

Hunter College
Urban Water: Supply and Management
Spring 2021
Preliminary Syllabus January 14, 2021

Instructors: Allan Frei and Lily Baum Pollans

Class time and location: Thursdays, 1:10-4PM, Room 1028 North

Office hours:

Frei: TBD

Pollans: TBD

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Course Description:

Water is critical to human life. But it can also be a deadly threat. Cities, therefore, can only exist to the extent that they are able to successfully manage water. In this course students will learn about the history and technology of urban water supply systems from ancient times to present; critical concepts in the field of water management; as well as the historical evolution of problems and solutions of supplying water to cities and managing wastewater, including recent state of the art developments.

In addition, students will learn about the politics of water in the city. We will consider how infrastructure is provided and how decisions are made in different contexts. We will ask who urban water infrastructure serves well, and who is excluded, and who gets to participate in decision-making. In answering these questions, we will unveil the ways that water reflects and reproduces patterns of political and economic power in society.

The course will be run with a combination of lecture and seminar style activities, including student discussions and presentations.

Learning Outcomes:

- Students will be able to describe different stages in the history of urban water supply.
- Students will be able to describe critical concepts related to urban water systems.
- Students will be able to describe the historical evolution, and current state-of-the-art, of the problems and solutions of managing water in cities.
- Students will be able to critically analyze water systems for evidence of social power relations by exploring questions about who makes decisions, who is well-served, and who is excluded.

Required Texts:

- Sedlak, David. 2014. *Water 4.0: The Past, Present and Future of the World's Most Vital Resource* (New Haven: Yale University Press)
- All other materials will be available on line or provided through blackboard

Course Format:

The course will be online and synchronous. Most sessions will consist of three components: two lectures and a breakout group activity.

Assignments and Evaluation

Weekly reading reflection assignments

Thematic Water Supply presentations

Students will work in small groups make presentations to the class about topical issues.

Independent Research Project

Students will work individually to write final papers, and make presentations to the class, about topical issues.

Midterm Exam

This course will include a mid-term exam.

Participation

Students are expected to participate in class presentations and discussions, as well as in break-out group exercises.

COURSE POLICIES

Deadlines:

Late assignments are not accepted.

University Policies:

Academic honesty: Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. I may conduct internet searches or use plagiarism detection services such as Turnitin.com to assess your work.

ADA policy statement: In compliance with the ADA and with Section 504 of the Rehabilitation Act, Hunter is committed to ensuring educational access and accommodations for all its registered students. Hunter College's students with disabilities and medical conditions are encouraged to register with the Office of AccessABILITY for assistance and accommodation. For information and appointments contact the Office of AccessABILITY located in Room E1214B, or call 212-772-4857, or e-mail AccessABILITY@hunter.cuny.edu.

Hunter College Policy on Sexual Misconduct: "In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

- a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).
- b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: <http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>?

THIS SCHEDULE IS TENTATIVE, SUBJECT TO CHANGE AS THE SEMESTER PROGRESSES

1:	Intro & course overview	<p>Lecture a. Intro to Climate and Hydrology for Urban Water Supply Systems</p> <p>Lecture b. Intro to Water Values & Hydropolitics</p> <p>Breakout Group Activity: (1) Meet and greet each other; (2) experiments with water balance spreadsheet for an urban water supply system,</p>
2:	Water 1.0 Water Supply Source and Conveyance	<p>Lecture a. Water supply conveyance technology from ancient to present times.</p> <p>Lecture b: Water as purity, and cleanliness as class: and the roots of water's role in environmental injustice in the West</p> <p>Breakout group activity. ancient water supply systems presentations</p>
3:	Water 2.0: water supply treatment	<p>Lecture a: The Hydrosocial Cycle</p> <p>Lecture b: Source Regions for Modern Urban Water Supply Systems</p> <p>Breakout Activity: evaporative losses from an open conveyance systems</p>
4:	Water 2.0 cont'd	<p>Lecture a. Drinking water treatment technology for urban water supply systems</p> <p>Lecture b: Introduction of governance, market failure, and collective governance paradigms</p> <p>Breakout group activity: discuss <i>international</i> cases of water supply management in middle- and low-income country contexts</p>
5:	Water 3.0 Waste Water Treatment	<p>Lecture a. Waste Water Treatment Technology for urban water supply systems</p> <p>Lecture b: Evolution of regulatory frameworks in US</p> <p>Breakout Group: Home water testing</p>
6:	Water 3.0 Global focus	<p>Lecture a: Sustainability, Agenda 21, international efforts to improve water quality</p> <p>Lecture b. Transboundary Conflicts</p> <p>Breakout Group: Article Reviews</p>
7-	Midterm Review & Values and Paradigms	<p>Midterm Review and Movie Discussion</p> <p>Lecture: Values and Paradigms</p>
8-	(Midterm week)	Lectures: New York City Water Supply System History

Part 2 of this course: Contemporary issues & solutions in urban water management. Each student will present once during weeks 9, 10, or 11; and present their final project in week 13 or 14			
9-	Water Quantity and Climate Change: Water in the American West		Student Presentations
10-	Water Quality: The American Drinking Water Crisis		Student Presentations
11-	Storm and wastewater in the urban environment		Student Presentations
12-	Water 4.0: Water Security and Resilience		Group discussion and individual student meetings about final projects
13-	Water 4.0 Cont'd		Student Presentations
14-	Synthesis / wrap up		Student Presentations
Finals Week	Synthesis / wrap up		