

## Course description

### Technology, science and environment in history (Interdisciplinary history)

#### 1. Course name, ECTS, quarter/semester, contact hours

Technology, science and environment in history (Interdisciplinary history), 4 ECTS, 56 contact hours

#### 2. Author of the course\*

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#### 3. Outline

The aim of this core course is two-fold: to introduce students to methodologies of interdisciplinary history on the basis of technological and environmental history and to show the advantages and contradictions in emerging of interdisciplinarity as one of the main tendencies in development of science.

Technological and environmental histories are now occupying a significant place among the leading and most rapidly developing subfields of history because of their relevance to a large number of hot contemporary debates, be it a new economy based on innovations, a new division of labor, problems of energy supply, food security or climate change among others.

The environmental history, on the one hand, is 'by its very nature an interdisciplinary pursuit – and should become still more so' (John McNeill). Environmental historians are well-placed to serve the interests of the historical profession but making a bridge between humanities and natural sciences. On the other hand environmental history is becoming the important component of applied (and public) history (Carruthers, Robin).

Learning methodology and gaining basic understanding of historiography of these two subfields in their close connection with the history of science is crucially important for students who prepared themselves either to academic career in interdisciplinary history or to doing applied research and practical work with heritage because the essential part of heritage has industrial / technological and / or natural components. Most of cultural heritage are a part of dynamically growing human-built world defined by technology, on the one hand, while on the other hand, are imbedded into natural landscapes or have natural components.

The course is thematically based and focused on how ecological and technological aspects intertwined and shaped with each other and with the science. The course examines in historical perspective such key concepts as "nature", "environment", "landscape", "river", "ocean", "city", "infrastructure" and etc.

#### 4. Structure and content

The course is seminar based and includes the following main sections:

- Topic 1. Ways of knowing as an overall approach in understanding development of science, technology and medicine (John Pickstone).
- Topic 2. Building of scientific disciplines and emergence of interdisciplinarity. Searching for common language. Advantages and obstacles of interdisciplinarity. Experts networks in the making.
- Topic 3. History and contemporary thematic fields and approaches in technological and environmental history.
- Topic 4. Technological and industrial development. History of infrastructures and human-built world.
- Topic 5. Nature, environment, and society: interactions and entanglements in history. History of resources and their use, history of the commons. Rivers, cities, agro- and technoscapes and other objects of studies by 'envirotech' approach.
- Topic 6. Industrial, technological and natural heritages: practices of studies and policy.

#### Recommended literature:

1. Bijker, W. and Law, J. (eds.). *Shaping Technology/Building Society*. Cambridge, Mass., 1992.
2. Emmett, R. and Zelko, F. *Minding the Gap: Working Across Disciplines in Environmental Studies// RCC Perspectives*, no. 2, 2014.
3. Fagan, B. *Elixir: A History of Water and Humankind*. Bloomsbury, 2011.
4. Hughes, T. *Networks of Power: Electrification in Western Society, 1880-1930*. Baltimore, 1983.
5. McNiell, J. and Roe, A. (eds.) *Global Environmental History: An Introductory Reader (Rewriting Histories)*. New York, 2013.
6. McNiell, J. *Something New Under the Sun: An Environmental History of the Twentieth-Century World*. London, 2000.
7. Pickstone, J.V. *Ways of Knowing: A New History of Science, Technology and Medicine*. Chicago, 2000.
8. Rosner, L. (ed.). *The Technological Fix: How People Use Technology to Create and Solve Problems*. New York, 2004.
9. Schama, S. *Landscapes and Memory*. London, 1996.
10. Uekotter, F. *Turning Points in Environmental History*. Munich, 2010.
11. Vaughan, J. *Conflicts over Natural Resources: A Reference Handbook*. Santa-Barbara, 2007.
12. Vleuten, E. and Kaijser, A. (eds.). *Networking Europe: Transnational Infrastructures and the Shaping of Europe 1850–2000*. Mass., 2006.

5. **Prerequisites:** no special prerequisites except upper intermediate level of English language is required

#### 6. Assessment

Coursework 2000-word essays (40%):

Oral examination in a form of project presentation (30%)

Class participation mark (30%)