

**OSTİM TECHNICAL UNIVERSITY
FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES
DEPARTMENT OF INTERNATIONAL TRADE AND FINANCE
COURSE SYLLABUS FORM
2023-2024 SPRING**

ITF 451 Innovation and Technology Management							
Course Name	Course Code	Period	Hours	Application	Laboratory	Credit	ECTS
Innovation and Technology Management	ITF451	3	3	0	0	2	4

Language of Instruction	English
Course Status	Compulsory
Course Level	Bachelor
Learning and Teaching Techniques of the Course	Lecture, Question-Answer, Problem Solving, Teamwork, Report Writing, Case Studies

Course Objective
<p>The primary goal of the course is to expose students to a variety of perspectives on technological innovation, building on an active learning process and preparing for work experiences in the future. This course approaches the management of technological innovation from a resource/knowledge-based view, which sees technological innovations as a driving force of competitive advantage of organizations through a combination of internal resources and external linkages. Students are introduced to the theories, models, tools and practical cases from industries by understanding what technological innovations are, why they are important, and what are needed to enable and manage technological innovations within and outside of the boundary of organizations. Although most attention will be paid to innovations made by industrial firms, relevant issues of innovations at levels of individual, team, network of organizations, and industry will be addressed as well. Finally, students will be taught social implications of innovation and technological advancements and learn about global implications as well. The weekly readings consist of a mixture of book chapters, journal articles, and cases.</p>

Learning Outcomes

On successful completion of this course, students should be able to:

1. Understanding the phenomena of innovation. Define what innovation is, what different types of innovations are, and explain why innovation is important.
2. Pinpoint the role of technology in innovation both in theory and in practice.
3. Demonstrate your critical thinking, analytical skills and hypothetical problem-solving capabilities as applied to course concepts and content related to innovation and leading technological advancements.
4. Understand how technology-driven changes in the external environment determine the optimal organizational structure and processes.
5. To be able to see the big innovation picture from a technological and corporate perspective and evaluate the context for innovation management.
6. Will have a sense of social responsibility and will be aware of the importance of ethics.
7. To understand and explain business challenges in an international context.

Course Outline

In this course, we take a broad perspective of innovation and how to best organize, implement, and operationalize innovation for optimal strategic and monetary value, as well as competitive, cultural and performance change. The course is a case-based discussion class, and the majority of learning will happen through interactive debate in class. We will be discussing real companies facing real strategic and organizational issues, and our goal in each session will be to conduct a comprehensive analysis of these situations, and to generate tangible recommendations for how the firm should solve these problems. Students will develop a better understanding of the complex issues surrounding the managerial tasks with respect to technology.

Weekly Topics and Related Preparation Studies

Weeks	Topics	Preparation Studies
1	Introduction to the course History: Paradigms, Cycles, and Waves of Scientific, Technological, and Industrial Evolution	<ul style="list-style-type: none"> – 3 articles to be read: 1. Dosi G. 1982. Technological paradigms and technological trajectories. <i>Research Policy</i>, 11: 147–162. 2. Abernathy WJ, Utterback JM. 1978. Patterns of Industrial Innovation. <i>Technology Review</i>, June–July: 40–47. 3. Fagerberg, J., Verspagen, B. 2009. Innovation studies the emerging structure of a new scientific field. <i>Research Policy</i>, 38(2): 218-233.

2	What is innovation and why is it important? Types and Patterns of Technology Technology, innovations, and an overview of technological innovation process	<ul style="list-style-type: none"> - Chapters 1&3 from the main textbook Dodgson et al., (2008).
3	Global context for innovation. Global technology and consumer behavior trends. Innovation theories and models. Innovation process. Research and development process	<ul style="list-style-type: none"> - Chapters 1&2 from the 2nd main textbook Trott, P. (2008).
4	Innovation sources. Search for innovative ideas. Chapter 4 Trott, P. (2008).	<ul style="list-style-type: none"> - Professor Joe Tidd identifies different sources of innovation & tools to help to search for these: - https://www.youtube.com/watch?v=IFck3eOwPnQ Where good ideas come from Steven Johnson
5	Innovation processes. Design thinking concept for the new product development. Problem identification. Rapid prototyping	<ul style="list-style-type: none"> - Chapter 5 Trott, P. (2008).
6	CASE Week	<ul style="list-style-type: none"> - General Electric: Changing with The Times - GlaxoSmithKline: Successful Internal Innovation - Acer Group: A Family of Brands - Google: A Pattern of Success
7	MIDTERM EXAM	
8	Models of new product development	<ul style="list-style-type: none"> - Chapter 14 Trott, P. (2008).
9	Knowledge management for innovation. Managing different knowledge dimensions.	<ul style="list-style-type: none"> - Chapter 7 Trott, P. (2008).

10	Innovation networks and partnerships. Open innovation. Innovation ecosystem	- Chapter 8 Trott, P. (2008).
11	Intellectual property management. Intellectual property protection tools and strategies.	- Chapter 6 Trott, P. (2008).
12	Innovation financing New business models	- Chapter 12 Trott, P. (2008).
13	Understanding The Social Implications of Innovation	- Concept of Social Entrepreneurship - Cases - White, M. A., & Bruton, G. D. (2011), Appendix 1
14	Promoting Innovation and Technology Organizing for Innovation in the Digitized World	- Korea's Innovation Leadership (Innovative Korea, Chapter 5) - Yoo, Youngjin, Richard J. Boland Jr, Kalle Lyytinen, and Ann Majchrzak. "Organizing for innovation in the digitized world." Organization science 23, no. 5 (2012): 1398-1408.
15	Leveraging the Global Integration and International Trade with Innovation and Technology	- Trade Performance of Korea (Innovative Korea, Chapter 4)
16	FINAL EXAM	

Textbook (s)/References/Materials:

Textbooks: Main: Trott, P. (2008). Innovation management and new product development. Pearson education
2nd: Dodgson et al. (2008): The Management of Technological Innovation

Supplementary References:

1. Sharma (1999). Central Dilemmas of Managing Innovation in Large Firms. California Management Review, 41(3):146-164.
2. White, M. A., & Bruton, G. D. (2011). The management of technology and innovation: A strategic approach. South-Western, CENGAGE Learning.
3. International Bank for Reconstruction and Development / The World Bank (2023) Innovative Korea Edited by Hoon Sahib Soh, Youngsun Koh, and Anwar Aridi Leveraging Innovation and Technology for Development
4. Howells, J. (2005). The management of innovation and technology. The Management of Innovation and Technology, 1-304.
5. Yoo, Youngjin, Richard J. Boland Jr, Kalle Lyytinen, and Ann Majchrzak. "Organizing for innovation in the digitized world." Organization science 23, no. 5 (2012): 1398-1408.

Assessment		
Studies	Number	Contribution margin (%)
Attendance		
Lab		
Classroom and application performance grade		
Field Study		
Course-Specific Internship (if any)		
Quizzes / Studio / Critical		
Homework		
Presentation		
Projects		
Report		
Seminar		
Midterm Exam/Midterm Jury	1	40
General Exam / Final Jury	1	60
	Total	100
Success Grade Contribution of Semester Studies		40
Success Grade Contribution of End of Term		60
	Total	100

ECTS / Workload Table			
Activities	Number	Duration (Hours)	Total Workload
Course hours (Including the exam week: 16 x total course hours)	16	3	48
Laboratory			
Application			
Course-Specific Internship			
Field Study			
Study Time Out of Class	16	3	48
Presentation / Seminar Preparation			
Projects			
Reports			
Homework	4	4	16
Quizzes / Studio Review			
Preparation Time for Midterm Exam / Midterm Jury	1	4	4
Preparation Period for the Final Exam / General Jury	1	4	4
Total Workload/25 hours	(120/25 = 4.32)		
ECTS	5		

Relationship Between Course Learning Outcomes and Program Competencies

No	Learning Outcomes	Contribution Level				
		1	2	3	4	5
LO1	Understanding the phenomena of innovation. Define what innovation is, what different types of innovations are, and explain why innovation is important.					X
LO2	Pinpoint the role of technology in innovation both in theory and in practice.					X
LO3	Demonstrate your critical thinking, analytical skills and hypothetical problem-solving capabilities as applied to course concepts and content related to innovation and leading technological advancements.					X
LO4	Understand how technology-driven changes in the external environment determine the optimal organizational structure and processes					X
LO5	To be able to see the big innovation picture from a technological and corporate perspective and evaluate the context for innovation management					X
LO6	Will have a sense of social responsibility and will be aware of the importance of ethics.					X
LO7	To understand and explain business challenges in an international context.					X

Relationship Between Course Learning Outcomes and Program Competencies									
No	Program Competencies	Learning Outcomes							Total Effect (1-5)
		LO 1	LO 2	LO 3	LO 4	LO 5	LO6	LO7	
1	Have advanced theoretical and up-to-date knowledge in discipline-specific areas such as international trade, finance, logistics, and general business and international business such as economics, marketing, management, accounting.	X	X	X			X	X	5
2	Evaluate, follow, absorb and transfer new information in the field of international trade.				X	X	X	X	4
3	Conduct market research, carry out projects and develop strategies for a business to open up to international markets.			X			X	X	3
4	Use knowledge of national and international trade law and legislation in the management of international commercial operation processes.		X	X	X		X	X	5
5	Work independently and within an organization, using the knowledge and skills acquired in the field and adopting continuous learning.	X	X				X	X	4
6	Have the ability to apply her theoretical knowledge in real life, with the experience she will gain through practice in departments such as marketing, accounting, foreign trade, finance, logistics.		X	X	X	X		X	5
7	Have the theoretical knowledge to carry out export, import, customs clearance, logistics, taxation and other international trade activities within the scope of global and regional commercial and economic organizations.	X		X			X	X	4
8	Can develop a business idea, commercialize the business idea, and design and manage their own venture using their entrepreneurial knowledge.	X					X	X	3
9	Using strategic, critical, innovative and analytical thinking skills, actively take part in the decision-making processes of the enterprise in the field of foreign trade and finance.	X				X	X	X	4
10	Act in accordance with ethical values, respectful to the environment, social and universal values in all activities it will carry out in its field.	X	X				X	X	4
11	Have the skills to follow up-to-date information at national and international level, to gather information about field, and to communicate with international institutions / organizations using her/him knowledge of English.	X	X			X	X	X	5
12	Gain professional competencies to take charge in national and international businesses, public and private sector organizations	X	X			X	X	X	5
13	Can evaluate the problems and conflicts encountered in all areas related to international trade from different perspectives with a holistic approach and produce value-based solutions.	X	X			X	X	X	5

Total Effect			56
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Policies and Procedures

Web page: <https://www.ostimteknik.edu.tr/uluslararasi-ticaret-ve-finansman-bolumu-209>
<https://www.ostimteknik.edu.tr/international-trade-and-finance-232>

Exams: The exams aim at assessing various dimensions of learning: knowledge of concepts and theories and the ability to apply this knowledge to real-world phenomena, through analyzing the situation, distinguishing problems, and suggesting solutions. The written exams can be of two types, i.e. open-ended questions, which can also be in the form of problems or multiple-choice questions. The case could also be carried to the Dean's Office for additional disciplinary action.

Assignments: Quizzes and Homework (Assignments) might be applicable. Scientific Research Ethics Rules are very important while preparing assignments. The students should be careful about citing any material used from outside sources and reference them appropriately.

Missed exams: Any student missing an exam needs to bring an official medical report to be able to take a make-up exam. The medical report must be from a state hospital.

Projects: Not applicable

Attendance: Attendance requirements are announced at the beginning of the term. Students are usually expected to attend at least 70% of the classes during each term.

Objections: If the student observes a material error in his/her grade, he/she has the right to place an objection to the Faculty or the Department. The claim is examined and the student is notified about its outcome.