

## BIOL 4803 Biological Basis of Public Healtl Spring 2015

## **Class Schedule**

Day	Date	#	Topic	Homework (readings to be completed before next class)	Speaker(s)
M	Jan 5	1	Introduction of Course  Lecture: Basic Concepts of Public Health	Chapter 1 Introduction: The Environment at Risk (for lectures 1-5)	Houlroyd Snell
W	Jan 7	2	Lecture: History of Public Health  Discussion: Reading from William Carlos Williams		Houlroyd
F	Jan 9	3	Lecture: Putting the determinants of Public Health in the context of Biology  Discussion: Context of education in biology with exposure to public health		Houlroyd
M	Jan 12	4	Lecture: Principle determinants of Environmental Health		Houlroyd
W	Jan 14	5	<b>Lecture:</b> Introduction to Environmental Health <b>Discussion</b> : The three P's: Pollution, Poverty, and  Population	Chapter 2- Environmental Epidemiology	Houlroyd
F	Jan 16	6	Lecture: Environmental Epidemiology as a method to assess environmental-human impacts and interactions Brackbill, R. M., Cone, J. E., Farfel, M. R., & Stellman, S. D. (2014). Chronic physical health consequences of being injured during the terrorist attacks on World Trade Center on September 11, 2001. American journal of epidemiology, kwu022. (available on the Columbia.edu website for free)	Brackbill, et al paper	Houlroyd
М	Jan 19		No class - MLK day		Houlroyd
W	Jan 21	7	Lecture: Epidemiological Studies: Analyzing data Health Hazard Evaluation of Deepwater Horizon Response Workers http://www.cdc.gov/niosh/hhe/reports/pdfs/2010 -0115-0129-3138.pdf	Health Hazard paper	Houlroyd

F	Jan 23	8	Discussion and Analysis: The Gulf Long-term		Houlroyd
			Follow-up Study and the World Trade Center		
			Health Programs as examples of epidemiology in		
N /	Jan 26	9	practice.	Chantar 2	Snell
M	Jan 26	9	Lecture: Principles of Exposure, Dose, and	Chapter 3 – Environmental	Sheii
			Response		
				Toxicology	
W	Jan 28	10	Lecture: Environmental Toxicology Continued	u	Snell
F	Jan 30	11	Lecture: Environmental Toxicology Continued	u	Snell
M	Feb 2	12	Lecture: Public Health Policy and Regulation	Chapter 4-	Houlroyd
			,	Environmental Policy	,
				and Regulation	
W	Feb 4	13	Lecture: Environmental Health Economics and	u	Houlroyd
			Policy		
F	Feb 6	14	TEST 1	Chapters 1-4	-
M	Feb 9	15	Lecture: Toxicity of metals and elements	Chapter 6- Toxic	Snell
				Metals and Elements	
W	Feb 11	16	Lecture: Toxicity of metals continued	и	Snell
F	Feb 13	17	Lecture: The Biology of Environmental Disease	Chapter 5 – Vector	Snell
				borne disease	
				Hatting excerpt from	
				the 1878 Report of the	
				Board of Health of the	
				State of New Jersey	
M	Feb 16	18	Lecture: Heavy Metals and Mad Hatters	Bernhardt, J. M.	Houlroyd
			,	(2004).	,
				Communication at the	
				core of effective public	
				health. American	
				Journal of Public Health, 94(12), 2051.	
				11caitii, 5 <del>4</del> (12), 2031.	

W	Feb 18	19	Lecture: Public Health Administration: Health Communication and informatics- Turning Science into Clear and Concise Messages for the Community	Shonkoff, J. P., Boyce, W. T., & McEwen, B. S. (2009). Neuroscience, molecular biology, and the childhood roots of health disparities: building a new framework for health promotion and disease prevention. Jama, 301(21), 2252-2259.	Houlroyd
F	Feb 20	20	<b>Lecture:</b> How biology intersects the field of behavioral health	Recommended, but not required reading: The Immortal Life of Henrietta Lacks by Rececca Skloot	Houlroyd
M	Feb 23	21	Lecture and Discussion: How Behavior Alters Human Biology	Callaway, E. (2013). Deal done over HeLa cell line. Nature, 500(7461), 132-133.	Houlroyd
W	Feb 25	22	<b>Lecture:</b> Public Health Ethics- The Critical Role of Biology in the Ethical Debate	Hudson, K. L., & Collins, F. S. (2013). Biospecimen policy: Family matters. Nature, 500(7461), 141-142.	Houlroyd
F	Feb 27	23	Lecture: Technology and Public Health Practice- Ethical and legal ramifications	Bobrow, M. (2013). Balancing privacy with public benefit. Nature, 500(7461), 123.	Houlroyd
М	March 2	24	Lecture and Discussion: The Immortal Life of Henrietta Lacks and her impact on public health practice		Houlroyd
W	March 4	25	<b>Lecture:</b> A clean environment – the basis for public health		Snell
F	March 6	26	Lecture: Pesticides and the impact on the environment	Chapter 7 –Pesticides and organic chemicals	Snell

М	March 9	27	Lecture: Pesticides continued	ll l	Snell
W	March 11	28	Lecture: Water Quality and Pollution	Chapter 9 – Water Quality	Snell
F	March 13	29	Lecture: Water Quality continued	"	Snell
М	March 16		No class - Spring Break		
W	March 18		Spring Break		
F	March 20		Spring Break		
M	March 23	30	Lecture: Air Quality and Pollution	Chapter 10 – Air quality	Snell
W	March 25	31	Lecture: Air Quality continued	и	Snell
F	March 27	32	TEST 2	Chapters 5,6,7,9,10	-
M	March 30	33	Lecture: Food Safety and Security	Chapter 11 – Food safety	Snell
W	April 1	34	<b>Lecture:</b> Population - The ultimate environmental health issue		Snell
F	April 3	35	Lecture: Risk Assessment and Management	Paper: Ecol risk assessment - European rivers	Snell
M	April 6	36	Lecture: Risk Assessment and Management Continued	п	Snell

W	April 8	37	Lecture: Municipal, Industrial, and Hazardous Waste	Chapter 12- Solid and Liquid Wastes  Goodman, M., LaKind, J. S., Fagliano, J. A., Lash, T. L., Wiemels, J. L., Winn, D. M., & Mattison, D. R. (2014). Cancer Cluster Investigations: Review of the Past and Proposals for the Future. International journal of environmental research and public health, 11(2), 1479-1499.	Houlroyd
F	April 10	38	<b>Discussion:</b> Ciba Geigy and Childhood Cancer	Chapter 13- Occupational Health	Houlroyd
M	April 13	39	Lecture: Occupational Health	Research the biological mechanism of chemical exposure to benzene and trichloroethylene for semiconductor workers.	Houlroyd
W	April 15	40	Lecture: Global Health Issues	Read: http://www.businessw eek.com/articles/2014 -04-10/deaths-at- samsung-alter-south- koreas-corporate-is- king-mindset	
F	April 17	41	<b>Lecture:</b> The biology of Technology: Cell Phones, Chemical Exposures, and Suicide		Houlroyd
M	April 20	42	Project Presentations		
W	April 22	43	Project Presentations		
F	April 24	44	Review		Houlroyd Snell