

Department of Humanities and Social Sciences

Course Profile

Course Number : STS 306	Course Title: Sociology of Science and Technology
Required / Elective : Required	Pre / Co-requisites : None
Catalog Description: Social construction of science and technology. Sociological aspects of science and technology. Ethnographic studies of scientific work. Ethical aspects of scientific and technological change. Technologies and everyday life.	Textbook/Required Material: James Watson, <i>The Double Helix</i> . Norton, 1968 and selected chapters from <i>The Science Studies Reader</i> , Mario Biagioli (ed.). Routledge, 1999; <i>The Handbook of Science and Technology Studies</i> , 3rd ed., Edward J. Hackett et al. (eds). MIT Press, 2008, and Stephen Cole, <i>Making Science</i> . Harvard, 1992.
Course Structure / Schedule : (3+0+0) 3 / 6 ECTS	
Extended Description: This course examines the sociological significance of science and technology in the modern world. A major theme is the “social construction of science and technology”. It looks at the ways in which a variety of sociological variables—culture, gender, education, power, knowledge, economics, etc.—shape technology science and are, in turn, shaped by technology and science. Case studies are used to illustrate and elaborate on these relationships, and to provide empirical support for key theoretical ideas. The course also explores the difficult ethical issues raised by developments in modern science and technology.	
Design content: None	Computer usage: No particular computer usage required
<p>Course Outcomes. By the end of the course, students should:</p> <ol style="list-style-type: none"> 1. Be able to discuss how sociology is relevant to the analysis of science and technology. (1, 2, 4) 2. Understand the range of sociological variables that shape, and are shaped by, scientific and technological change. (1, 2, 4, 10) 3. Be able to explain, and give examples of, the social construction of science and technology. (1, 2, 4, 10) 4. Grasp crucial ethical dimensions of scientific and technological practices. (2, 9) 5. Give a presentation and write reflections (papers) on topics and readings relevant to the course. (8, 10, 14) <p>(1) Apply analytical and critical thinking skills to contemporary global issues.</p> <p>(2) Describe interrelationships between science, technology, society, and the environment.</p> <p>(4) Explain the historical, political, and economic conditions in which science and technology emerge.</p> <p>(8) Summarize and assess current developments in the subject area.</p> <p>(9) Recognize ethical issues and social responsibilities in the contemporary world.</p> <p>(10) Synthesize complex ideas in clear, concise ways.</p>	

(14) Demonstrate an ability to communicate effectively with written, oral and visual means.

Recommended reading:

Teaching methods: Lecture and class discussions. Student presentations.

Assessment methods: Weekly reflection papers, in-class presentation, final (essay) exam)

Student workload:

Pre-reading	20 hrs
Lectures and Class Presentations	45 hrs
Preparatory reading	40 hrs
Weekly Reflections	20 hrs
Literature review for presentation.....	15 hrs
Team work for presentation	10 hrs
TOTAL	150 hrs

Prepared by : Dr. Mark A. Shields

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