

**Department of Humanities and Social Sciences**

**Course Profile**

Course Number : <b>STS 301</b>	Course Title: <b>Perspectives on Science, Technology, and Society Relations</b>
Required / Elective : Required	Pre / Co-requisites : None
Catalog Description: Theories of science and technology in society. Case studies of science and technology. Scientific Revolution. Positivism and post-Positivism. Theories of invention and innovation. Technological determinism. Social Constructionism. Society shaping science and technology. Interactions between science, technology and society.	Textbook/Required Material: Robert McGinn, <u>Science, Technology, and Society</u> (1991) Prentice-Hall, plus various readings, assembled in a course pack.
Course Structure / Schedule : <b>(3+0+0) 3 / 6 ECTS</b>	
<p>Extended Description: This course introduces students to social and philosophical perspectives on science and technology. Both science and technology are social institutions whose impacts are interconnected with other social institutions, including the economy, politics, cultural values and ethics. Emphasis in the course is placed on examining these interconnections, starting with the Scientific Revolution and Industrial Revolutions in seventeenth and eighteenth century Europe and continuing until the present-day revolutions in information technology and biotechnology. Among the topics examined are the philosophy of science, especially positivism and the idea of scientific rationality; how science and technology change, in particular whether such change is mainly cumulative or revolutionary; the conflicts between science and religion, especially creationism versus evolutionism; theoretical approaches to explaining how science and technology work, including recent approaches emphasizing the social construction of technology and science and “actor networks”; the rise of “big science” in the twentieth century and its ties to states and corporations; and the importance of professional ethics in science and technology.</p>	
Design content : none	Computer usage: No particular computer usage required
<p>Course Outcomes:</p> <ol style="list-style-type: none"> <li>1. Be able to describe differences and similarities of science and technology, and their interrelationships. <b>(2, 8, 10)</b></li> <li>2. Grasp a basic historical understanding of the emergence and development of modern technology and science. <b>(1, 4, 10)</b></li> <li>3. Become familiar with current controversies in science and technology, including ethical dilemmas. <b>(2, 9)</b></li> <li>4. Write a paper and give a presentation on a topic relevant to the course. <b>(7, 8, 10, 14)</b></li> </ol> <p><b>(1) Apply analytical and critical thinking to current global issues.</b></p> <p><b>(2) Describe interrelationships between science, technology, and society.</b></p>	

- (4) Explain historical, political, and material conditions in which science and technology emerge.**
- (7) Apply discipline-relevant methods to HSS research projects.**
- (8) Summarize and assess current developments in the subject area.**
- (9) Recognize ethical issues and social responsibilities in the contemporary world.**
- (10) Synthesize complex ideas in clear, concise ways.**
- (14) Demonstrate an ability to communicate effectively with written, oral and visual means.**

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
<b>TOTAL .....</b>	<b>150 hrs</b>

Prepared by : Dr. Mark A. Shields

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