

## Department of Humanities and Social Sciences

### Course Profile

Course Number : <b>HSS 204</b>	Course Title : <b>The Rise of Modern Science</b>
Required / Elective : Required	Pre / Co-requisites : None
Catalog Description: The main theoretical and methodological approaches to study the history of science. Central issues in the history of the physical sciences since the Renaissance. Copernican Revolution, Scientific Revolution, and the Enlightenment.	Textbook / Required Material : Peter J. Bowler & Iwan Rhys Morus, <i>Making Modern Science</i> (Chicago : University of Chicago Press, 2005).  Excerpts from <i>Cambridge History of Science, Volume 7, the Modern Social Sciences</i> , edited by Theodore M. Porter & Dorothy Ross (Cambridge: Cambridge University Press, 2008).
Course Structure / Schedule : <b>(3+0+0) 3 / 6 ECTS</b>	
Extended Description : This course focuses on some of the most important scientific thoughts and experiences until the turn of the 20th century. The themes to be recovered will range from the Scientific Revolution to the controversies about the evolutionary theory, the arguments about the human mind, major development in physics, the social impacts of historical developments in the making of science at large.	
<u>Course Outline:</u>	
Week	Topics
1	Introduction
2	The Scientific Revolution and its roots
3	The Age of the Earth
4	The Continental Drift
5	The Birth of Biology
6	Social Darwinism and Eugenics
7	The Mendelian Revolution
8	The Atomic theory and its implications
9	Einstein and the Theory of Relativity
10	Quantum Theory
11	The Chemical Revolution
12	Scientific Theories of the Human Mind I
13	Scientific Theories of the Human Mind II
14	Science and War in historical context

15	Overview					
Design content : none			Computer usage: No particular computer usage required			
<u>Course Outcomes:</u>						
	Program Outcomes	*Level of Contribution				
		1	2	3	4	5
1	Apply analytical and critical thinking skills to contemporary global issues.					X
2	Describe the interrelationships between science, technology, and society.					X
3	Describe the interrelationships between art, culture, and society.					
4	Explain the historical, political and economic conditions in which science and technology emerge.					X
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.					X
7	Apply discipline-relevant methods to HSS research assignments.					
8	Summarize and assess current developments in their subject area.		X			
9	Recognize ethical issues and social responsibilities in the contemporary world.				X	
10	Synthesize complex ideas in clear and concise ways.					X
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.	X				
Recommended reading:-						
Teaching methods: Class participation: Pre-class readings, lecture and class discussions, individual readings and research and team work for presentation.						
Assessment methods: Exams, class presentation, class survey.						
Student workload:						

Pre-reading .....50 hrs  
 Lectures .....55 hrs  
 Preparatory reading ..... 35 hrs  
 Literature review for presentation..... 5 hrs  
 Team work for presentation .....0 hrs  
**TOTAL ..... 145 hrs ... to match 25x6 ECTS**

Course Category:

ISCED General Area Codes	General Areas	ISCED Basic Area Codes	Basic Educational Areas	Percentage
1	Education	14	Teacher Training and Educational Sciences	
2	Humanities and Art	21	Art	
2	Humanities and Art	22	Humanities	
3	Social Sciences, Management and Law	31	Social and Behavioral Sciences	20
3	Social Sciences, Management and Law	32	Journalism and Informatics	
3	Social Sciences, Management and Law	38	Law	
4	Science	42	Life Sciences	40
4	Science	44	Natural Sciences	40
4	Science	46	Mathematics and Statistics	
4	Science	48	Computer	
5	Engineering, Manufacturing and Civil	52	Engineering	
5	Engineering, Manufacturing and Civil	54	Manufacturing and Processing	
5	Engineering, Manufacturing and Civil	58	Architecture and Structure	

6	Agriculture	62	Agriculture, Forestry, Livestock, Fishery	
6	Agriculture	64	Veterinary	
7	Medicine and Welfare	72	Medical	
7	Medicine and Welfare	76	Social Services	
8	Service	81	Personal Services	
8	Service	84	Transport Services	
8	Service	85	Environment Protection	
8	Service	86	Security Services	
Prepared by: Prof.Dr. M. Asım Karaömerlioğlu			Revision Date : 27. 06.2013	