



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Biostatistics							
Course Code		EBE640		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	4	Workload	100 ( <i>Hours</i> )	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		To use of statistics in the health field							
Course Content		Basic concepts in Statistics, Causality Descriptive statistics Universe and sample, the concept of power Comparison of the rate of two groups Comparison of the average of two groups Comparison of the averages of more than two group Correlation-regression usage of software like SPSS, StatCal, Pass.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Discussion, Case Study, Individual Study, Problem Solving					
Name of Lecturer(s)		Prof. Pınar OKYAY							

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

### Recommended or Required Reading

1	Aksakoğlu, G. (2006) Sağlıkta araştırma ve Çözümleme, D.E.Ü. Rektörlük Basımevi, İzmir
2	Özdamar K (2001) SPSS ile Bioistatistik, ETAM A.Ş. Matbaa, Eskişehir.
3	3. Sağlık istatistiği Öğretimi, S.K. Lawanga, Cho-yook Iye, Çev: Servet Özgür, Sedat Törel, Cumhuriyet Üniversitesi Yayınları no:31, Ankara
4	Portney LG., Watkins MP. Foundations of clinical research. Applications to practice. Second Edition. Prentice Hall. USA, 2000.
5	Basic & Clinical Biostatistic, Saunders-Dawson B., Trapp R.G. Prentice-Hall International Inc, Toronto, 1994
6	Medical Epidemiology, Greenberg R.S. and et, Appleton & Lange, Toronto 1996
7	Uygulamalı İstatistik, Şanslı Başkan, Ege Üniversitesi Basımevi:İzmir, 1993
8	Introduction to Classical and Modern Test Theory, Crocer L., Algina J., Holt, Rinehart and Winston:Newyork,1986
9	Research Methods in Psychology, Shaughnessy J.J, Zechmeister, Mcgrawhill.New York,1994

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction, course description
	Preparation Work	Reading, Browsing Resources, Examination
2	Theoretical	Health and Concept of Research on Health
	Preparation Work	Reading, Browsing Resources, Examination
3	Theoretical	Causality - Introduction to SPSS
	Preparation Work	Reading, Browsing Resources, Examination
4	Theoretical	Fundamentals of analysis, distributions
	Preparation Work	Reading, Browsing Resources, Examination
5	Theoretical	Research Types, distributions and p-value rate, ratio and risk concepts – sensitivity-specificity, predictive value, probability ratio, consistency (ROC curve)
	Preparation Work	Reading, Browsing Resources, Examination
6	Theoretical	Sample size and power - PASS and Statcalc practice
	Preparation Work	Reading, Browsing Resources, Examination
7	Theoretical	Data types - How to choose the analysing method - Database in SPSS
	Preparation Work	Reading, Browsing Resources, Examination
8	Intermediate Exam	Midterms
9	Theoretical	t test (one sample, two independent samples, two dependent samples), Non parametric tests - SPSS practice
	Preparation Work	Reading, Browsing Resources, Examination



10	Theoretical	chi-square, McNemar chi-square, chi-square for trend - SPSS practice
	Preparation Work	Reading, Browsing Resources, Examination
11	Theoretical	ANOVA - SPSS practice
	Preparation Work	Reading, Browsing Resources, Examination
12	Theoretical	Correlation (spearman, Pearson, Kendall) - SPSS practice
	Preparation Work	Reading, Browsing Resources, Examination
13	Theoretical	Regression (Multiple, binary logistics) - SPSS practice
	Preparation Work	Reading, Browsing Resources, Examination
14	Theoretical	Advanced analysis (stratified analysis, meta-analysis, confounding) - SPSS practice & StatCalc
	Preparation Work	Reading, Browsing Resources, Examination
15	Theoretical	Writing an article, preparing a questionnaire - syntax in SPSS
	Preparation Work	Reading, Browsing Resources, Examination
16	Final Exam	Final

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Individual Work	14	0	2	28
Midterm Examination	1	8	2	10
Final Examination	1	18	2	20
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

\*25 hour workload is accepted as 1 ECTS

### Learning Outcomes

1	1. To be able to know statistical methods and principles
2	To be able to know analysis methods and choose the right method
3	To be able to use methods of statistics effectively by the help of suitable software
4	To be able to interpret the acquired data correctly
5	To be able to use advanced analysis methods

### Programme Outcomes (Midwifery Doctorate)

1	To be able to develop and deepen in the level of expertise with original thinking and / or research in recent and advanced information in the midwifery area as based on midwifery postgraduate qualification, and to create the original definitions bring innovation to the area, to evaluate and use new information in a systematic approach
2	To be able to develop the new / known idea, method and / or application included innovation to the midwifery science and art using the mental processes as creative and critical thinking, problem solving and decision making, to applies to the different area, to make the critical analysis, synthesis and evaluation of new and complex ideas.
3	To be able to use strategic decision-making processes in the solution of problems related midwifery, to adopted and practice continuous professional development and lifelong learning policy.
4	To be able to understand the interaction between disciplines associated with midwifery, to reaches the original results using the information requiring expertise in the analysis, synthesis and evaluation of the new and complex ideas.
5	To be able to has the experience ability of working with other health care disciplines, to make the leadership in interdisciplinary problem solving, to discuss with experts putting out original ideas issues in the field and to use the effective communication showing her competence.
6	To be able to contribute to the solution of social, scientific, cultural and ethical problems encountered in the issues related with midwifery, and support the development of these values.
7	To be able to know the importance of ethical principles and ethics committee for the individual and society, examine and develop governing norms social relations and these relationships with a critical perspective, and if it is necessary, manage action to change.
8	To be able to contribute to advances in the field performing independently an original work developing the new idea, method, design and / or application coming innovation to the midwifery science and art or implementing a known idea, method, design and / or application to a different area.
9	To be able to follow up evidence-based practices and to conduct researches related to professional practice to create evidence in their field.
10	To be able to has knowledge and skills in high-level about statistics the methods used in the midwifery researches, and select, implement and interpret the correct statistical methods in her research, evaluate a scientific article in terms of research methods and statistics.



11	To be able to writ report of the research that she participate, contribute to knowledge in the field presenting at least one scientific article national / international accepted by a peer-reviewed publications in journals and / or presenting at scientific meetings.
12	To be able to have knowledge and skills to use advanced computers, other technological tools and specific to the device required for midwifery area, and to develop creative solutions to a problem.
13	To be able to use current developments and information in the field of health to benefit of society in the direction of mothers, babies, family, national values and the realities of the country, contribute to be the information society and the process of maintain it by introducing the development his society.

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

	L1	L2	L3	L4
P1	5	5	5	5
P3	5	5	5	5
P4	5	5	5	5
P5	5	5	5	5
P10	5	5	5	5
P11	5	5	5	5

