

ENVIRONMENTAL MANAGEMENT I (ENVR E-101)

FALL 2015

Course Description: This course surveys the scientific principles of environmental issues and environmental management practices, with attention to the health of both humans and the ecosystem. Fundamental and emerging topics related to air and water pollution, water use and management, aquatic ecosystems, energy and climate change, biodiversity, toxic substances in the environment, solid waste management, and regulatory strategies for risk assessment and environmental management are examined. A local aquatic field trip is planned on a weekend in the fall with alternatives provided for distance students. Other optional site visits are scheduled throughout the semester. (4 credits)

Pre-Requisites: High school biology and chemistry

Meeting Time: Wednesdays
7:40 pm – 9:40 pm (EST)

Location: The course is offered on campus (location Maxwell-Dworkin G115) with live streamed lectures that are filmed and posted online within 48 hours. A live chat room is active and monitored during each class with follow-up discussion occurring during the week.

Faculty: **John D. Spengler, PhD**
Akira Yamaguchi Professor of Environmental Health and Human Habitation
Harvard T. H. Chan School of Public Health
Director
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Office Hours: By appointment

TAs: TAs will be introduced at the first class meeting. All students will be assigned a TA except for auditors.

Erika Eitland – ere419@mail.harvard.edu
Peter Zevitas - pzevitas@fas.harvard.edu
Piers MacNaughton - pom422@mail.harvard.edu
Skye Flanigan – Flanigan@hsph.harvard.edu
Susan Calahan - scahalan@g.harvard.edu

Guest Speakers: **John Mandyck**
Chief Sustainability Officer
United Technologies Building & Industrial Systems

Rachel Gutter
Senior Vice President, Knowledge
U.S. Green Building Council
Director, Center for Green Schools at U.S. Green Building Council

James Shine
Senior Lecturer on Aquatic Chemistry
Harvard T. H. Chan School of Public Health.

Mark Leighton
Senior Advisor, Sustainability
Harvard Extension School

Ramon Sanchez
Director, Corporate Outreach and Strategy
Center for Health and the Global Environment
Harvard T. H. Chan School of Public Health

Bill Denman
Chief, Restoration & Sustainability Section
U.S. EPA

Joe Hunt
Visiting Professor in Landscape Architecture
Harvard University Graduate School of Design

Clark C. Abt
Founder
Abt Associates

Text: Botkin, Daniel B., and Edward A. Keller. *Environmental Science: Earth as a Living Planet, 9th Edition*. New York: Wiley, 2014.
e-text: ISBN: 978-1-118-80187-1
print: ISBN: 978-1-118-42732-3

Supplementary Text: Turabian, Kate L. *A Manual for Writers of Research Papers, Theses, and Dissertations: Chicago Style for Students and Researchers*. Chicago: U of Chicago, 2007. Print.

Course Website: All course materials, schedules, assignments, and grades will be available through the course website: <https://canvas.harvard.edu/courses/4345>
Announcements will be made through the website; please set your notification preferences to ensure you receive announcements.

Assignments: Weekly Readings
Chapter readings from the textbook are posted on the syllabus (subject to change). Additional readings will be posted based on current events, class discussions and case studies.

Class Participation
Participation in class discussions (in-person and via the chatroom) and discussion boards is a critical component of the learning experience. Students are expected to attend every class (in-person or via the web), contribute to discussion board conversations, read all assigned materials, and be prepared to ask questions and discuss the material.

Your grade in E101 will be determined by performance on assignments over the course of the semester:

- 3 writing assignments (20 points each)
- Discussion board participation (15 points)
- 1 final exam written assignment (25 points)

Details on the assignments, due dates, and contribution to your final grade are provided in a separate document to enrolled students.

Course Syllabus for ENVR E-101, Fall 2015
(as of September, 2015; subject to change)

Date	Topic	Faculty	Readings
9/2	Course Introduction Current environmental work (faculty) Who is in class? (students) “Framing of Environmental Risks”	J. Spengler J. Allen G. Buckley	Ch 1,2
9/9	“Environmental Health and Environmental Toxicology” <i>Case Study: PCBs in Schools</i>	J. Allen	Ch 8
9/16	“Case Studies on Coastal Management”	G. Buckley	TBD
9/23	“The Indoor Environment” <i>Case Study: Flame Retardant Chemicals and Health</i>	J. Allen	“Green Buildings & Health”
9/29	ASSIGNMENT 1 DUE – Indoor Environmental Quality		
9/30	“Atmospheric Air Pollution and Climate Change”	J. Spengler	Ch 5, 20
10/7	“Air Pollution and Health”	J. Spengler	Ch 21
10/14	“Water Resources” “Solid Waste and Materials Management”	G. Buckley	Ch 18, 23
10/20	ASSIGNMENT 2 DUE – Air Quality and Toxic Release		
10/21	“Environmental Etymology: A New Vocabulary for the Movement”	R. Gutter	TBD
10/28	“Water and Health” <i>Case Study: West Virginia Drinking Water Incident</i>	J. Shine	Ch 19
11/4	“Ecology and Land Management”	M. Leighton G. Buckley	Ch 6, 10
11/11	“Food Foolish – The Hidden Connection Between Food Waste, Hunger and Climate Change”	J. Mandyck	“Food Foolish” Chapters TBD
11/17	ASSIGNMENT 3 DUE – Water, Bays and Fisheries		
11/18	“Energy and Environmental Impacts”	R. Sanchez	Ch 14, 15
11/25	No Class		
12/2	“Environmental Law and Environmental Justice” <i>Case Study: Superfund Redevelopment and Sustainability</i>	B. Denman	Ch 24
12/3	Final Exam Question Released		
12/9	“International Environmental Issues”	J. Hunt C. Abt	TBD
12/16	<i>Special Topic: The Environmental Impacts of Hydraulic Fracturing</i> Wrap-up	J. Shine G. Buckley	
12/17	FINAL EXAM DUE		