

New Jersey Institute of Technology

Digital Commons @ NJIT

Chemistry, Environmental and Forensic Science
Syllabi

NJIT Syllabi

Fall 2024

EPS 202-451: Society, Technology and Environment

Michael Bonchonsky

Follow this and additional works at: <https://digitalcommons.njit.edu/chem-syllabi>

Recommended Citation

Bonchonsky, Michael, "EPS 202-451: Society, Technology and Environment" (2024). *Chemistry, Environmental and Forensic Science Syllabi*. 610.
<https://digitalcommons.njit.edu/chem-syllabi/610>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in Chemistry, Environmental and Forensic Science Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact digitalcommons@njit.edu.

EPS 202-451 SOCIETY, TECHNOLOGY, AND ENVIRONMENT
NEW JERSEY INSTITUTE OF TECHNOLOGY
Fall 2024

Course Information: Instructor: MP Bonchonsky
Time: Online, asynchronous (on-line anytime, but each week participation required)
Location: Online on Canvas
Canvas: <http://Canvas.njit.edu>, lectures posted on Canvas

E-mail: bonchons@njit.edu; Office: Tiernan 365
Office Hours: This semester...on-line zoom/webex by appt

Number of Credits: 3 Cr

Course description: Examines the relationships between the creation and use of technologies, the human and natural environment, and the development of social and cultural institutions.

Prerequisites: HUM 101

Course-Section and Instructor **Course Modality:** asynchronous “on line Newark”

Course-Section	Instructor
EPS 202-451	Michael P. Bonchonsky, CES Dept

Office Hours : On line zoom/webex by apptmt

Required Textbook:

Title	Classic Edition Sources Notable Selections in Environmental
Author	Thomas Easton, ed.
Edition	5 th (available in NJIT (bookstore or through on line vendors)
Publisher	McGraw Hill
ISBN #	ISBN: 9781308081939

NJIT Academic Integrity Code: All Students should be aware that the Department of Chemistry & Environmental Science (CES) 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.

Students are asked to practice care and attention in regard to academic honesty, with the understanding that all cases of plagiarism, cheating, multiple submission, and unauthorized collaboration are subject to penalty. Students must properly cite and attribute all sources used for papers and assignments. Students may not collaborate on exams or assignments, directly or through virtual consultation, unless the instructor gives specific permission to do so. Posting an exam, assignment, or answers to them on an online forum (before, during, or after the due date), in addition to consulting posted materials, constitutes a violation of the university's Honesty policy. Likewise, unauthorized use of live assistance websites, including seeking "expert" help for specific questions during an exam, can be construed as a violation of the honesty policy. All students should be familiar with the [NJIT Academic Integrity Code](#)

Academic integrity: Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu

University-wide Withdrawal Date: The last day to withdraw is Nov. 13, 2024 (always confirm with current policy and registrar's academic calendar)

I. Introduction and Objectives

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 on the environment and investigate specific issues such as air pollution, water contamination, hazardous materials, ozone depletion, declining biodiversity, and climate change. Other topics include energy, food production, biotechnology, and the environmental implications of contemporary consumption practices.

II. 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 aspect of citizenship with the social responsibility to develop solutions to contemporary environmental problems from personal, professional and societal perspectives.
4. To develop in students 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

contemporary environmental problems with development and application of innovative science, technology and engineering practices.

III. Required Reading

Students in this course should obtain the following materials from the NJIT bookstore or through any of the commercial on-line dealers.

Thomas Easton, ed., Fifth edition, 2014, Classic Edition Sources Notable Selections in Environmental Studies, (in bookstore) **ISBN: 9781308081939** Stamford, CT: McGraw-Hill.

The assigned readings are designed to give you background knowledge needed to understand the subject matter covered in class. The readings listed for each topic should be read prior to the class. The more you are able to read, the better prepared you will be for class discussions.

IV. Evaluation

The final grade of this course will be given in the following standards:

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

Each week there will be a quiz to be taken on Canvas by end Sunday.

Midterm : Oct 26, 27, 2024 (as shown on Canvas) Final exam : Dec 14, 15, 2024

ANY CHANGES WILL BE on Canvas (Canvas controls)

The evaluation of student performance in this course is based on five components:

- 1. Midterm examination (25%):** There will be a midterm exam comprised of multiple-choice or short-answer questions and brief essays. This exam will be based on course lectures, discussion sessions, and assigned readings. The midterm is scheduled on October 27, 28th.
- 2. Final examination (25%):** There will be a final exam conducted during the end-of-semester exam period. The format of the final exam will be the same as the midterm exam; it will be based only on course material covered during the second half of the semester.
- 3. Class participation (10%):** Each week students are required to post an entry in the discussion forum for that week (200 word entries). This is important because it is your opportunity to post observations on the weekly material or to react to a classmate's posting. You are required to do this during each week by Sunday by 11:55pm (you can't go back after that week) for the full 10% of "class participation." Discussion posts are "all or nothing," so students will either receive full credit or no credit.
- 4. Quiz (20%):** A quiz will be given on Canvas each week to assess your familiarity with the weekly lectures and the required readings. There will be no make-up quizzes or late submission under any circumstances. I will drop two lowest grades in calculating your final scores to accommodate any need to "miss" a quiz. Be aware: Academic Honor Code is applied.

5. **Writing Assignments (20%):** Two research papers will be required during the semester. The schedule for the assignments will be determined at the start of the semester (see the schedule on syllabus and in Canvas). Instructions for the assignments will be posted on Canvas prior to deadlines. All completed assignments must be submitted online on by 11:55pm on the day of the deadline.

6. **Extra Credit - environmental news bonus work (up to 5 pts):** You need to collect one piece of environmental news and submit your comments (reaction comments) in a paragraph. To earn the EC, you must submit 5 pieces of your work (attaching your news article) **spread throughout the semester** - recommend: one piece every other week. Submittals in last two weeks will receive minimal credit. See weekly schedule on Canvas:

Tests: See Canvas for any changes: Canvas controls
Weekly Quiz at end Sunday each week, see Canvas
Midterm: on line Oct 26, 27 2024
Final: on line Dec 14, 15 2024

V. Important Notices

1. Students enrolled in this course are forewarned that the consequences of plagiarism or academic misconduct of any kind are severe. Violations will be handled in accordance with the rules outlined in the [Code of Student Conduct](#). If you are unfamiliar with these procedures, you should consult the appropriate section of this governing manual.

2. Please be sure to log into Canvas each week, take quizzes on prior week's material, listen to a lecture, and post observations in the weekly discussion forum. From my end of Canvas, reports provide to me when you enter and for how long at all times.

3. All quizzes and exams are closed book, closed notes, no aids.

Using Respondus LockDown Browser and a Webcam for Online Exams

Respondus LockDown Browser is a locked browser for taking exams in Canvas. It prevents you from printing, copying, going to another URL, or accessing other applications during a test. If a Canvas quiz requires that LockDown Browser be used, you will not be able to take the assessment or quiz with a standard web browser. You may be required to use LockDown Browser with a webcam (Respondus Monitor), which will record you during an online exam.

This course requires the use of Respondus LockDown Browser and/or Respondus Monitor with a webcam for the midterm and final online exams. The webcam can be built into your computer or can be the type that plugs in with a USB cable. Watch [this short video](#) to get a basic understanding of LockDown Browser and the webcam feature. A student [Quick Start Guide \(PDF\)](#) is also available.

1. Download and install LockDown Browser from this link:
<http://www.respondus.com/lockdown/download.php?id=264548414>
2. Once your download has finished, locate the "LockDown Browser" shortcut on the desktop and double-click it. (For Mac users, launch "LockDown Browser" from the Applications folder.)
3. You will be brought to the Canvas login page within the LockDown Browser, click "Login with your UCID" to log in with your NJIT UCID and password and then click Login.
4. Under "My courses", click on the course in which you have to take the exam that requires the LockDown Browser.
5. After you enter the course, find the exam and click on it.

6. A confirmation prompt will appear, click the “Start attempt” button. Once a quiz has been started with LockDown Browser, you cannot exit until the Submit all and finish button is clicked.
 7. If you are required to use a webcam (Respondus Monitor), you will be prompted to complete a Webcam Check and other Startup Sequence steps.
4. Final grades are not subject to post-semester adjustment-with the exception of the amendment due to a grading error. Under no circumstances will students be given the opportunity to complete extra-credit papers or other assignments to bolster their final grades.

VI. Schedule (follow weekly dates as shown on Canvas) Class week begins Sept 3, 2024...classes end Dec 11, 2024 Final exam Dec 14, 15, 2025...Quizzes due end Sunday each week (one each week) as shown on Canvas

Introduction

Week 1 Intro Sept 3-17 2024

Course outline and synopsis

Syllabus (Canvas) Study Guide (Canvas)

Week 1 Discussion

Practice Quiz 1 Quizzes are Sunday each week covering prior week’s material

Worldviews and the Environment

Week 2 Worldviews

Vitousek, “Human Domination of Earth’s Ecosystems,” Easton, pp. 33-40

Meadows, et al, “From Limits to Growth: the 30-year Update,” Easton, pp. 28-32

Diamond, “A Tale of Two Farms,” Easton, pp. 213-218

Video: The Environment: A Historical Perspective

Week 2 Discussion

Quiz 2

Origins of Environmentalism

Week 3 Origins

Carson, “Silent Spring,” (Canvas)

Hardin, “The Tragedy of the Commons,” Easton, pp. 23-27

Video: Silent Spring

Week 3 Discussion

Quiz 3

Wilderness

Week 4 Wilderness

Muir, “The Mountains of California,” Easton, pp. 5-7

Pinchot, “The Fight for Conservation,” Easton, pp. 8-9

Leopold, “A Sand County Almanac....,” Easton, pp. 10-12

Marsh, “From Man and Nature”, Easton, pp 1-4

Video: Wilderness idea

Week 4 Discussion Quiz 4

Toxics and Risk in the Environment

Week 5 Environmental Pollution

Paigen, “Controversy at Love Canal,” Easton, pp. 106-112

Steingraber, “Living Downstream: An Ecologist Looks at Cancer and the Environment,” Easton, pp. 157-161

Colborn, et al, “Our Stolen Future,” Easton, pp. 162-164 Video: Love Canal

First Writing Assignment, Due see date on Canvas

Week 5 Discussion
Quiz 5

Environmental Health and Water Resources

Week 6 Water Pollution and Env. Health

Palmer, et al, "Restoring Rivers," Easton, pp 113-117

Video: Tapped, concerns issues with bottled water

Week 6 Discussion Quiz 6

Week 7 Chemical and Manufacturing Industries: Can They Ever be Green?

Chemical and Manufacturing Ind.

McDonough, "Cradle-to-cradle design: creating healthy emissions - a strategy for eco-effective product and system design," (Canvas)

Video: The Next Industrial Revolution (Cradle to Cradle)

Week 7 Discussion

Quiz 7

Week 8 Review this week as posted and Midterm Exam designated on Canvas

(Midterm date: Fri, Sat, Oct 26, 27 2024 your choice, see Canvas)

Week 9 Energy Policy and Global Impacts

Lecture Energy

Lovins, "From 'More Profit with less Carbon'" Easton, pp. 65-69

Flavin and Dunn, "Reinventing the Energy System," Easton, pp. 70-75

Video: The Big Energy Gamble (California State experience) (PBS)

Week 9 Discussion

Quiz 9

- Last day to withdraw Nov 13, 2024 (always check registrar's academic calendar).

Climate Change and International Agreements

Week 10 Climate Change

The Intergovernmental Panel on Climate Change, "Climate Change 2007," Easton, pp. 127-135

Video: Global Warming (PBS)

Week 10 Discussion

Quiz 10

Population Growth

Week 11 Population

Ehrlich, "The Population Explosion...," Easton, pp. 183-188

Cohen, "How Many People Can the Earth Support," Easton, pp. 193-196

Video: World in Balance

Week 11 Discussion

Quiz 11

Second Writing Assignment, see Canvas due date

Sustainable Development

Week 12 Sustainability

World Commission on Environment and Development, "Our Common Future," Easton, pp. 198-202

Annon GEO 3 Report (Canvas)

Week 12 Discussion

Quiz 12

Week 13 Food

Berry, "The Unsettling of America: Culture and Agriculture," Easton, pp. 137-140

Brown, "Food Scarcity: An Environmental Wake-Up Call," Easton, pp. 141-145

Video: Food Inc.

Week 13 Discussion Quiz 11

Biodiversity, Biotechnology and Species Conservation

Week 14 Biodiversity

Wilson, "The Current State of Biological Diversity," Easton, pp. 86-90

Shiva, "Women's Indigenous Knowledge and Biodiversity Cons.," Text., pp. 209-212

Vandermeer, "Rethinking Rain Forest: Biodiversity and Social Justice," Easton, pp. 95-101

Video: Crash: A Tale of Two Species

Week 14 Discussion

Quiz 14

Week 15 Exam Review Final on-line Sat 12/14- Su 12/15 2024

Final Exam will be held on-line as shown on Canvas.

VII. Resources for NJIT Online Students

IST Service Desk: IST Service Desk is the central hub for computing information and first point of contact for getting help and reporting issues related to computing technology at NJIT. Students can put in a ticket with the service desk: <https://servicedesk.njit.edu/CherwellPortal/IST> or call (973) 596-2900
Monday - Friday from 8:00am - 9:00pm

Academic Advising Success Center: "...assist in the advisement of students who are undecided in their major, transitioning into another major at NJIT, and those students who need additional support to graduate successfully and in a timely manner."

Academic Integrity: "New Jersey Institute of Technology is an institution dedicated to the pursuit of knowledge through teaching and research. The university expects that its graduates will assume positions of leadership within their professions and communities. Within this context, the university strives to develop and maintain a high level of ethics and honesty among all members of its community. Imperative to this goal is the commitment to truth and academic integrity. This commitment is confirmed in this NJIT University Code on Academic Integrity."

Academic Support and Student Affairs: "From questions about becoming a student at NJIT - to student engagement - to searching for information on career development, the Division of Academic Support and Student Affairs Staff is here to help."

Additional Tutoring Centers: [Math Learning Center](#); [Chemistry Learning Center](#); [The Writing Center](#); [ECE Study Groups](#)

Bookstore: "Show your New Jersey Institute Of Technology pride all year long with our authentic assortment of New Jersey Institute Of Technology collegiate apparel...Plus, our selection of [textbooks](#), [computers](#), and [supplies](#) will ensure every New Jersey Institute Of Technology student is prepared for success."

Center for Counseling and Psychological Services: "The NJIT Center for Counseling and Psychological Services (C-CAPS) is committed to assisting students in the achievement of their academic goals as well as benefiting from their personal experience on campus. College life can be personally challenging and stressful at times. We believe that the educational process is an important component of the development of the individual as a whole person. Our goal is to optimize the college experience and

improve the quality of the lives of our students by promoting their mental health and facilitating students' personal, academic and professional growth.”

Disability Support Services: “The Disability Support Services office works in partnership with administrators, faculty and staff to provide reasonable accommodations and support services for students with disabilities that have provided our office with documentation to receive services.”

The Learning Center: “Our mission is to assist students both in the classroom and beyond by providing tutorial services, academic coaching, academic and personal enrichment workshops and staff and peer support so students can meet the demands of their coursework and are prepared for life after graduation.”

Canvas Help Page: Tutorials for students.

Robert W. Van Houten Library: “The Van Houten Library offers electronic and print resources essential to the mission of New Jersey's science and technology university, including a core collection of academic books, databases, and journals, as well as research and consultation services.”

Student Financial Aid Services: “Student Financial Aid Services (SFAS) at NJIT is committed to providing you with every opportunity to obtain funding to support your undergraduate educational costs at NJIT.”

NJIT Academic Calendar F 2024

Sept 2	Labor Day. University Closed
Sept 3	First Day of Classes
Sept 9	Last Day to Add/Drop a Class
Sept 9	Last Day for 100% Refund, Full or Partial Withdrawal
Sept 10	W Grades Posted for Course Withdrawals
Sept 16	Last Day for 90% Refund, Full or Partial Withdrawal - No Refund for Partial Withdrawal after this
Sept 30	Last Day for 50% Refund, Full Withdrawal
Oct 21	Last Day for 25% Refund, Full Withdrawal
Nov 11	Last Day to Withdraw from Classes
Nov 26	Thursday Classes Meet
Nov 27	Friday Classes Meet
Nov 28	Thanksgiving Recess Begins. No Classes
Dec 1	Thanksgiving Recess Ends
Dec 11	Last Day of Classes
Dec 12	Reading Day 1
Dec 13	Reading Day 2
Dec 14	Saturday Classes Meet
Dec 15	Final Exams Begin
Dec 21	Final Exams End