

Department of Humanities and Social Sciences

Course Profile

Course Number : STS 303	Course Title: History of Science and Technology
Required / Elective : Required	Pre / Co-requisites : None
Catalog Description: Development of science and technology from Enlightenment to present. Industrial Revolution. Emergence of engineering. Interdependence of science and technology. Development of medical sciences and information technologies. Science and technology in the Ottoman Empire and Turkey in context of global developments.	Textbook/Required Material: R. A. Buchanan, <u>The Power of the Machine</u> (1992) Penguin. John Henry, <u>The Scientific Revolution and the Origins of Modern Science</u> (2008)Palgrave Macmillan.
Course Structure / Schedule : (3+0+0) 3 / 6 ECTS	
Extended Description : The history of science and technology (HST) is a field of history that examines how human understanding of the natural world (science) and the ability to manipulate it (technology) have changed over time. HST also studies the social, cultural, economic and political impacts of science and technology. This course is a broad general survey of the field, going back to the Enlightenment and, later, Industrial Revolution up until present-day information and communication technologies and biotechnologies, intimately join technology and science. The course also takes a look at possible futures--genetic engineering and cloning--and their implications for human nature.	
Design content : none	Computer usage: No particular computer usage required
<p>Course Outcomes:</p> <ol style="list-style-type: none"> 1. Know how the history of science and technology are connected with other histories, that is, understand the contexts of scientific and technological change. (2, 4, 10) 2. Be able to explain why the Industrial Revolution was such a pivotal historical development. (1, 2, 4, 10) 3. Grasp how the pace and frequency of scientific and technological change have accelerated in recent decades compared with the past. (1, 2, 4, 10) 4. Know the history of two specific scientific and/or technological developments, and write papers and give oral presentations on them. (2, 7, 8, 10, 14) <p>(1) Apply analytical and critical thinking to current global issues.</p> <p>(2) Describe interrelationships between science, technology, and society.</p> <p>(4) Explain historical, political, and material conditions in which science and technology emerge.</p> <p>(7) Apply discipline-relevant methods to HSS research projects.</p> <p>(8) Summarize and assess current developments in the subject area.</p> <p>(10) Synthesize complex ideas in clear, concise ways.</p> <p>(14) Demonstrate an ability to communicate effectively with written, oral and visual means.</p>	

Recommended reading : -

Teaching methods: Lecture and class discussions

Assessment methods : Two papers and oral presentations

Student workload:

Pre-reading	30 hrs
Lectures	45 hrs
Preparatory reading	40 hrs
Literature review for presentation.....	20 hrs
Team work for presentation	15 hrs
TOTAL	150 hrs

Prepared by : Dr. Mark A. Shields

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