

	<u>Date</u>	<u>Initials</u>
Division/School Approval:	9/4/2020	TMC
Curriculum Committee Approval:	11/06/20	CMG
Senate Approval:	03/09/21	ERM

SUNY SCHENECTADY Course Outline

ACADEMIC DIVISION/SCHOOL: Math, Science, Technology, and Health

PREPARED BY: Ralf W. Schauer

COURSE CODE: ENV 100 **COURSE TITLE:** Introduction to Environmental Science

LECTURE HOURS/WEEK: 3 **LAB HOURS/WEEK:** 0 **CREDIT HOURS:** 3

PREREQUISITE(S): None

PREREQUISITE or CONCURRENT COURSE: None

COREQUISITE: None

COURSE DESCRIPTION:

This course introduces students to the environmental issues and challenges facing current humanity. Topics cover environmental issues from various perspectives: ecological, biological, social, economic, ethical, and governmental policy. In addition, the course emphasizes the tools of scientific inquiry as they pertain to the understanding and analysis of topics such as energy production and consumption, hazardous and solid waste, species and land usage, resource depletion and food production, water issues, air issues, and the consequences of Global Climate Change.

	SUNY SCHENECTADY S-CORE COURSE	SUNY GENERAL EDUCATION COURSE
APPROVED CATEGORY 1	Scientific Literacy	Natural Science
APPROVED CATEGORY 2	Choose an item.	Choose an item.
RECOMMENDED CATEGORY 1	Choose an item.	Choose an item.
RECOMMENDED CATEGORY 2	Choose an item.	Choose an item.

STUDENT LEARNING OUTCOMES:

Students who have successfully completed this course will have:

- described the four principles of sustainability;
- applied scientific laws and theories as related to environmental issues;
- described the natural chemical and physical cycles as they pertain to environmental issues;
- assessed the impact of human interaction with and upon the environment; and
- explained the consequences of Global Climate Change.

REPRESENTATIVE TEXT(S):

TITLE	AUTHOR(S)	PUBLISHER
Essentials of Ecology	Miller, G. Tayler	Cengage
Environmental Science: Toward a Sustainable Future	Wright, Richard T., Boorse, Dorothy F.	Pearson
Environmental Science: A Global Concern	Cunningham(s), William P. & Mary Ann	McGraw Hill
SPECIAL NOTES:		

COURSE MATERIALS:

Magazine, journal, newspaper articles, government and industrial material and reports, and three non-textbooks, at least two of which must be chosen from the following: 1) Silent Spring; Carson, Rachel; Houghton Mifflin 2) Ishmael, Quin, Daniel; Bantam/Turner 3) The Conundrum; Owen, David; Riverhead Books 4) Nature Wars; Sterba, Jim; Broadway Books 5) Omnivore’s Dilemma, Young Readers Edition; Pollan, Michael; Dial 6) Full Planet, Empty Plates; Brown, Lester R. 7) The Story of Stuff; Leonard, Annie; Free Press 8) Field Notes from a Catastrophe; Kolbert, Elizabeth; Bloomsbury 9) The Sixth Extinction; Kolbert, Elizabeth; Henry Holt 10) Half-Earth; Wilson, Edward O.; Liveright

NOTE: Grading and assessment criteria may appropriately differ. Grades focus on what individual students have learned while assessments focus on entire cohorts of students. Each instructor will determine his/her grading criteria for the course and state on the course syllabus.

EVALUATION METHODS:

Methods of evaluation may include, but are not limited to: quizzes, examinations, assignments, discussions, poster presentations, oral presentations, and online work.

REQUIRED ASSESSMENT METHODS:

Assessment results from these methods will be used for course-level assessment and, where applicable, for SUNY Schenectady S-Core principles and SUNY General Education Knowledge and Skills areas. This information will be incorporated in program reviews.

STUDENT LEARNING OUTCOME	METHOD(S)
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Described the four principles of sustainability	Examination
Applied scientific laws and theories as related to environmental issues	Examination
Described the natural chemical and physical cycles as they pertain to environmental issues	Examination
Assessed the impact of human interaction with and upon the environment	Written assignment – Fall semester Poster project – Spring semester
Explained the consequences of Global Climate Change	Written assignment
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COURSE CONTENT OUTLINE:

NOTE: College policy requires a final exam or final week activity.

WEEK(S)/HOUR(S)	TOPIC
1	History of the Conservation and Environmental Movement
2	Basic Principles of Environmental Science and Sustainability
3	Basic Laws of Science
4	Energy: Fossil Fuels and Nuclear
5	Energy: Renewables
6	Solid Waste
7	Hazardous Waste in the Household
8	Land Usage
9	Endangered, Exotic, and Invasive Species
10	Food Production
11	Fresh Water Issues
12	Water Pollution Issues
13	Air Pollution Issues
14	Global Climate Change: Causes and Consequences
15	Human Population: Sustainability
16	Final Exam