



**AYDIN ADNAN MENDERES UNIVERSITY**  
**GRADUATE SCHOOL OF HEALTH SCIENCES**  
**BIOSTATISTICS**  
**BIOSTATISTICS (MEDICAL)**  
**BIOSTATISTICS (MEDICAL) MASTER**  
**COURSE INFORMATION FORM**

Course Title	Biostatistics-I								
Course Code	BİS501	Course Level		Second Cycle (Master's Degree)					
ECTS Credit	6	Workload	152 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	The importance of biostatistics, data presentation, summarizing, sample selection, basic knowledge on statistical comparisons.								
Course Content	Definitions and Terminology, Data Collection Method; Compilation of Information, Graphics; Means, Distribution dimensions, Probability, Binomial Probability and Distribution; Poisson distribution and probability, sampling; Hypothesis Testing, Normal Distribution; Normal Distribution and z-test; t Distribution and Test; Analysis of Variance (one-way, two way); Chi-Square Distribution and the Test; Non-Parametric Tests; Regression Analysis; Correlation Analysis								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration								
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	Dawson, B., Trapp, R. G., & Greive, A. (2004). Basic & clinical biostatistics (Vol. 4). New York: Lange Medical Books/McGraw-Hill.
2	Özdamar, K. (2001). SPSS İle Biyoistatistik, Kaan Kitapevi. Baskı. Eskişehir.
3	Gallin, J. I., & Ognibene, F. P. (Eds.). (2012). Principles and practice of clinical research. Academic Press.
4	Çelik, Y. (2011). Nasıl? Biyoistatistik Bilimsel Araştırma SPSS.
5	Daniel, W. W., & Cross, C. L. (2018). Biostatistics: a foundation for analysis in the health sciences. Wiley.
6	Sokal, R. R., & Rohlf, F. J. (1987). Introduction to biostatistics. New York.
7	Pagano, M., & Gauvreau, K. (2018). Principles of biostatistics. Chapman and Hall/CRC.
8	Norman, G. R., & Streiner, D. L. (2008). Biostatistics: the bare essentials. PMPH USA.

#### Week Weekly Detailed Course Contents

Week	Weekly Detailed Course Contents	
1	Theoretical	Basic definitions and concepts
	Practice	Applications with package programs
2	Theoretical	Editing and graphically analyzing data
	Practice	Applications with package programs
3	Theoretical	Descriptive statistics
	Practice	Applications with package programs
4	Theoretical	Probability, Binomial probability and distribution
	Practice	Applications with package programs
5	Theoretical	Poisson distribution and probability
	Practice	Applications with package programs
6	Theoretical	Hypothesis testing
	Practice	Applications with package programs
7	Theoretical	Normal distribution and z-test
	Practice	Applications with package programs
8	Intermediate Exam	Midterm exam
9	Theoretical	t distribution and t tests
	Practice	Applications with package programs
10	Theoretical	One-way analysis of variance
	Practice	Applications with package programs



11	Theoretical	Non-parametric tests
	Practice	Applications with package programs
12	Theoretical	Non-parametric tests
	Practice	Applications with package programs
13	Theoretical	Chi-square distribution and test
	Practice	Applications with package programs
14	Theoretical	Regression and correlation analysis
	Practice	Applications with package programs
15	Theoretical	Literature review and discussion
	Practice	Literature review and discussion
16	Final Exam	Final exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Assignment	1	10	0	10
Quiz	14	2	1	42
Midterm Examination	1	20	2	22
Final Examination	1	20	2	22
Total Workload (Hours)				152
[Total Workload (Hours) / 25*] = ECTS				6

\*25 hour workload is accepted as 1 ECTS

### Learning Outcomes

1	To be able to Understand the Importance of Statistical Methods in Studies
2	To be able to Understand the Points to Be Considered in Designing the Experimental
3	To be able to Decide Enough Sample Holdings
4	To be able to Prepare Analysis of Research Data
5	To be able to Interpret the Results of Analysis

### Programme Outcomes (*Biostatistics (Medical) Master*)

1	To be able to understand the interdisciplinary interaction related with biostatistics.
2	to be able to use Theoretical and practical knowledge at the level of expertise.
3	To be able to interpret the information by integrating information from different disciplines and create new information
4	To be able to analyze 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 give statistical advise at the beginning 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	5	5	5	5	5
P2	5	5	4	4	4
P3	4	4	4	5	5
P4	4	5	4	5	4
P5	4	4	5	5	4
P6	4	4	4	5	4
P7	5	5	4	3	4
P8	5	5	4	4	4
P9	5	5	5	4	5



P10	5	5	5	4	5
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