PATTERN RECOGNITION

1	Course Title:	PATTERN RECOGNITION	
2	Course Code:	BMB4018	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	8	
7	ECTS Credits Allocated:	5.00	
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:	Prof. Dr. Ahmet Emir DİRİK	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Ahmet Emir Dirik, edirik@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	The main objectives of the course are as follows: To provide essential knowledge of pattern recognition fundamentals. To develop advanced practical skills and competency in pattern recognition. To apply these skills to the full spectrum of pattern recognition applications, through independent research and investigation. To develop the students' transferable skills including communication (oral, written and aural), time and project management.	
19	Contribution of the Course to Professional Development:	To be able to follow innovations and apply them in the field by using the competence of collecting information, researching and analyzing them.	
20	Learning Outcomes:		
		1	Gain sufficient knowledge on pattern recognition; the ability to model and solve computer vision application problems using theoretical and practical knowledge.
		2	Gain the ability to identify, model, and solve complex problems; the ability to select and apply appropriate analysis and modeling methods for these problems.
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21	Course Content:		

	Course Content:	
Week	Theoretical	Practice
1	Introduction to Pattern Recognition	
2	Bayesian decision theory	
3	Bayesian decision theory (continued)	
4	Bayesian estimation	
5	Bayesian estimation (continued)	
6	Feature selection and extraction	
7	Linear Discriminant Functions	
8	Nonparametric Pattern Recognition	
9	Algorithm-independent Learning	
10	Comparing classifiers	
11	Learning with Multiple Algorithms	
12	Syntactic Pattern Recognition	
13	Project presentations	
14	Review	

22	Textbooks, References and/or Other Materials:	Pattern Recognition and Machine Learning, C. M. Bishop, 2006, Springer
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
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		Measurement and evaluation is carried out according to the principles of Bursa Uludag University Associate and Undergraduate Education Regulation.

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	2.00	28.00
Homeworks	0	0.00	0.00
Projects	1	30.00	30.00
Field Studies	0	0.00	0.00
Midterm exams	1	18.00	18.00
Others	0	0.00	0.00
Final Exams	1	32.00	32.00
Total Work Load			168.00
Total work load/ 30 hr			5.00
ECTS Credit of the Course			5.00

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	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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