R&D AND INNOVATION IN ENGINEERING

1	Course Title:	R&D AND INNOVATION IN ENGINEERING
2	Course Code:	MAK3029
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	2
6	Semester:	3
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ALİ RIZA YILDIZ
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	Prof. Dr. Ali Rıza Yıldız Tel:0224-2941950 aliriza@uludag.edu.tr
17	Website:	
18	Objective of the Course:	Within the scope of this course, basic topics such as R&D, invention, innovation and technological invention are covered. In addition to these basic concepts, the differences between the concepts, types and degrees of innovation, new paradigms and socio-economic effects are examined.
19	Contribution of the Course to Professional Development:	They will have the skills to create and manage an R&D project In their professional life.
20	Learning Outcomes:	
	1	Correct understanding of R&D and innovation definitions and processes
	2	Learning and applying open and closed innovation methods
	3	Having the ability to create R&D projects and manage innovation projects
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21	Course Content:	
	Course Content:	
Week	Theoretical	Practice
1	R&D and innovation	
2	Basic concepts in innovation	

3	Innovation performance indicators	
4	R&D performance indicators	
5	Hybrid R&D and innovation indicators	
6	R&D and innovation systems	
7	R&D strategy and planning methods	
8	Regional innovation systems	
9	Science, technology and innovation investments and evaluation methods	
10	Science, technology and innovation investments and evaluation methods	
11	Definitions and basic concepts used in R&D evaluation and impact analysis	
12	National and international R&D systems and policies	
13	National and international R&D systems and policies.	
14	National and international R&D systems and policies.	

22	Textbooks, References and/or Other Materials:	Susanne, D., Serdal, T., & Aisenberg, F. H. (Eds.). (2018). Open Innovation and Knowledge Management in Small and Medium Enterprises (Vol. 3). World Scientific
23	Assesment	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	0	0.00	0.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	28.00	28.00
Others	0	0.00	0.00
Final Exams	1	28.00	28.00
Total Work Load			112.00
Total work load/ 30 hr			2.80
ECTS Credit of the Course			3.00

Measurement and Evaluation Techniques Used in the Course: Relative assessment will be used.

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	4	4	3	4	4	4	5	5	4	3	3	4	4	4	0	0
ÖK2	4	3	4	4	4	4	4	4	3	3	3	4	4	4	0	0
ÖK3	3	4	4	4	4	4	4	3	4	0	4	4	4	4	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High