

School of Engineering and Natural Sciences / Industrial Engineering (English)

2023 - 2024 Academic Year

INNOVATION and ENTREPRENEURSHIP

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
INNOVATION and ENTREPRENEURSHIP		IND4149190	Fall Semester	2+0	2
Prerequisites Courses					
Recommended Elective Courses	Project Management				
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Required				
Course Coordinator	Assist.Prof. Kevser Banu KÖSE				
Name of Lecturer(s)	Prof.Dr. Mehmet Kemal ÖZDEMİR, Assist.Prof. Kevser Banu KÖSE				
Assistant(s)					
Aim	Recognize the basic concepts about innovation, and entrepreneurship, interpret the common creative thinking methods, design an innovative business, evaluate the intellectual property rights, evaluate the fails and successes in start up experiences and apply a case study for preparation of a proposal to take grant from national funds for a techno-start up.				
Course Content	This course contains; Self-assessment of the potential of self and entrepreneurship. Introduction to entrepreneurship, basic concepts and course content,The role of innovation and innovative entrepreneurship in business life,Creative thinking methods,Creative thinking methods – practice for creating new business ideas,The concept and components of the business plan. ,The business concept with functions, types, establishments, legal and financial responsibilities. The grants for Techno-Start ups in Turkey and application procedures,Intellectual property (IP) rights and the management of IP capital,The scenarios of establishment, expanding and getting investment as an entrepreneur in the national ecosystem.,How to prepare an Engineering Project Proposal for 2209A/B Grant Program?,Project management tools (Decision support systems),Literature review and tools (Mendeley, etc.). Plagiarism. YÖK Scientific Research and Publication Ethics Directive ,Group/Individual Study of the students on Success and Fail Stories of Entrepreneurship, techno startup proposal, research proposal,Group/Individual Study of the students on Success and Fail Stories of Entrepreneurship, techno startup proposal, research proposal,Group/Individual Study of the students on Success and Fail Stories of Entrepreneurship, techno startup proposal, research proposal.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
1. Be able to explain the common concepts about technology, innovation, and entrepreneurship:			10, 16, 18, 9	A	
2. Be able to describe the national research funds and propose a project			10, 16, 18, 9	A	
3. Be able to arrange creative thinking methods Explain the brainstorming, lateral thinking, morphological analysis, La Sella matrices, and TRIZ.			5, 6, 9	A	
4. Distinguish the basic terminologies such as copyright, trade mark, patent, utility model, industrial design, and geographical sign			10, 16, 18, 9	A	
5. Explain the main components of a business plan, such as market research, management plan, production plan, marketing plan, and financial plan			19, 5, 6	F	
6. Be able to transform a research idea into an original project proposal in disciplinary and multi-disciplinary teams and develop innovative projects with students from different programs.			10, 16, 19, 5, 6, 9	F, H	
Teaching Methods	10: Discussion Method, 16: Question - Answer Technique, 18: Micro Teaching Technique, 19: Brainstorming Technique, 5: Cooperative Learning, 6: Experiential Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, F: Project Task, H: Performance Task				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Self-assessment of the potential of self and entrepreneurship. Introduction to entrepreneurship, basic concepts and course content	Basic search about being entrepreneur and criticizing the difference between being an entrepreneur and a professional staff in private, public or academic domain			
2	The role of innovation and innovative entrepreneurship in business life	Basic search about the relation between innovation and entrepreneurship and the relation and differences between R&D and innovation			
3	Creative thinking methods	How can we benchmark the algorithms. Why is a succesful algorithm or technic important? Which benefit can we get from the algorithms in our daily life, such as in time planning, issue management, etc.? Can we use some technics for a better and efficient thinking?			
4	Creative thinking methods – practice for creating new business ideas	Application steps of brain storming			
5	The concept and components of the business plan.	Reviewing some main contracts for companies			
6	The business concept with functions, types, establishments, legal and financial responsibilities. The grants for Techno-Start ups in Turkey and application procedures	The importance of production and management for the sustainability and successfulness of the company			
7	Intellectual property (IP) rights and the management of IP capital	What is intellectual property and how can we protect them?			
8	The scenarios of establishment, expanding and getting investment as an entrepreneur in the national ecosystem.	When the companies require expension, for enlarging the market, new market penetration, etc.			
9	How to prepare an Engineering Project Proposal for 2209A/B Grant Program?	Adapting original business and research project ideas to grant application formats			
10	Project management tools (Decision support systems)	Supportive tools in project management			
11	Literature review and tools (Mendeley, etc.). Plagiarism. YÖK Scientific Research and Publication Ethics Directive	Basic definitions			
12	Group/Individual Study of the students on Success and Fail Stories of Entrepreneurship, techno startup proposal, research proposal	Business model canvas, research proposal			
13	Group/Individual Study of the students on Success and Fail Stories of Entrepreneurship, techno startup proposal, research proposal	Business model canvas , Research Proposal			
14	Group/Individual Study of the students on Success and Fail Stories of Entrepreneurship, techno startup proposal, research proposal	Business model canvas, research proposal			
Evaluation Methods		Weight(%)			
Midterm Exam		30			
General Exam		70			

Resources

1. Peter Thiel, Blake Masters, Sıfırdan Bire, Start up'lar üzerine notlar ya da geleceęi inşa etmenin yolları, Pegasus yayıncılık.
2. Eric Ries, The lean start up,
3. Steve Blank, The Start up Owner's ManualThe Guidlines of Technology Transfer Office