

Earth and Ocean Systems

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EOS 280: Sustainable Agriculture and Gardening

Although humans can obtain the air and (to a lesser extent) the water they need freely, we must work to provide our bodies with food. Before the industrial era, hunting, gathering, and farming were the primary human activities. Technology and industrialization have greatly reduced the human labor required to produce food, and farming has become the specialized occupation of the few. However, in the process, modern industrialized agriculture has developed into a system with many impacts, such as water pollution, greenhouse gas production, and the health consequences of highly processed diets. These impacts of industrialized agriculture are unsustainable as population increases, water resources become scarce, and global warming makes the intensive use of fossil fuels undesirable. In this course, we will examine what a more sustainable mode of food production might look like through class work as well as hands-on work in the Soka Instructional Garden.

Units: 3

Program: [Earth and Ocean Systems](#)

EOS 322: Water Resources

The struggle to manage water resources has shaped societies in the past and continues to do so today. Human use of water for drinking, sanitation, and agriculture is controlled by natural processes, by engineering, and by the institutions that manage water for the benefit of societies. In this course students will study how these processes control the availability and quality of water. Students will explore water resources in the local area through field visits to both natural and engineered sites and will learn to apply some of the techniques of water resource managers.

Units: 4

Program: [Earth and Ocean Systems](#)

EOS 402: Climate Change

The Earth's climate is changing because human activity is increasing the levels of greenhouse gases such as carbon dioxide and methane in the atmosphere. You will learn what causes climate change, as well as its present and future effects on both the earth and society. You will also learn about the responses society and individuals can make to prevent and adapt to climate change. In the laboratory portion of this class, you will learn how to plan and perform a scientific experiment measuring greenhouse gases.

Units: 3

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