Department of Humanities and Social Sciences

Course Profile

Course Number : **STS 304**	Course Title : **Philosophy of Science**
Required / Elective: Elective	Pre / Co-requisites : -
Catalog Description: Exploration of enduring philosophical questions regarding the nature of reality, the existence of the external world, the extent of human freedom, the definition of the good, its relevance to moral life. The principles of social and political organization. Traditional problems in philosophy (reality, knowledge, existence of God, morality, aesthetic experience), Works by the great philosophers. Basic philosophizing skills; critical reasoning, conceptual analysis, writing skills, argument strategy and tactics.	Textbook / Required Material : *Philosophy of Science* (Samir Okasha / Oxford University Press / ISBN 978-0-19-280283-5) and *Philosophy of Science* (Edited by Martin Curd and J. A. Cover / W. W. Norton and Company / ISBN 978-0-393-97175-0)

Course Structure / Schedule : **(3+0+0) 3 / 6 ECTS**

Extended Description : The aim of the course is to analyze the basic issues in the Philosophy of Science and to explore various epistemological, ontological and ethical perspectives on science. The definition of science as well as the difference between science and philosophy, science and religion, science and pseudoscience, science and art, philosophy and religion, philosophy and art will be explicated and various matters such as truth, falsity, validity, observation, experimentation, justification, explanation, verification, falsification, induction, deduction, prediction, realism, anti-realism, rationalism, empiricism, universalism, relativism, objectivism and subjectivism will be explored and analyzed through a philosophical perspective. Particular ethical aspects in relation to science will be summarized as well. Students are expected both to understand the matters raised in class and to develop an ability of critical and philosophical thinking.

Course Outline:

Week	Topics
1	An Introduction to Philosophy
2	An Introduction to Epistemology and the Philosophy of Science
3	What is Science? (Samir Okosha; Chapter I; pp. 1-17)
4	Scientific Reasoning (Samir Okossha; Chapter II; pp. 18-39)
5	Explanation in Science (Samir Okosha; Chapter III; pp. 40-57).
6	Realism and Anti-Realism (Samir Okasha; Chapter IV; pp. 58-76)
7	Scientific Change and Scientific Revolutions (Samir Okasha; Chapter V; pp. 77-94)
8	Philosophical Problems in Physics, Biology and Psychology (Samir Okasha; Chapter VI; pp. 95-119)
9	Science and Its Critics (Samir Okasha; Chapter VII; pp. 120-135)

10	Mid-Term Exam
11	Karl Popper: Conjectures and Refutations (Curd & Cover; Part I, Chapter I, pp. 1-10)
12	Thomas S. Kuhn: Logic of Discovery or Psychology of Research? (Curd & Cover; Part I, Chapter I, pp. 11-19)
13	Imre Lakatos: Science and Pseudoscience (Curd & Cover; Part I, Chapter I, pgp. 20-26)
14	Class Discussion on Science and Pseudoscience

Design content : none	Computer usage: No particular computer usage required

Course Outcomes:

	Program Outcomes	*Level of Contribution				
		1	2	3	4	5
1	Apply analytical and critical thinking skills to contemporary global issues.					*
2	Describe the interrelationships between science, technology, and society.					*
3	Describe the interrelationships between art, culture, and society.				*	
4	Explain the historical, political and economic conditions in which science and technology emerge.					*
5	Explain the historical, political and material conditions in which art and cultural expression emerge.			*		
6	Analyze how modes of thought are shaped by socio-cultural, historical, political and economic variables.				*	
7	Apply discipline-relevant methods to HSS research assignments.			*		
8	Summarize and assess current developments in their subject area.					*
9	Recognize ethical issues and social responsibilities in the contemporary world.					*
10	Synthesize complex ideas in clear and concise ways.					*
11	Generate creative solutions to local and/or global problems.				*	
12	Recognize relevance of coursework to personal experiences, lifelong learning, and job security.			*		
13	Demonstrate an ability to function on teams.			*		
14	Demonstrate an ability to communicate effectively with written, oral and visual means.					*

Recommended reading : -	
Teaching methods : Class participation: Pre-class readings, lecture and class discussions, individual readings.	
Assessment methods : 1 Mid-Term Exam (%45), 1 Final Exam (%45 each), Attendance (%10)	
Student workload: Preparatory reading ……..... 60 hrs Lectures ……..... 60 hrs Class Discussions ……..... 30 hrs TOTAL ……..... **150 hrs . . . to match 25 X 6 ECTS**	
Prepared by : Prof. Dr. Örsan Öymen	Revision Date : 27. 06. 2013