

ANKARA YILDIRIM BEYAZIT UNIVERSITY – DEPARTMENT OF MANAGEMENT

Course Code	Course Title	Course Type	ECTS Credits	Prerequisite Information	Date of Preparation
BUS211	History of Science and Technology	Compulsory	6		22.10.2025
Instructor of the Course & E-Mail Address	Asst. Prof. Dr. Murat Ulubay, mulubay@aybu.edu.tr				
Office Hours & Office Room	Monday 15.45-17.00 B-257				
Course Content and Objectives	This course will cover <i>a survey of scientific and technological change/progress</i> throughout the <i>history of civilizations</i> (primarily “Western/Mediterranean/ Islam/Ottoman Empire etc.) in pre-modern and Modern Era. The main focus in this survey will be the function of science and technology, in terms of creating <i>structural change</i> , a change in the way of how human societies make sense of, and manipulate the world, themselves and other societies.				
Textbook(s)	McClellan, James E., III, and Harold Dorn. <i>Science and Technology in World History: an Introduction</i> . Baltimore: Johns Hopkins University Press, 1999.				
Teaching Methods and Techniques	Lecture, class discussions.				
Course Learning Outcomes	1	Analyze the Interaction between Technological Change and Economic Systems Students will examine how major scientific and technological revolutions—from the Agricultural and Industrial Revolutions to the Information Age—have transformed modes of production, labor organization, political systems and global trade, shaping the foundations of modern business and management practices			
	2	Understand the Social and Institutional Contexts of Technological progress Students will develop an understanding of how political, cultural, and institutional factors influence scientific progress and technological diffusion, and how these dynamics continue to affect innovation at societal and organizational level, entrepreneurship in general.			
	3	Foster Critical and Historical Thinking about Knowledge and Progress Students will cultivate the ability to think critically about how scientific knowledge and technological change shape human understanding, culture, and values—developing a broader intellectual perspective on the nature of progress and the role of science in society.			
Program Outcomes Contributed by the Course	Program Outcomes (PO)				
	PO1	Graduates are equipped with up-to-date conceptual and applied knowledge of their field of study			
	PO6	Graduates are ethically aware, know how business decisions affect those not directly involved in making of these decisions.			
	PO8	Graduates are open-minded, willing to fight discrimination of all kinds in workplaces and business environment.			
	PO9	Graduates are knowledgeable about fundamental environmental and social issues.			

Contribution of the Course to Field Instruction	This course broadens students' understanding of how scientific and technological developments have shaped human civilization, encouraging a deeper appreciation of the dynamic relationship between knowledge, society, and the ways we understand and organize the world.		
Topics Covered in the Course	1. Week	Meeting, History; stereotypical meaning of history vs. <i>historical</i> (social, political) change. Structural change, path dependence	
	2. Week	Introduction: Basic definitions and distinction of science and technology. Prehistory of human and civilizations: Hunter gatherers, agriculture, and primitive technology. Knowledge and technique in the prehistory. McClellan/Dorn, p. 1-30 (chapters 1 & 2). p. 31-54 (chapter 3)	
	3. Week	Urban Revolution and Ancient Civilizations. Chapter 3. (Pharaohs and Engineers p. 31-54)	
	4. Week	Greek science, technology, and society. McClellan/Dorn, pp. 55-95 (chapter 4) Unity of scholar expertise, science, philosophy, religion. Ancient astronomy and its social, economic and religious functions. McClellan/Dorn, p. 65-85. Aristotle's physics and the Greek cosmos.	
	5. Week	Science and technology in the Islamic world Read: McClellan/Dorn, pp. 97-115 (chapter 5), Science and technology in the Ottoman Empire Chinese and Indian Civilizations and Scientific/Technological Heritage	
	6. Week	Medieval universities, Islam, and Greek science, The medieval cosmos. (Background of Western Scientific and Industrial Revolution)	
	7. Week	Midterm Week	
	8. Week	Revolution in astronomy: Copernicus to Kepler. Galileo, astronomy, and the Church McClellan/Dorn, p. 203-221 (chapter 10)	
	9. Week	Western Scientific and Industrial Revolution: Invention, discovery, innovation. Scientific Method (fundamentals)	
	10. Week	Western political revolutions, reforms: Political function of science and technology within the ideology of progress.	
	11. Week	Industrial revolution and social/political change, relations of production and property. Western Scientific and Industrial Revolution: Communication, Transportation and National Market. (Modern State, Nation and Society)	
	12. Week	Science and scientific method in management science (academic and practical applications and significance -statistics as a sample demonstration).	
	13. Week	Post industrial Societies. Globalization, Financial capital and transnational corporations. General trends and concepts of historical change derived from the history of science and technology.	
Course Evaluation Criteria	In-Term Studies	Quantity	Percentage %
	Mid-terms	1	% 35
	Quizzes		%
	Assignments		%
	Attendance	1	% 10 (class participation bonus)
	Practice		%
	Project		%
	Final examination	1	% 65
	Total		100%

Disability Policy	<p>If you have a documented disability (e.g., visual, hearing, or physical impairment, etc.) that may influence your performance in this course, it is recommended to meet with the Business School AYBU (https://aybu.edu.tr/engelsiz/content_list-327-yildirim-beyazit-universitesi-engelsiz-universite-birimi-yonergesi.html) to arrange for reasonable conditions (such as accommodation, etc.) to ensure an equitable opportunity to meet all the requirements of this course. You may also contact the local authority of the Faculty of Humanities and Social Sciences. You should communicate your needs to the course instructor as soon as possible to ensure that any course needs concerning exams, lecture materials, etc. are met.</p>
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