Course Title	Code	Semester	Theoretical (hours/week)	Practice (hours/week)	Laboratory (hours/week)	ECTS
Research and Publication Ethics	MİK 521	1./2. Semester	3	0	0	5

Prerequisites	None
Course Language	Turkish
Course Type	Compulsory
Teaching Methods	Lecture, question- answer, demonstration, practice-exercise
Instructor(s)	Prof. Dr. Vildan SÜMBÜLOĞLU Dr. Öğr. Üyesi Pınar GÜNEL KARADENİZ
Course Objective	To emphasize the role of biostatistics methods and principles on health sciences; to teach basic concepts of biostatistics; to give basic information about the planning, executing, evaluating results and interpreting stages of a research.
Course Learning Outcomes	At the end of this course, the students are; 1- able to express the basic concepts of biostatistics, 2- able to calculate descriptive statistics, 3- able to determine the appropriate type of tables and graphs, 4- able to define the concept and methods of sampling, 5- able to determine the appropriate hypothesis test, 6- able to define research methods, 7- able to express stages of research, 8- able to express basic information about the research planning, 9- able to define ethical rules in researches, 10- able to write a research report.
References	1- Sümbüloğlu Kadir ve Sümbüloğlu Vildan. Biyoistatistik. 16. bs., Ankara, Hatiboğlu Yayınevi, 2014. 2- Özdamar Kazım. SPSS ile Biyoistatistik. Genişletilmiş Beşinci Baskı, 2003, Kaan Kitapevi. 3- Alpar Reha. Spor, Sağlık ve Eğitim Bilimlerinden Örneklerle, Uygulamalı İstatistik ve Geçerlik-Güvenirlik, 2010, Detay Yayıncılık. 4- Daniel W.W. Biostatistics A foundation for Analysis in The Health Sciences. 2005, John Wiley and Sons, USA. 5- Schork M.A., Remigton R.D. Statistics with Applications to the Biological and Health Sciences. 2000, Prentice Hall, New Jersey, USA. 6- Dawson B., Trapp R.G., Basic&Clinical Biostatistics, 2004, McGraw-Hill Companies Inc. Newyork, USA. 7- Sümbüloğlu Vildan ve Sümbüloğlu Kadir. Sağlık Bilimlerinde Araştırma Yöntemleri. 6. bs., Ankara, Hatiboğlu Yayınevi, 2013. 8- Friis RH, Sellers TA. Epidemiology for public health practice. fourth edition, 2009. Jones and Bartlett publishers . Canada 9- Rothman K..J, Greenland S, Lash T.l. Modern Epidemiology. 3Rd Edition, Wolters Kluwer/Lippincot Williams&Wilkins, 2008,Philadelphia

WEEKLY COURSE TOPICS

Weeks	DISCUSSION TOPICS TO BE PROCESSED
1.	Health care services and biostatistics, Frequency distributions, Descriptive statistics, Table and graph method
2.	Sampling
3.	Principles of significance tests
4.	Independent samples tests, Paired samples test
5.	Analysis of variance, Two proportions test, One sample tests
6.	Nonparametric tests, Chi-square tests
7.	Correlation and Regression analysis
8.	**Midterm exam**
9.	The Scientific Method, Data and Data Features, Measurement Process and Scales
10.	Examination of Causal Relationships, Errors in Researches
11.	Research Planning, Stages and Types
12.	Survey Method, Experimental Design, Observation Method, Blinding, Randomization
13.	Ethical rules in Researches
14.	Report Writing Methods
15.	**Final Exam**

ECTS / WORK LOAD TABLE

Activities	Number	Duration	Total Work Load
Course	14	3	42
Laboratory			
Practice			
Field Study			
Outclass course work hours (Self working / Teamwork / Preliminary work)	14	3	42
Presentations (Video preparation / Poster preparation / Oral presentation / Focus group discussion / Applying questionnaire/ Observation and report writing)	6	4	24
Seminars			
Project			
Case study			
Role playing, dramatization			
Preparing and criticizing article			
Semester midterm exams	1	7	7
Semester final exams	1	10	10
Total Work Load (hour) / 25(s)	**125/25**		
ECTS	**5**		

EVALUATION SYSTEM

Midterm Studies	Number	Contribution
Midterm exam	1	%30
Quiz		
Laboratory		
Practice		
Field Study		
Specific practical training (If exists)		
Homework assignment		
Presentation and seminar	4	%20
Projects		
Other evaluation methods		
Total of Midterm Studies		%50
Final Studies		
Final	1	%50
Homework assignment		
Practice		
Laboratory		
Total of Final Studies		%50
Contribution of midterm studies to course grade		%50
Contribution of final studies to course grade		%50
Total Grade		100

RELATIONSHIPS BETWEEN COURSE LEARNING OUTCOMES AND PROGRAM QUALIFICATIONS

Program Qualifications		LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	L10
1.	Gains scientific knowledge and skills at the level of expertise in the field of medical microbiology.										
2.	Uses the research resources adequately to reach scientific knowledge.						3	3	3	3	3
3.	Reaches new information in the field of medical microbiology and synthesizes the information obtained from different sources and evaluates it from a scientific point of view.	2	2	2	2	2	3	3	3	3	3
4.	Gains awareness about the ethics of scientific work and fulfills ethical responsibilities.						3	3	3	5	3
5.	Learns and applies the basic principles of research methods.						5	5	5	5	5
6.	Describes the morphological and physiological characteristics of microorganisms.										
7.	Works in the laboratory in accordance with biosafety rules.										
8.	Have knowledge about the devices and tools that are specific to the field and use them.										
9.	Learns and applies laboratory techniques used in the field of medical microbiology.										
10.	Knows and applies the basic methods for microbiological examination.										
11.	Conducts studies related to the field individually or in a team. Performs the tasks given in scientific studies.	2	2	2	2	2	3	3	3	3	3
12.	Plans and conducts scientific research by using the knowledge learned in the field of medical microbiology, analyzes and evaluates the results.	4	4	4	4	4	4	4	4	4	4
13.	Gains the ability to present the information obtained or information related to his / her studies orally and visually.										
14.	Follows scientific developments and current studies.	2	2	2	2	2	2	2	2	2	2
15.	Gains the ability of lifelong learning.	2	2	2	2	2	2	2	2	2	2

Contribution to the level of proficiency: 1: Low **2:** Low/Moderate **3:** Moderate **4:** High **5:** Excellent