



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Statistical Methods in Mathematics Education							
Course Code		MTE502		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		Definition and objectives of statistics; statistical methods and analysis, statistical software and applications, the use of statistical programs							
Course Content		Research and data analysis, to use suitable statistical methods, creating SPSS data, frequency distribution and descriptive statistics; distribution of multiple variables' frequencies: crosstabs; correlation; independent samples t test; Oneway ANOVA; Two-way ANOVA; paired samples t test; Oneway ANOVA for repeated measures; regression analysis; multiple regression; analyses of covariance; multivariate variance analyse (MANOVA); non-parametric statistics; reliability and validity, factor analyses							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)		Assoc. Prof. Gökhan AKSU							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	70

Recommended or Required Reading

1	Büyüköztürk, Ş. (2002). Sosyal bilimler için veri analizi el kitabı
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Week	Weekly Detailed Course Contents	
1	Theoretical	Research and data analysis, to use suitable statistical methods, creating SPSS data
2	Theoretical	Frequency distribution and descriptive statistics; distribution of multiple variables' frequencies: crosstabs
3	Theoretical	Correlation
4	Theoretical	Independent samples t test
5	Theoretical	Oneway ANOVA; Two-way ANOVA
6	Theoretical	Paired samples t test
7	Theoretical	Oneway ANOVA for repeated measures
8	Intermediate Exam	Midterm
9	Theoretical	Regression analysis; multiple regression
10	Theoretical	Analyses of covariance
11	Theoretical	Multivariate variance analyse (MANOVA)
12	Theoretical	Non-parametric statistics
13	Theoretical	Non-parametric statistics
14	Theoretical	Reliability, validity and factor analyses
15	Theoretical	Reliability, validity and factor analyses
16	Final Exam	Final Term

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	5	3	112
Midterm Examination	1	38	2	40
Final Examination	1	46	2	48
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8
*25 hour workload is accepted as 1 ECTS				



Learning Outcomes

1	To understand the basic concepts of statistics and terminology of it
2	To use software for measurement
3	To use statistical software
4	To understand the computer assisted statistical methods
5	To use the computer assisted statistical methods at educational researches

Programme Outcomes (*Mathematics Education Master*)

1	Learns sufficient theoretical knowledge in the field of mathematics education
2	Uses theoretical knowledge in educational settings
3	Integrates mathematics education knowledge with the other disciplines and products functional knowledge
4	Uses information and communication technologies efficiently in conceptual learning
5	Finds scientific solutions to the problems in the field of mathematics education
6	Evaluates the knowledge critically in the field
7	Participates team projects in the mathematics education field
8	Shares national and international data in the field of mathematics education
9	Comprehends and evaluates science-technology-society and mathematics interactions
10	Comprehends mathematics under the ethical values and takes account of ethical considerations
11	Follows the current development in the mathematics education field
12	Develops strategical plans and evaluates them in the context of quality processes
13	Adopts lifelong learning strategies to his/her studies

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
P2					4
P3	3	3	3	3	
P4	4	4	4	4	4
P5	5	5	5	5	5
P6	3	3	3	3	
P9	3	3	3	3	
P11	5	5	4	4	4
P12	4	4	4	4	4
P13	3	3	3	3	3

