Graduate School of Health Sciences / Health Management Ph.D.

2023 - 2024 Academic Year

ADVANCED RESEARCH METHODS

Syllabus

Course Description					
Name	**Code**	**Semester**	**T+A Hour**	**Credit**	**ECTS**
ADVANCED RESEARCH METHODS	SAYD1214048	Spring Semester	3+0	3	8

Prerequisites Courses	
Recommended Elective Courses	
Language of Instruction	Turkish
Course Level	Third Cycle (Doctorate Degree)
Course Type	Elective
Course Coordinator	Prof.Dr. Abdulbari BENER
Name of Lecturer(s)	Prof.Dr. Abdulbari BENER
Assistant(s)	
Aim	To demonstrate advanced statistical methods that can be used in scientific research.
Course Content	This course contains; Introduction to multivariate statistical methods,Multi-eyed chi-square tests,Multiple regression analysis methods,Logistic regression analysis 1,Logistic regression analysis 2,Probit analysis,ROC analysis,One factor analysis of variance in repeated measures,Two-factor analysis of variance in repeated measures,One-way analysis of variance in independent groups,Two-way analysis of variance in independent groups,MANOVA,Survival analysis methods 1,Survival analysis methods 2.

Course Learning Outcomes	**Teaching Methods**	**Assessment Methods**
Interprets statistical results.	10, 16, 9	E
Applies multivariate statistical methods on computer.	6, 9	E
Summarizes multivariate statistical methods.	16, 9	E

Teaching Methods	10: Discussion Method, 16: Question - Answer Technique, 6: Experiential Learning, 9: Lecture Method
Assessment Methods	E: Homework

Lecture Schedule

Sequence	**Topics**	**Preliminary Preparation**
1	Introduction to multivariate statistical methods	Hair, Joseph F. "Multivariate data analysis: 2018 (p.1-45)
2	Multi-eyed chi-square tests	Barton, Belinda, and Jennifer Peat. Medical statistics: A guide to SPSS, data analysis and critical appraisal. John Wiley & Sons, 2014. p.249-286
3	Multiple regression analysis methods	J. Hair, p.259-370
4	Logistic regression analysis 1	J. Hair, p.548-598
5	Logistic regression analysis 2	J. Hair, p.548-598
6	Probit analysis	J. Hair, p.548-598
7	ROC analysis	Barton and Belinda, p. 331-349
8	One factor analysis of variance in repeated measures	Belinda and Peat p.161-196
9	Two-factor analysis of variance in repeated measures	Belinda and Peat p.161-196
10	One-way analysis of variance in independent groups	Belinda and Peat p.112-160
11	Two-way analysis of variance in independent groups	Belinda and Peat p.112-160
12	MANOVA	J. Hair, p. 371- 468
13	Survival analysis methods 1	Belinda and Peat p.350-368
14	Survival analysis methods 2	Belinda and Peat p.350-368

Evaluation Methods	**Weight(%)**
Midterm Exam	50
General Exam	50

Resources

1. Advanced Statistics, Larry Stephens, McGraw Hill, 2004.
2. Bilgisayar istatistik ve tıp Dr. Murat Hayran, Dr. Oktay Özdemir.
3. Bilimsel araştırmalarda biyoistatistik prensip ve yöntemlerinin bilinçli kullanımı 4. Kadir Sümbüloğlu, Vildan Sümbüloğlu.
5. Paket programlar ile istatistiksel veri analizi Kazım Özdamar 1999-1-2.
6. Sağlık alanına özel istatistiksel yöntemler Kadir Sümbüloğlu.
7. Sağlık Araştırmaları İçin Temel İstatistik, Murat Hayran, Mutlu Hayran.
8. Tıbbi araştırmalarda istatistiksel analiz teknikleri "SPSS uygulamaları" Aziz Akgül.
9. Barton, Belinda, and Jennifer Peat. Medical statistics: A guide to SPSS, data analysis and critical appraisal. John Wiley & Sons, 2014.
10. Hair, J. F. (2019). Multivariate data analysis: An overview. 8. edition, Örneklendirilmiş Bilimsel Araştırma Yöntemleri
Prof. Dr. Veysel Sönmez, G. Füsun Alacapınar ANI YAYINCILIK