prior to Fall 2012 or those with a declared major or minor in the Department of Anthropology, Department of Biology, Department of Chemistry, Department of Environmental Science, Department of Physics, Bioinformatics, Forensic Science or Neuroscience.

Current knowledge regarding the geological development of Earth - its age, structure and glacial history and how we came to this understanding.

Outcome: Students will demonstrate an understanding of the fundamental knowledge and concepts in geology, the qualitative and quantitative reasoning used, and how this science can be applied.

ENVS 214 - Earth Sci: Weather - Climatology

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Examines our understanding of the atmosphere and the measures that allow us to monitor its activity.

Outcome: Students will develop critical reasoning skills, both qualitative and quantitative, and apply them to a variety of atmospheric phenomena including cloud and storm formation, weather systems, climate factors and human impact on the atmosphere.

ENVS 273 - Energy and the Environment

Requirement: UCSF 137 for students admitted to Loyola University for Fall 2012 or later. No requirement for students admitted to Loyola prior to Fall 2012 or those with a declared major or minor in the Department of Anthropology, Department of Biology, Department of Chemistry, Department of Environmental Science, Department of Physics, Bioinformatics, Forensic Science or Neuroscience.

The concept of energy developed from antiquity through the present day and applied to national and worldwide energy use patterns, the technologies supporting their use, as well as the societal impact and environmental consequences of energy usage.

Outcome: Students will become skilled in critical reasoning and methods of inquiry; demonstrate an understanding of critical concepts and knowledge: heat and energy, the laws of thermodynamics, and current and future technologies and their impact.

ENVS 281 - Human Impact on Environment

Requirement: UCSF 137 for students admitted to Loyola University for Fall 2012 or later. No requirement for students admitted to Loyola prior to Fall 2012 or those with a declared major or minor in the Department of

Anthropology, Department of Biology, Department of Chemistry, Department of Environmental Science, Department of Physics, Bioinformatics, Forensic Science or Neuroscience.

Examines the diversity, complexity, and functioning of natural ecosystems and how human activity alters these attributes.

Outcomes: Students will demonstrate an understanding of foundational knowledge in ecology including species interactions, energy flow and elemental cycles, and use this to assess human impacts such as ozone depletion, elevated atmospheric carbon, invasive species, pesticides/herbicides/hormones, dams and habitat fragmentation.

ENVS 282 - The Human Environment

Examines the impact that current environmental conditions have on the health and well-being of humans, both locally and globally.

Outcome: Students will demonstrate an understanding of core environmental concepts and make reasoned, ethical judgments regarding the impact of a compromised environment on human health, including the impact of world food distribution, pesticides, water resources and pollution, air pollution, climatic changes, and hazardous waste.

ENVS 283 - Environmental Sustainability

Requirement: UCSF 137 for students admitted to Loyola University for Fall 2012 or later. No requirement for students admitted to Loyola prior to Fall 2012 or those with a declared major or minor in the Department of Anthropology, Department of Biology, Department of Chemistry, Department of Environmental Science, Department of Physics, Bioinformatics, Forensic Science or Neuroscience.

Examines the impact of humans as consumers on the environment and how these interactions affect the probability of establishing sustainability for human and non-humans on Earth.

Outcome: Students will become skilled in critical reasoning and methods of inquiry, and demonstrate an understanding of knowledge critical to the field including current human consumptive practices and their effects on the health and well-being of living organisms.

ENVS 300 – Seminar

Lectures and discussions of current topics in the natural and environmental sciences.

ENVS 399 - Directed Readings

Directed by an ESP faculty member, students will read, analyze, and discuss a publications focusing on different aspects of a specific environmental issue or theme.

Outcome: Students will demonstrate comprehension of, and the ability to apply information from, scientific literature and be able to synthesize information to produce a cogent, synthetic analysis of their topic based on these readings.