

Fall 2018

# EPS 202-007: Society, Technology and Environment

Michael Bonchonsky

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## Recommended Citation

Bonchonsky, Michael, "EPS 202-007: Society, Technology and Environment" (2018). *Chemistry and Environmental Science Syllabi*. 10. <https://digitalcommons.njit.edu/chem-syllabi/10>

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**EPS 202-007 Society, Technology  
and Environment:  
*Fall 2018 Course Syllabus***

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Office: Tiernan 365

Office Hours: T / Th 10:00-11:30 and by appt

**NJIT Academic Integrity Code:** All Students should be aware that the Department of Chemistry & Environmental Science takes the University Code on Academic Integrity at NJIT very seriously and enforces it strictly. This means that there must not be any forms of plagiarism, i.e., copying of homework, class projects, or lab assignments, or any form of cheating in quizzes and exams. Under the University Code on Academic Integrity, students are obligated to report any such activities to the Instructor.

**COURSE INFORMATION**

**Course Description:** This course introduces students to the interdisciplinary field of environmental studies and explores the interrelationships between science, technology, environment, and society. We examine the social and scientific origins of environmental problems and evaluate the complex role of technology in creating and resolving these concerns. The perspective of the course is broadly social scientific, though this mode of investigation takes place against the background of a scientific appreciation of current environmental dilemmas. We will consider both the local and global implications of current social activities affecting the environment and investigate specific issues such as air pollution, water contamination, acid rain, hazardous waste, declining biodiversity, and climate change. Other topics include energy, food production, biotechnology, and the environmental implications of contemporary consumption practices.

**Number of Credits:** 3 Cr

**Prerequisites:** None

**Course-Section and Instructors**

Course-Section	Instructor
EPS 202-007, TR 2:30-3:50, GITC 1400	MP Bonchonsky

**Office Hours for All Chemistry & Environmental Science Instructors:** [Fall 2018 Office Hours and Emails](#)

**Required Textbook:**

Title	“Classic Edition: Sources Notable Selections in Environmental Studies”
Author	Thomas Easton, ed., Fifth edition, 2014
Edition	Fifth ed.
Publisher	McGraw-Hill.
ISBN #	<i>ISBN: 9781308081939</i>

**University-wide Withdrawal Date:** The last day to withdraw is as shown on the NJIT academic calendar currently listed as Monday, November 12, 2018. It will be strictly enforced.

**Learning Outcomes:**

1. To develop students’ sensibility to contemporary environmental/ecological problems and their roots and causes.
2. To enhance students’ understanding of the complex and dynamic interactions among science, technology, environment and society.
3. To build up students’ ecological citizenship with the social responsibility to develop solutions to contemporary environmental problems from personal, professional and societal perspectives.
4. To empower students with critical thinking skills and knowledge of sustainability, to effectively engage in community development and pursue successful careers in science, technology and engineering.
5. To nurture students’ environmental entrepreneurship spirit in tackling the contemporary environmental problems with development and application of innovative science, technology and engineering practices.

**POLICIES**

All EVSC students must familiarize themselves with, and adhere to, all official university-wide student policies. EVSC takes these policies very seriously and enforces them strictly.

**Grading Policy:** The final grade in this course will be determined as follows:

Essays	20
Quizzes	20
Participation	10
Midterm Exam	25
Final Exam	25

The final course grade will be determined as follows:

Final Grade	Overall Academic Performance (100%)
A	Above 90
B+	85-89
B	80-84
C+	75-79
C	70-74
D	60-69
F	Below 60

**Attendance Policy:** Attendance at classes will be recorded and is **mandatory**. Each class is a learning experience that cannot be replicated through simply “getting the notes.”

**Homework Policy:** Homework is an expectation of the course. The homework assignments set by the instructor are used in class discussions which comprise in part the determination of the score for “participation”.

**Exams:** There will be a weekly quiz, a midterm exam held in class during the semester and one final exam. The following exam periods are tentative and therefore possibly subject to change (see moodle for any updates):

Midterm Exam	October 14-21, 2018
Quiz first class session each week	
Final Exam Period	December 15 - 21, 2018

**Makeup Exam Policy:** There will normally be **NO MAKE-UP QUIZZES OR EXAMS** during the semester. In the event that a student has a legitimate reason for missing a quiz or exam, the student should contact the Dean of Students office and present written verifiable proof of the reason for missing the exam, e.g., a doctor’s note, police report, court notice, etc. clearly stating the date AND time of the mitigating problem. The student must also notify the CES Department Office/Instructor that the exam will be missed so that appropriate steps can be taken to make up the grade.

**Cellular Phones:** All cellular phones and other electronic devices must be switched off during all class times. Such devices must be stowed in bags during exams or quizzes.

## ADDITIONAL RESOURCES

**Accommodation of Disabilities:** Office of Accessibility Resources and Services (*formerly known as Disability Support Services*) offers long term and temporary accommodations for undergraduate, graduate and visiting students at NJIT.

If you are in need of accommodations due to a disability please contact Chantonette Lyles, Associate Director at the Office of Accessibility Resources and Services at **973-596-5417** or via email at [lyles@njit.edu](mailto:lyles@njit.edu). The office is located in Fenster Hall Room 260. A Letter of Accommodation Eligibility from the Office of Accessibility Resources Services office authorizing your accommodations will be required.

For further information regarding self-identification, the submission of medical documentation and additional support services provided please visit the Accessibility Resources and Services (OARS) website at:

- <http://www5.njit.edu/studentssuccess/disability-support-services/>

**Important Dates** (See: [Fall 2018 Academic Calendar, Registrar](#))

Date	Day	Event
September 4, 2018	T	First Day of Classes
September 10, 2018	M	Last Day to Add/Drop Classes
November 12, 2018	M	Last Day to Withdraw
November 20, 2018	T	Thursday Classes Meet
November 21, 2018	W	Friday Classes Meet
November 22 - 25, 2018	R - Su	Thanksgiving Break - University Closed
December 12, 2018	W	Last Day of Classes
December 14, 2018	F	Reading Day
December 15 - 21, 2018	F - R	Final Exam Period

# Course Outline

(please see Moodle course website for any changes and updates during the semester)

## Introduction

Course outline and synopsis  
Syllabus (Moodle) Study Guide (Moodle)  
Discussion: Cancer Cure, a case study (posted, read before class)

## Worldviews and the Environment

Vitousek, "Human Domination of Earth's Ecosystems," Sources, pp. 33-40  
Meadows, et al, "From Limits to Growth: the 30-year Update," Sources  
Diamond, "A Tale of Two Farms," Sources  
Media: The Environment: A Historical Perspective

## Origins of Environmentalism

Carson, "Silent Spring," (Moodle)  
Shabecoff, "The Environmental Revolution" A Fierce Green Fire (Moodle)  
Hardin, "The Tragedy of the Commons," Sources  
Media: Silent Spring

## Wilderness

Muir, "The Mountains of California,"  
Pinchot, "The Fight for Conservation," Sources,  
Leopold, "A Sand County Almanac....," Sources  
Marsh, "From Man and Nature", Sources  
Media: Wilderness idea

## Toxics and Risk in the Environment

Paigen, "Controversy at Love Canal," Sources  
Steingraber, "Living Downstream: An Ecologist Looks at Cancer and the Environment," Sources,  
Colborn, et al, "Our Stolen Future," Sources      Media: Love Canal

## First Writing Assignment Due

## Environmental Health and Water Resources (Quiz 4)

Palmer, et al, "Restoring Rivers," Sources  
Media: "Tapped"

## Chemical and Manufacturing Industries: Can They Ever be Green?

McDonough, "Cradle-to-cradle design: creating healthy emissions – a strategy for eco-effective product and system design," (Moodle)  
Media: The Next Industrial Revolution (Cradle to Cradle)

## Review and Midterm Exam

## Energy Policy and Global Impacts

National Energy Policy Development Group, "Reliable, Affordable, and Environmentally Sound Energy for America's Future" (available at <http://www.whitehouse.gov/energy/>)  
Lovins, "From 'More Profit with less Carbon'" Sources  
Flavin and Dunn, "Reinventing the Energy System," Sources  
Media: The Big Energy Gamble (California State experience) (PBS)

**Last day to withdraw (check registrar's academic calendar).**

### **Climate Change and International Agreements: Kyoto Protocols**

The Intergovernmental Panel on Climate Change, "Climate Change 2007," Sources  
Skolnikoff, E.B. 1999. The role of science in policy: The climate change debate in the United States. (Moodle)  
Media: Global Warming

**Second Writing Assignment, see moodle for due date**

### **Population Growth**

Ehrlich, "The Population Explosion...", Sources  
Cohen, "How Many People Can the Earth Support," Sources  
Media: The World in Balance

### **Food Production**

Berry, "The Unsettling of America: Culture and Agriculture," Sources  
Brown, "Food Scarcity: An Environmental Wake-Up Call," Sources  
Media: Food, Inc.

### **Sustainable Development and Consumption**

World Commission on Environment and Development, "Our Common Future," Sources, pp. 198-202  
Annan, K. 2002. Sustaining the Earth. Environment, 42(8), 10pp. (Moodle)  
Mabogunje, A.L. 2002. Poverty and environmental degradation: challenges within the global economy. Environment, 44(1), 11pp. (Moodle)  
Kates, R.W. 2000. Population and consumption: what we know, what we need to know. Environment, 42(3), 10pp. (Moodle)  
Media: Plastics

### **Biodiversity, Biotechnology and Species Conservation and review for Final**

Wilson, "The Current State of Biological Diversity," Sources  
Shiva, "Women's Indigenous Knowledge and Biodiversity Conservation," Sources.  
Vandermeer, "Rethinking Rain Forest: Biodiversity and Social Justice," Sources.  
Ruastiala, K. and D.G. Victor. 1996. Biodiversity since Rio: the future of the Convention on Biological Diversity. Environment, 388(4): 17-20+37 (Moodle)  
Media: Crash: A Tale of Two Species

**Review...Final Exam period begins as shown on NJIT academic calendar**