AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Advanced Statistical Methods						
Course Code	BİS637		Couse Level	Third Cycle (Doctorate Degree)			
ECTS Credit	10	Workload	252 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course is the concepts of statistical techniques and allow them to practice in different disciplines on SPSS						
Course Content	One-way analysis of variance, two or more way analysis of variance, regression, correlation, multiple regression, non-parametric statistics, the chi-square distribution.						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods			Explanation (Presentation), Demonstration, Discussion, Individual Study, Problem Solving				
Name of Lecturer(s)							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Mertler, C. A., & Reinhart, R. V. (2016). Advanced and multivariate statistical methods: Practical application and interpretation. Routledge.
2	Kim, K., & Timm, N. (2006). Univariate and multivariate general linear models: theory and applications with SAS. Chapman and Hall/CRC.
3	Alpar, R. (2013). Uygulamalı çok değişkenli istatistiksel yöntemler. Detay Yayıncılık.
4	Johnson, R.A., Wichern, D.W.(1988). Applied Multivariate Statistical Analysis
5	Westfall, P., & Henning, K. S. (2013). Understanding advanced statistical methods. CRC Press.

Weekly Detailed Course Contents

Week	Weekly Detailed Course Contents	
1	Theoretical	Multivariate parametric models
2	Theoretical	Multivariate nonparametric models
3	Theoretical	Multivariate analysis of variance-I
4	Theoretical	Multivariate analysis of variance-I
5	Theoretical	Repeated measures variance analysis
6	Theoretical	Covariance analysis
7	Theoretical	Multivariate covariance analysis
8	Theoretical	Literature review and discussion (Midterm exam)
9	Theoretical	Loglinear analysis-I
10	Theoretical	Loglinear analysis-II
11	Theoretical	Ensemble learning methods-I
12	Theoretical	Ensemble learning methods-II
13	Theoretical	Artificial neural networks
14	Theoretical	Propensity score analysis
15	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Assignment	1	20	0	20
Reading	1	0	10	10
Individual Work	1	0	10	10
Quiz	14	8	1	126
Midterm Examination	1	20	2	22

Final Examination	1	20	2	22
		Total Workload (Hours)		252
		[Total Workload (Hours) / 25*] = **ECTS**		10

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To learn theoretical patterns of multivariate statistical methods
2	
3	Undergraduate and master's degree programs, and the basic methods of the evaluation of multivariate distributions
4	Advanced methods of multivariate analysis and the implementation of their multi-dimensional data
5	To gain the ability to interpret the results of advanced biostatistical analysis correctly

Programme Outcomes *(Public Health Nursing 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 field of communıty health nursing as based on the field of public health nursing postgraduate qualification, and to create the original definitions bring innovation to the area, to evaluate and use new information in a systematic approach
2	Theories devoloping quality of care towards individual,family and society ,using conceptual framework and to make of evidence based nursing practice
3	To approach a systematic way to new ideas in community health nursing and gaining advanced skills in academic reasearch methods in the field.
4	Developing an innovative scientific method bringing innovation to science or practising an already established model in different field. Studying, understanding, designing, adapting and implementing an original subject and be able to contribute to science by publishing
5	Conducting a critical analysis, interpretation and evaluation of new and sophisticated ideas,to achieve original result by using expert knowledge
6	Developing new ideas and methods by using creative and critical thinking skills and leading.
7	At least one foreign language,advanced written,verbal and visual communicating and discussing. ("European Language Portfolio Global Scale", Level C1)
8	Scientific , social and cultural developments follow to contribute to the development of the information society.
9	setting priorities in problem solving ,establishing a functional interaction by using the process of etnical decision –making
10	To be able to has knowledge and skills in high-level about statistics the methods used in the field of community healt researches, and select, implement and interpret the correct statistica methods in her research, evaluate a scientific article in terms of research methods and statistics.,
11	Field of communıty health establishing effective communication showing one's competency in the area/, defending original opinions to discuss of subject in the area with experts in the domestic/ international environments