

Academic Year: (2022 / 2023)

Review date: 17-05-2022

Department assigned to the subject: Social Sciences Department

Coordinating teacher: TRAVIESO BARRIOS, EMILIANO

Type: Courses of humanities ECTS Credits : 3.0

Year : Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

This course is aimed at students of diverse disciplinary backgrounds, so there are no specific requirements. A familiarity with university-level work is assumed, including critical reading of academic literature, evidence-based debate, and basic rules regarding ethics in study and research.

OBJECTIVES

This introductory course offers a long-term view of the interactions between human societies and their natural environment in order to better understand sustainable development challenges in the present.

Throughout the course, students will learn to:

- Identify the deeper historical roots of contemporary environmental crises.
- Use environmental concepts and indicators to measure and discuss human impacts on nature through time.
- Understand when and how some crucial historical developments (such as the Neolithic agricultural revolution, European imperial expansion, or the Industrial Revolution) fundamentally transformed the interactions between human societies and the environment.
- Broaden their intellectual outlook and appreciation for diverse scholarly disciplines.

This course will help students to develop the following skills:

- Evidence-based argumentation in the context of written and oral communication.
- Critical thinking, including the capacity to think historically, situating events and developments in their context.
- Teamwork in problem-solving and discussion.
- Analysing complex quantitative data visualizations (graphs, maps, and diagrams).
- Interpreting environmental indicators (e.g. carbon footprint, embodied land, energy balance).

DESCRIPTION OF CONTENTS: PROGRAMME

Our current ecological challenges, including climate change, have anthropogenic bases (that is, are largely caused by human societies) and thus are rooted in environmental history. Part I of this introductory course present an overview of the signal developments that reshaped the interaction between societies and their environment in historical perspective, from the Neolithic revolution to our own days. Part II discusses the range, quality, and limitations of historical environmental data and considers how the (re)construction of historical evidence conditions present-day debates about environmental sustainability.

Part I: from the Neolithic revolution to 'late industrialization'

1. Introduction. Basic concepts: environmental history, global environmental change, Anthropocene.
2. How it all began: the Neolithic agricultural revolution (c.10,000 BCE). Living standards and economic activity in hunter-gatherer and early farming communities. Ruddiman's hypothesis: a prehistoric Anthropocene.
3. Pre-industrial societies and their 'organic economies'. Malthusian trap, living standards, and energy sources.
4. European 'ecologic imperialism' in the early modern period. Conquest of the Americas: environmental causes and consequences.
5. The Industrial Revolution and the transition to fossil fuels in the 19thC.
- 6 The 'great acceleration' in the 20thC: an urban world.
7. 'Late industrialization' and environmental change in Asia, Africa and Latin America since 1950.

Part II: data and debates in environmental history

8. Historical environmental data (1): climate change. The 'Little Ice Age' (15thC-18thC) and global

warming since industrialization (19thC-21stC).

9. Historical environmental data (2): land use change. Diets and global agri-food systems.

10. Historical environmental data (3): use of materials. Resource extraction and economic growth in the long-run.

11. Sustainability and economic growth. The Environmental Kuznets Curve versus planetary limits.

12. Epilogue. The future of environmental change. The economic valuation of nature and intergenerational justice.

LEARNING ACTIVITIES AND METHODOLOGY

Learning activities are composed of in-person classes and autonomous student work. Students will learn the course content through interaction with the lecturer and with each other in the weekly classes, as well as through their independent work. Classes will include both lecturing and collective discussions, with active student participation. Skills and abilities will be developed through individual and collective student work.

Students will be encouraged to ask questions during weekly office hours.

Learning activities will include:

- Independent reading: one article or chapter will be assigned every week, to be read before class.
- Analysis and interpretation of environmental data: individual and group work with quantitative databases (see "electronic resources").
- Taking part in group discussions during class and/or in the online course forum.
- Writing an essay (individually or in small groups) in answer to a question about environmental sustainability in historical perspective, based on the reflection of the course content and suggested readings. The lecturer will offer guidance on the essay during class and during the weekly office hours.

ASSESSMENT SYSTEM

The final exam is worth 50% of the total grade. It could take the form of a take-home essay. Continuous assessment tasks account for the remaining 50% of the total grade. These include weekly reading quizzes, regular class participation, and a midterm test.

Assessment components (% of final grade):

- Class participation and weekly reading quizzes (15%)
- Midterm test (35 %)
- Final exam (50%)

% end-of-term-examination: 50

% of continuous assessment (assignments, laboratory, practicals...): 50

BASIC BIBLIOGRAPHY

- McNeill, J. R. *Something New Under the Sun: An Environmental History of the Twentieth-Century World*, WW Norton & Company, 2001
- Ruddiman, W. F. *Plows, Plagues, and Petroleum: How Humans Took Control of Climate*, Princeton University Press, 2010
- Smil, V. *Harvesting the Biosphere: What We Have Taken From Nature*, MIT Press, 2013

ADDITIONAL BIBLIOGRAPHY

- A. Kander, P. Malanima, & P. Warde *Power to the People: Energy in Europe Over the Last Five Centuries*, Princeton University Press, 2013
- Austin, G. (ed.) *Economic development and environmental history in the Anthropocene: perspectives on Asia and Africa*, Bloomsbury, 2017
- Carson, R. *Silent Spring*, Houghton Mifflin, 2002
- Crosby, A. W. *The Columbian Exchange: Biological and Cultural Consequences of 1492*, Praeger, 2003
- Crosby, A. W. *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, Cambridge University Press, 2004
- Diamond, J. *Collapse: How Societies Choose to Fail or Succeed*, Penguin, 2011
- Diamond, J. *Guns, Germs and Steel. A Short History of Everybody for the Last 13,000 Years*, Vintage, 1999
- Lomborg, B. *Cool it: The skeptical environmentalist's guide to global warming*, Vintage, 2010
- Maslin, M. *Global warming: a very short introduction*, Oxford University Press, 2008
- McNeill, J. R. *Energy, population, and environmental change since 1750: entering the Anthropocene*, In J. R. McNeill & K. Pomeranz (Eds.), *The Cambridge World History. Volume VII, Part 1*. Cambridge:

Cambridge University Press, pp. 51-82., 2015

- McNeill, J. R., & Engelke, P. The Great Acceleration, Belknap Press, 2014
- Nordhaus, W. D. The Spirit of Green, Princeton University Press, 2021
- O'Neill, J. Ecology, policy and politics: Human well-being and the natural world, Routledge, 2002
- Ross, M. L. The Oil Curse: How Petroleum Wealth Shapes the Development of Nations, Princeton University Press, 2012
- Smil, V. Energy: A Beginner's Guide, Oxford University Press, 2006
- Wrigley, E. A. Energy and the English Industrial Revolution, Cambridge: Cambridge University Press, 2010

BASIC ELECTRONIC RESOURCES

- FAO . Global Agro-Ecological Zones: <https://gaez.fao.org/>
- Global Carbon Project . Global Carbon Atlas: <http://www.globalcarbonatlas.org>
- O'Neill, D.W., Fanning, A.L., Lamb, W.F., and Steinberger, J.K. . A Good Life For All Within Planetary Boundaries: <https://goodlife.leeds.ac.uk/>