MULTI-CRITERIA DECISION MAKING

1	Course Title:	MULTI-CRITERIA DECISION MAKING	
2	Course Code:	ISL5321	
3	Type of Course:	Optional	
4	Level of Course:	Second Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
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:	Dr. Ögr. Üyesi Burcu AVCI ÖZTÜRK	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	bavci@uludag.edu.tr Tel: 0224 29 41157	
17	Website:		
18	Objective of the Course:	In general terms, the main objective of the course is to teach how to use multi-criteria decision making (MCDM) methods in order to support MCDM processes in business. In detail, teaching how to create, solve and interpret results of the MCDM problems for various business problems encountered in different management levels and teaching how to analyze the interpreted results and adopt or put them into practice are the main objectives of the course.	
19	Contribution of the Course to Professional Development:	MCDM contributes to all kinds of business-related processions in terms of analyzing and interpreting numerical data and decision making.	
20	Learning Outcomes:		
		1	Identifies criteria affecting a business problem.
		2	Calculates weights of criteria in MCDM problems using appropriate methods.
		3	Can model MCDM problems.
		4	Will be able to choose and apply the most suitable method for MCDM problem.
		5	Can calculate group decision and use results for decision support.
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21	Course Content:		
	Course Content:		
Week	Theoretical		Practice

1	Basic concepts of decision making, decision making process and modeling of decision problems	
2	Multi-Criteria Decision Making (MCDM) Process (Weighting, Sequencing, Classification),	
3	Simple Additive Weighting Method	
4	The basic structure of the Analytical Hierarchy Process (AHP) and the creation of the hierarchical structure	
5	Usage and application examples of AHP	
6	Analytical Network Process (ANP)	
7	TOPSIS Method	
8	TOPSIS Method	
9	VIKOR Method	
10	Gray Relational Analysis (GRA)	
11	ELECTRE Method	
12	PROMETHEE Method	
13	Integrated MCDM problems, group decisions and business practices.	
14	Integrated MCDM problems, group decisions and business practices.	

22	Textbooks, References and/or Other Materials:	Belton, V, Stewart, T.J., 2002. Multi-criteria Decision Analysis: An Integrated Approach, Kluwer Academic Publishers, Boston. Tzeng, G.H., Huang, J.J. 2011. Multiple Attribute Decision Making: Methods and Applications, CRC Press Taylor & Francis Group, Boca Raton. Bahadır Yıldırım, Emrah Önder, Çok Kriterli Karar Verme Yöntemleri, Dora Yayıncılık (2015)
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	0	0.00
Quiz	0	0.00
Home work-project	1	40.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Homework and Written exam

24	**ECTS / WORK LOAD TABLE**

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	3.00	42.00
Homeworks	1	55.00	55.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Others	0	0.00	0.00
Final Exams	1	35.00	35.00
Total Work Load			174.00
Total work load/ 30 hr			5.80
ECTS Credit of the Course			6.00

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	3	5	3	2	1	1	2	1	1	5	1	0	0	0	0
ÖK2	3	3	4	3	2	1	1	2	1	1	5	1	0	0	0	0
ÖK3	3	3	4	3	2	1	1	2	1	1	5	1	0	0	0	0
ÖK4	4	3	5	3	2	1	1	2	1	1	5	1	0	0	0	0
ÖK5	5	4	5	5	2	2	1	2	1	1	5	1	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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