

NATS 1510 – History of the Environment

This course looks at the history of human impact on the environment through the lens of technology and science. It is posited that technology has magnified our impact on the environment, both in scale and in scope (e.g. the magnitude of impact and new kinds of impacts – e.g. new technologies). On one end of the spectrum, science has contributed to creating new materials (e.g. plastic) that are harmful to the environment, but science is also our primary tool to determine how we are damaging the environment, and possibly how to fix it. Thus science and technology both hinder and help the environment. We will look closely at the claim that the tendency of science and technology to be appropriated by business and government undermines the ability of environmentalists to enact positive change. The course will consider examples of human interaction with the environment (so-called anthropogenic impacts) from the earliest of human civilizations to present day.

Course Instructor

Dr. Ian Slater, slater@yorku.ca

Lecture: M,W 10:30-1:30, VH B

Office Hours: TBA, RM 311 Norman Bethune College

Required Texts

Online

Notes on Submission of Materials and Deadlines

A. If you have question about the course, or an assignment to submit, please do so in class where possible, not by phone or email. I will respond to emails, however, it may take some time, so in person is better.

B. Note: if you know you will be missing many classes, please do not register in this course.

C. All assignments must be submitted through Moodle.

Evaluation

1. Reading Summary and Critique (5 pages): 15% - Due May 15
2. Annotated Bibliography (5 pages): 15% - Due May 24
3. Essay (5-8 pages): 30% - Due June 12
4. Final Exam: 40% - TBA

1. The reading summary and critique involves picking one of three readings (Martin, Kirsch or Ogden), summarizing it then critiquing it. 5 pages.

2. The annotated bibliography involves taking one of the three topics assigned and finding sources relating to that topic and summarizing them.

3. The essay is a position paper on the topic you have researched, it should summarize the issue and your position on it.

4. The final exam is cumulative.

Essay Topics NATS 1510 (Pick one of three)

1. Huesemann and Huesemann argue for a complex set of conditions needed to make technology environmentally responsible, identify a current “green” technology and see if it stands up to Huesemann’s critique.
2. Jackson argues that the development of scientific models and testing technologies for chemical pollutants such as chlorinated compounds was crucial to their detection and removal from the environment. Find a modern environmental controversy where models and testing technologies are contested, and discuss how that impacts the debate.
3. Josephson argues that technologies like the small bore internal combustion engine are a great risk to the environment as they bring airborne pollution to environmentally pristine areas through their use in recreational vehicles. Evaluate this argument using any recreational vehicle technology as an example.

Lecture Schedule

May 1

– Introductory Lecture

May 3 -

–Neil Evernden, *The Natural Alien*, University of Toronto Press, 1985, Chapter 1

May 8 -

- Paul S. Martin, *Twilight of the Mammoths: Ice Age Extinctions and the Rewilding of America*, University of California Press, 2005, Prologue and Chapter 2

- James Maclelland and Harold Dorn, *Science and Technology in World History*, Johns Hopkins University Press, 1999, Chapter 3

May 10 –

- Edmund Newell, *Atmospheric Pollution and the British Copper Industry, 1690-1920*, *Technology and Culture*, Vol. 38, No. 3 (Jul., 1997), pp. 655-689

May 15 –

- David F. Noble, *America By Design: Science, Technology and the Rise of Corporate Capitalism*, Oxford University Press, 1977, Chapter 1

May 17

- Ann Norton Greene, *Horses at Work: Harnessing Power in Industrial America*, Chapter 5

- David A Kirsch, *The Electric Vehicle and the Burden of History*, Rutgers University Press, 2000, Chapter 6, *The Burden of History: Expectations Past and Imperfect*, pp 195-208

May 22 - Holiday

May 24 –

- Robert Post, *Urban Mass-Transit: The Life Story of a Technology*, John Hopkins University Press, 2010

May 29 -

- Laura A Ogden, *Swamplife: People, Gators, and Mangroves Entangled in the Everglades*, University of Minnesota Press, 2011, Chapter 6 – Alligator Conservation, Commodities, and Tactics of Subversion

May 31-

- Paul R. Josephson, *Motorized Obsessions: Life, Liberty, and the Small-Bore Engine* – Chapter 2

June 5-

- Steven Michael Cohn, *Too Cheap To Meter, An Economic and Philosophical Analysis of the Nuclear Dream*, Chapter 6, *The Disestablishment of Nuclear Power as an Official Technology*.

June 7 –

- Richard E. Jackson, *Recognizing Emerging Environmental Problems: The Case of Chlorinated Solvents in Groundwater*, *Technology and Culture*, Vol. 45, No. 1 (Jan., 2004), pp. 55-79

- Pimentel Et Al, *Assessment of Environmental and Economic Impacts of Pesticide Use*, in Laura Westra and Kristin Shrader-Frechette, *Technology and Values*, Rowman and Littlefield, 1997

June 12

- Michael Huesemann and Joyce Huesemann, *Techno-Fix: Why Technology Won't Save Us or the Environment*, New Society Publishers, 2011, Chapter 6 - Sustainability or Collapse

- Exam Review