



Comprehensive Course Syllabus

History of Technology, Culture, and Society.

History of Technology, is a one semester senior elective which explores the origins, engines, and consequences of technological change. Using three case studies: the Medieval technological Revolution, The Ship, and The Fossil Fuel Engine, the class explores why innovation happens, how the technologies work, and how the innovations reach out into every facet of society, politics, and economics. Each case study is arranged around researching and constructing a model of the technology in question. Students write several short research papers on the origins and impact of the models being built. The summative project of the course is a team-researched and presented proposal for American energy policy for the 21st Century.

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Office Hours: B,C, D-Days. 4:15

Texts: Norman Cantor, *The Civilization of the Middle Ages*

William McNeill, *The Pursuit of Power*

Daniel Yergin, *The Prize*

Jan. 19-22 The Medieval Revolution, Cantor, 228-233, McNeill, 63-83.

Jan. 25-29 Research proposal development Film *Cathedral*

Feb.1-Feb 5 Medieval Technology Development (Proposal due Jan. Jan.27. (6 pages))

Feb.8 -Feb 11 Medieval Technology Development.

Feb.16-Feb.19 Medieval Technology Development (Presentation of Medieval Projects)

Feb. 22-Feb. 26 The Maritime Revolution Film: *Master and Commander*, Cantor 480-528.

Feb.29-March 4 Maritime Technology Development McNeill, 83-116

March 7-March 11 Maritime Technology Development

March 14- March 18 Maritime Technology Development (Rigging Quiz due)

Spring Break

March 28-April 1 (Ship Presentations) (Maritime Revolution paper (10 pages due)

April 4-April 8 The Fossil Fuel Revolution Film: *Credit Where it is Due*

April 11-April 15 Steam

April 18-April 22 Intro to Internal combustion engine (Internal Combustion Genealogy

Scavenger Hunt due) Racing film clips from *Seabiscuit* (2003), *Grand Prix* (1966), and *Rush*

(2013).

April 25-April 29 Building Cars, Yergin, *The Prize* 306-408

May 2-May 6. Car Presentations and The internal combustion engine today, Yergin, *The Prize*
306-408 (excerpts) (The Great Car paper (8 pages) due)

May 9-May 13 Energy Research

May 16-May 20 Energy Research

May 23-May 27 Energy Research

May 31-June 3 Presentation of Energy Plans. (10 page proposal and bibliographic essay)

Grading

Grades for History of Technology and Culture will be assessed on the basis of performance in four areas: Written work, quizzes, class participation (discussion and construction of the group projects), and performance in the four group presentations. You need not be a skilled model maker, carpenter, or engineer. You do need to try. The capacity to laugh at yourself will be equally esteemed. On the presentations, you need not be an orator. You do need to come to class prepared and speak clearly and knowledgably on your topic. Here again, the ability to laugh at yourself and with others is a valued trait.

SSLs and Outcomes: Paper #1

Medieval Technology Proposal

Analyze the importance of material forces of production, distribution, and consumption as forces in human affairs by exploring how changes in the means of production from handicraft to industry, transform other aspects of a given society [SSL-I.C, D, II.A, B, III.B, IV.A; IL-14.F.5; AHA-3.E, I.F] [SSL-I.C, D, II.A, B, IV.A, C, V.A, B; IL-15.D.5.B] Express both written and oral opinions clearly and elegantly and defend them with the use of primary evidence by writing papers that defend a given position or argument with the use of primary evidence [SSL-I.B, II.A, B, III.A, B, C, IV.B, V.B; IL-18.B.5; AHA-4.A, 4.B, 4.C, 4.B]

Research teams will develop proposals for constructing medieval technology models. Each should include History and importance of device, illustration and discussion of how device will be reconstructed. (6 pages)

Medieval Technology Oral Presentation

IV.A Express both written and oral opinions clearly and elegantly.

Research teams will give oral presentations explaining the operation and importance of their model for the rest of the class. Presentations will be assessed on the basis of accuracy, organization, clarity, and genuine collaboration between presenters.

Paper #2

Maritime Revolution Paper

Students studying history and social science at IMSA analyze the importance of material forces of production, distribution, and consumption as forces in human affairs by transforming other aspects of society. [SSL-I.C, D, II.A, B, III.B, IV.A; IL-14.F.5; AHA-3.E, I.F]; Students analyze the importance of material forces production, distribution, consumption as forces in human affairs by assessing the role of material considerations in determining diplomatic or military policy. [SSL-I.C, D, II.A, B, III.B, IV.A, V.B; IL-14.E.5] and express both written and oral opinions clearly and elegantly and defend them with the use of primary evidence by writing papers that defend a given position or argument with the use of primary evidence. [SSL-I.B, II.A, B, III.A, B, C, IV.B, V.B; IL-18.B.5; AHA-4.A, 4.B, 4.C, 4.B]

Students will identify what they believe to be the most important innovation of the Maritime Revolution and defend it with evidence and analysis. (10 pages)

Maritime Revolution Presentation

IV A. Writing and speaking with power economy and elegance

Research teams will give oral presentations explaining the operation and importance of their model for the rest of the class. Presentations will be assessed on the basis of accuracy, organization, clarity, and genuine collaboration between presenters.

Paper #3

The Great Car

Students studying history and social science at IMSA analyze the importance of material forces of production, distribution, and consumption as forces in human affairs by transforming other aspects of society. [SSL-I.C, D, II.A, B, III.B, IV.A; IL-14.F.5; AHA-3.E, I.F]

Students will identify which vehicle was the most important in the evolution of the automobile. The argument must include the technological, social, and economic impact of the vehicle. (8 pages)

Automotive History Presentation

IV A. Writing and speaking with power economy and elegance

Research teams will give oral presentations explaining the operation and importance of their model for the rest of the class. Presentations will be assessed on the basis of accuracy, organization, clarity, and genuine collaboration between presenters.

Group Energy Video, Powerpoint Presentation, or InfoTech Presentation

Students express both written and oral opinions clearly and elegantly and defend them with the use of primary evidence by writing papers that defend a given position or argument with the use of primary evidence. [SSL-I.B, II.A, B, III.A, B, C, IV.B, V.B; IL-18.B.5; AHA-4.A, 4.B, 4.C, 4.B] Students evaluate data and primary sources in both printed and electronic media by developing facility with the resources of a research library [SSL-I.C, D, III.A, IV.A; IL-17.A.5; AHA-2.E, 2.F, 2.G, 4.B, 4.C] and displaying the ability to use printed and electronic sources in their arguments while crediting those sources appropriately. [SSL- I.C, D, III.A, IV.A; IL-16.A.5.A; AHA-4.C] D. by:

Attendance: Attendance policy in this class is consistent with the school policy contained in your Student Handbook.

Late assignments: Late work will be marked down ½ grade each class period until it is submitted. Stress days do not relieve students of responsibility for submitting work. Electronic problems will not be accepted as an explanation for missing deadlines, so **PLEASE SAVE YOUR WORK!** Do not rely on your hard drive. Save another copy on a separate disk or the server.. Failure to submit a major assignment (paper or examination) before the end of the semester will result in a failing grade for that semester.

Academic Dishonesty:

There will always be the temptation to pass off other people's work as your own. All of your work should be your own. Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams in their book *The Craft of Research*, 2d ed. (Chicago: University of Chicago Press, 2003) explain:

“You plagiarize when, intentionally or not, you use someone else's words or ideas but fail to credit that person. . . . You plagiarize even when you do credit the source but use its exact words without using quotation marks or block indentation. . . . You [also] plagiarize when you paraphrase a source so closely that anyone putting your work next to it would see that you could not have written what you did without the source at your elbow.”

Claiming as your own the work of others, in whole *or in part*, will result in an immediate failure (here no credit) for the assignment and referral to Keith McInstosh for disciplinary action. See the IMSA Student Handbook for specific details and be sure to refer to the IMSA [Chicago Style](#) website for written assignments. Such activity can result in being dismissed from IMSA, so if you are in doubt, come see me. –adapted from Lee Eysturlid syllabus