

**Tompkins Cortland Community College**  
**Master Course Syllabus**

**Course Discipline and Number: ENVS 101**  
**Course Title: Introduction to Environmental Sciences**

**Year: 2020-2021**  
**Credit Hours: 3**

**Attendance Policy:** *To maintain good grades, regular attendance in class is necessary. Absence from class is considered a serious matter and absence never excuses a student from class work. It is the responsibility of all instructors to distribute reasonable attendance policies in writing during the first week of class. Students are required to comply with the attendance policy set by each of their instructors. Students are not penalized if they are unable to attend classes or participate in exams on particular days because of religious beliefs, in accordance with Chapter 161, Section 224-a of the Education Law of the State of New York. Students who plan to be absent from classroom activity for religious reasons should discuss the absence in advance with their instructors. See college catalog for more information.*

**Services for Students with Disabilities:** *It is the College's policy to provide, on an individual basis, appropriate academic adjustments for students with disabilities, which may affect their ability to fully participate in program or course activities or to meet course requirements. Students with disabilities should contact the Coordinator of Access and Equity Services, to discuss their particular need for accommodations. All course materials are available in alternate formats upon request.*

### **Course Description**

Explores the biological dimensions of natural-resource management issues. A basic introduction to evolutionary and ecological principles help support discussions of topics such as human population dynamics, human health and toxicology, wildlife biology and management, food production, pest control, and maintenance of biodiversity. Both local and global issues are addressed. Intended for all students, regardless of major field of study. ENVS 101 fulfills the SUNY General Education Natural Sciences requirement. Prerequisites: RDNG 099 if required by placement testing; prior completion or concurrent enrollment in ENGL 100 or ESL 120, 121, and 122 (or prior completion of ESL 103). 3 Cr. (2 Lec; 2 Lab.) Fall and spring semesters.

### **Course Context/Audience**

ENVS 101 satisfies the SUNY GEN ED Natural Sciences requirement. It is a required course in the ENVS A.S. degree program. ENVS 295H requires that the student first take ENVS 101 or ENVS 102.

### **Basic Skills/Entry Level Expectations**

**Writing:** WC College level writing skills are required. See course co-requisites or pre-requisites.

**Math:** M0 Course requires very little or no math.

**Reading:** R2 Before taking this course, students must have a C or better in RDNG 099 or assessment indicating that RDNG 099 was not required.

### **Course Goals**

The student will become more aware of his/her role in the environment, and how s/he can change his/her lifestyle to cause less damage to earth's systems. The class will promote a greater understanding of environmental issues and how the scientific method can be used to understand natural ecosystems and how they are being impacted by humans.

## Course Objectives/Topics

Objective/Topic	% Course
Introduction to environmental problems and sustainability, featuring current events	10%
Environmental worldviews, ethics, and sustainability	10%
Basic ecological principles- Laws of thermodynamics acting in an ecosystem, Nutrient cycles, Evolution and biodiversity, Major biomes, Tolerance and limiting factors, Succession (of vegetation type over time), and Ecological communities	30%
Human population issues- e.g., Calculation of natality/mortality, Age tables, Density dependent/independent regulating factors, carrying capacity, etc.	10%
Agriculture, biotechnology, and food security	10%
Biodiversity and deforestation	10%
Wildlife issues- Hunting. Endangered species, etc.	10%
Development and related issues- Land-use planning, Federal agencies and regulations pertaining to the environment	10%
Scientific Method, Research Design, Data Analysis and Interpretation	Throughout

## General Education Goals - Critical Thinking & Social/Global Awareness

CRITICAL THINKING OUTCOMES	HOW DOES THE COURSE ADDRESS THE OUTCOMES (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
<p>Students will be able to</p> <ul style="list-style-type: none"> <li>➤ develop meaningful questions to address problems or issues.</li> <li>➤ gather, interpret, and evaluate relevant sources of information.</li> <li>➤ reach informed conclusions and solutions.</li> <li>➤ consider analytically the viewpoints of self and others.</li> </ul>	<p>The course examines relevant contemporary issues and asks students to look at multiple stakeholders and pros/cons.</p> <p>The course emphasizes the importance of considering possible bias in the media and focuses on evaluating sources for legitimacy.</p> <p>The course emphasizes the importance of considering possible bias in the media and focuses on evaluating sources for legitimacy. Emphasis is on building support for your viewpoint using disparate sources of information.</p> <p>Students are asked to consider how personal belief and others' viewpoints shape any given environmental issue and how it is conveyed in the media.</p> <p>These outcomes are addressed through a required Letter to a Leader; Mini research paper; Media bias discussion; Class discussion; a Debate; and the Green Pledge.</p>

<b>SOCIAL/GLOBAL AWARENESS OUTCOMES</b>	<b>HOW DOES THE COURSE ADDRESS THE OUTCOMES</b> (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
<ul style="list-style-type: none"> <li>➤ Students will begin to understand how their lives are shaped by the complex world in which they live.</li> <li>➤ Students will understand that their actions have social, economic and environmental consequences.</li> </ul>	<p>Focus is on ecological connections, and how humans are a part of and apart from ecological systems.</p> <p>The course examines the social dimension of sustainability and focuses on why sustainable solutions must consider social context.</p> <p>The course examines the economic dimension of sustainability, and focuses on why sustainable solutions must consider economic feasibility.</p> <p>Students are asked to consider how their lifestyles affect the environment.</p> <p>These outcomes are addressed through lecture, class discussion, a required Letter to a Leader, Ecological Footprint, a Debate, and the Green Pledge.</p>

### Instructional Methods

Lecture, discussion, debate, and media are all appropriate.

### Methods of Assessment/Evaluation

Method	% Course Grade
Exams	20-60%
Lab research, reports, and presentations	30-50%
Term paper or multiple smaller written assignments	0-50%
Participation in discussion	0-33%
Creative, primary research, or service projects	0-33%
Quizzes	0-30%

### Text(s)

Withgott, J. and S. Brennan. 2011. Environment: The Science Behind the Stories (4<sup>th</sup> ed). Benjamin Cummings, Boston.

### Bibliography

Reaka-Kudla, M., et. al., Biodiversity II, © 1997: Joseph Henry Press, Washington, DC.

Kormondy, E.J., Concepts of Ecology, 4th edition, © 1996: Prentice Hall, Portland, OR.

Leopold, A., A Sand County Almanac, © 1949: Oxford University Press.

Carson, R., Silent Spring, © 1962: Houghton Mifflin, Boston, MA.

Hardin, G. Tragedy of the Commons, © 1970.

## Other Learning Resources

### Audiovisual

Journal to Planet Earth - DVD series

Darwin's Nightmare

An Inconvenient Truth

Flow: For the Love of Water

Blue Gold

Food, Inc.

### Electronic

No resources specified

### Other

No resources specified