



HASAN KALYONCU UNIVERSITY
Faculty of Engineering
Course Description Form

COURSE: Technology and R&D Management					
CODE: FE102		SEMESTER: SPRING			
LANGUAGE: ENGLISH		TYPE: COMPULSORY			
PRE-REQUISITES: - CO-REQUISITES: -		THEORY	PRACTICAL	CREDIT	ECTS
WEEKLY HOURS: 2		2	0	2	2

CONTENT OF THE COURSE:

Within the course, knowledge for following concepts are provided: Definition and importance of innovation, innovation types, innovation strategies, new product development, Technology monitoring and access to technology, Definition and importance of entrepreneurship, entrepreneurship types, entrepreneurial strategies, business models, entrepreneurship, product portfolio management. -D Management, carrying out R&D studies within the scope of Sustainability, Sustainable Development and R&D, definition of a project and of modern project management, Estimating the duration and cost of the project, CPM method, Having general information about environmental law, patent and intellectual property, To have information about industrial rights, Technological development and its environmental effects, Technology development for problems, Transition to cleaner production technologies, Product recovery options: Recycling, repair, renewal, remanufacturing.

OBJECTIVE OF THE COURSE:

- Increasing students' interest in new technologies and the concept of innovation and ensuring their continuity.
- Researching and sharing the developments in the world and in our country in the field of new and advanced technologies.
- Enabling students to think in an innovative, creative, systematic and project logic.
- Bringing the responsibilities of the individual and the organization to young people, starting from their student years, in order to increase the number of organizations that produce and benefit from new technology.
- Raising the level of knowledge and awareness of students so that they can think about innovation and technology and implement their new ideas within the project logic.

WEEKLY SCHEDULE

Week	Topics
1	Technology, its types, technological innovation and monitoring of technology
2	What is Innovation? Types of Innovation
3	Research and Development (R&D)
4	Sustainability and Sustainable Development
5	R&D and Sustainable Development Relationship
6	Strategic Aspects of R&D Management
7	R&D Management and Follow-up

8	R&D Management and Follow-up
9	Project Planning
10	Budgeting
11	Sustainability and Product Improvement
12	Cleaner Production Technologies and Environmental Impacts
13	Technology Development Examples – Construction, Environment and Health Technologies
14	Patent and Intellectual Property Law

TEXTBOOK: “Innovation, Research and Development Management”, Patrick Gilbert, Natalia Bobadilla, Lise Gastaldi, Martine Le Boulaire, Olga Lelebina.

“R&D Management”, Akhilesh, K B.

“Design for Sustainability: A Practical Approach”, Tracy Bhamra, Vicky Lofthouse.

REFERENCE BOOKS:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
LO1	0	0	0	0	0	0	3	3	0	0	0
LO2	0	0	0	0	0	0	3	3	0	0	0
LO3	0	0	0	0	0	0	2	3	0	0	0
LO4	0	0	0	0	0	0	2	3	0	0	0
LO5	0	0	0	0	0	0	3	3	0	0	0
	PO: Program Outcomes LO: Learning Outcomes Values: 0: None 1: Low 2: Medium 3: High										

INSTRUCTOR(S):	Dr. Adem YURTSEVER
FORM PREPARATION DATE:	22.05.2019

LEARNING OUTCOMES OF THE COURSE:

LO1: Awareness about innovation and innovative strategies.

LO2: Awareness that creativity management and innovation can lead to entrepreneurship.

LO3: Ability to schedule by using project identification, cost estimation and critical path method.

LO4: National and international environmental law and patent and intellectual property law.

LO5: Awareness about the importance of sustainability issues, product recovery and product improvement options.

CONTRIBUTION OF THE COURSE TO VOCATIONAL EDUCATION:

With the help of this course, students gain awareness and knowledge about the non-technical aspects of engineering and produce solutions to real-life projects and problems by taking these aspects into consideration.