PROBABILITY WITH APPLICATIONS

1	Course Title:	PROBABILITY WITH APPLICATIONS	
2	Course Code:	END2027	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	2	
6	Semester:	3	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	English	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. SEDA ÖZMUTLU	
15	Course Lecturers:	Öğr. Gör. Dr. Alkın Yurtkuran	
16	Contact information of the Course Coordinator:	Prof.Dr. Seda Özmutlu seda@uludag.edu.tr 0224-294-2085 Mühendislik Fakültesi Endüstri Mühendisliği Bölümü Görükle Bursa	
17	Website:		
18	Objective of the Course:	To convey the statistical and probabilistic techniques to undergraduate students for them to reach correct conclusions and make correct deductions on their studies including uncertainty and probability.	
19	Contribution of the Course to Professional Development:	To give the concept of uncertainty to students, to teach that uncertainty exists in business life; and also to give the ability to handle and measure uncertainty in real life	
20	Learning Outcomes:		
		1	Conveying the concepts of probability and uncertainty
		2	Ability to analyze collected data
		3	Ability to identify and solve real-life problems that contain uncertainty
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Introduction to Statistics	
2	Sampling	

3	Measures of Central Tendency and Distibution	
4	Depicting Statistical Data with Tables and Graphs	
5	Permutation-Combination	
6	Introduction to Probability	
7	Probability Calculations and Problems	
8	Conditional Probability and Bayes Theorem	
9	Expected Value and Variance	
10	Introduction to Probability Distributions	
11	Discrete Probability Distributions	
12	Discrete Probability Distributions	
13	Continuous Probability Distributions	
14	Normal Distribution	

22	Textbooks, References and/or Other Materials:	Probability and Statistics for Engineers and Scientists, Walpole, Myers, Myers and Ye, Prentice Hall, 2011
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	25.00
Quiz	0	0.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Measurement and Evaluation Techniques Used in the Exams and quizzez		

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 preparation	14	5.14	71.96
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm Exams	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			117.96
Total work load/ 30 hr			3.93
ECTS Credit of the Course			4.00

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	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0
ÖK3	0	0	5	0	5	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