AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Probability								
Course Code	BİS523		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	2	Workload	46 *(Hours)*	Theory	1	Practice	0	Laboratory	0
Objectives of the Course	The objective of this course is to introduce the main issues in the theory and practice of probability and basic ınference.								
Course Content	Basic Concepts of Probability, Probability Distributions, Sampling and Sampling Distributions, Estimation, Hypothesis Testing								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation)								
Name of Lecturer(s)	Prof. İmran KURT ÖMÜRLÜ								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	AKDENİZ, F. (2012). Olasılık ve İstatistik, 17. B., Nobel Kitabevi y., Adana.
2	DeGroot, M. H., & Schervish, M. J. (2012). Probability and statistics. Pearson Education.
3	Billingsley, P. (2008). Probability and measure. John Wiley & Sons.
4	Jeffreys, H. (1998). The theory of probability. OUP Oxford.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduce to discrete distributions, Bernoulli distribution
2	Theoretical	Binomial distribution
3	Theoretical	Mean and variance of Binomial distribution, normal approximation to binomial distribution
4	Theoretical	Geometric and hypergeometric distribution
5	Theoretical	Introduce to continuous distributions, uniform distribution
6	Theoretical	Exponential distribution
7	Theoretical	Normal distribution
8	Intermediate Exam	Midterm exam
9	Theoretical	Sampling, sampling distributions, the proporties of point estimation
10	Theoretical	Interval estimation : The interval estimation for population mean and variance
11	Theoretical	The interval estimation for population proportion and the difference between two population parameters
12	Theoretical	Chebyshev’s inequality and the central limit theorem
13	Theoretical	Introduction to hypothesis testing and basic issues, hypothesis testing for population mean
14	Theoretical	Hypothesis testing for population variance and proportion
15	Theoretical	Literature review and discussion
16	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	1	14
Assignment	1	10	0	10
Midterm Examination	1	10	1	11

Final Examination	1	10	1	11
			Total Workload (Hours)	46
			[Total Workload (Hours) / 25*] = **ECTS**	2
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To be able to improve the ability statistical analysis with using basic issues and methodology
2	To be able to apply some special distribution, use statistical methods and comment of its outputs.
3	To be able to est of population parameters
4	To be able to estimate intervals for population parameters
5	To be able to make statistical inferences

Programme Outcomes *(Biostatistics Master)*	
1	To be able to understand the interdisciplinary interaction releated with biostatistics.
2	to be able to use Theoretical and practical knowledge at the level of expertise.
3	To be able to nterpret the information by integrating information from different disciplines and create new information
4	To be able to nalyze the problems encountered by using research methods
5	to be able to conduct a study as an independent specialist
6	To be able to formulate solutions for complex unpredictable problems encountered by developing new approaches and taking responsibility.
7	To be able to resolve problems in environments that require leadership.
8	To be able to evaluate and direct knowledge and skills with a critical approach at the level of expertise.
9	To be able to to give statistical advise at the begining stages of preparing health related projects
10	To be able to get the knowledge and the ability of using statistical packages

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	4	5	4	3	5
P2	4	4	4	4	5
P3	5	4	4	4	4
P4	5	5	4	4	5
P5	4	4	4	4	4
P6	4	4	4	4	4
P7	4	4	4	4	4
P8	5	4	5	4	4
P9	4	3	5	5	4
P10	4	4	5	5	4