

HUDSON COUNTY COMMUNITY COLLEGE

ENV 203: Sustainability and Conservation

Credits: 3

Course description:

This course introduces students to the principles and practices of sustainability. It explores the origins and evolution of the discourse surrounding the idea of sustainable development, as it applies to global and local processes and practices. The course focuses on synthesizing ecological, economic and social domains taking into account the long-term consequences of present-day actions. Students will engage with issues such as population growth dynamics, energy and resources use, pollution, climate change mitigation and adaptation, food and nutrition, health and sanitation, water, social justice and equality, and poverty reduction. Students will develop a sound understanding of the use of sustainability indicators and quality-of-life metrics, and will understand the ways in which these can be applied to help guide the practices of sustainability and conservation.

Detailed outline of suggested topics:

Session	Topic
1 st	Introduction and overview of the course: Review of course syllabus, grading, attendance, cell phone, and behavior policies. Discuss HCCC's learning resources available to students.
2 nd	Framework for a sustainable future: Environmental science, environmental movement, sustainability concepts and trends, moving towards a sustainable future
3 rd	Economics, politics, public policy: Goods and services, environment and public policies
4 th	Ecology: Basic needs of living things, organisms and their environment, matter and energy
5 th	<u>Exam 1</u> Populations and communities
6 th	Eco-systems: Flow of energy, eco-system response to disaster, humans and eco-system sustainability
7 th	The value, use, and restoration of ecosystem, conservation & preservation
8 th	Population and consumption around the world
9 th	<u>Exam 2</u> Water: Hydrologic cycle and human use

10 th	Water: Supply and public policy Paper topic due
11 th	Soil: Farming and ecosystem, land management, soil conservation
12 th	Food: Production and distribution, crops and animals Paper outline due
13 th	<u>Exam 3</u> Energy from fossil fuel
14 th	Renewable energy
15 th	<u>Exam 4</u> Paper due

Suggested paper topics:

Solar power: describe two solar power applications

Geothermal energy: describe how it can be harvested and its application

Renewable energy vs. fossil fuel

Renewable and non-renewable ground water

Reducing wasting water in households

Suggested paper topics continued:

Describe major uses of water and explain how water can be conserved

Describe sustainability in agricultural context

Food foot print: Calculate your daily consumption

Proposed student texts.

Wright, R.T., Boorse, D.F. (2014). *Environmental science: Towards a sustainable future*. 12th edition Benjamin Cummings Publishing

