Course Syllabus

Code - Course Title	**EÖD506 - Educational Statistics II**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. YAVUZ AKBULUT

Mode of Delivery	This course is delivered through face-to-face instruction.
Place of Delivery	On Campus
Used Educational Platforms	Face-to-face
Prerequisites	This course has no prerequisites or corequisites.
Courses Recomended	Students who wish to take this course are recommended to have completed Educational Statistics I.
Recommended Resources	• Akbulut, Y. (2010). Sosyal bilimlerde SPSS uygulamaları: Sık kullanılan istatistiksel analizler ve açıklamalı SPSS çözümleri. İdeal. • Field, A. (2009). Discovering statistics using SPSS (3rd edition). Sage.• Huck, S.W. (2012). Reading statistics and research (6th edition). Pearson.• Pallant, J. (2020). SPSS survival manual: A step by step guide to data analysis using IBM SPSS. Routledge.
Work Placement	Not applicable.
Aims of the Course	This course aims to equip students with advanced univariate and multivariate statistical methods and develop their skills in analyzing complex research data using appropriate statistical techniques and interpreting the results scientifically.

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1	**LO-1**	Introduction to the general linear model and the logic of multifactor analyses	Lecture, Question & Answer, Discussion, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 2	**LO-1**	Two-way between-groups analysis of variance	Lecture, Question & Answer, Discussion, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 3	**LO-1**	Three-way between-groups analysis of variance and interaction effects	Lecture, Question & Answer, Discussion, Practice/Practical Work/Workshop, Document/Text/Data Analysis

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 4	LO-1	Two-way repeated-measures analysis of variance	Lecture, Question & Answer, Discussion, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 5	LO-1	Three-way repeated-measures analysis of variance	Lecture, Question & Answer, Discussion, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 6	LO-1	Mixed-design analysis of variance	Lecture, Question & Answer, Discussion, Problem Solving, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 7	LO-2	Analysis of covariance (ANCOVA): basic concepts and applications	Lecture, Question & Answer, Discussion, Problem Solving, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 8	LO-1 LO-2	Multivariate analysis of variance (MANOVA)	Lecture, Question & Answer, Discussion, Problem Solving, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 9	LO-2	Multivariate analysis of covariance (MANCOVA)	Lecture, Question & Answer, Discussion, Problem Solving, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 10	LO-3	Multiple linear regression analysis	Lecture, Question & Answer, Discussion, Problem Solving, Practice/Practical Work/Workshop, Document/Text/Data Analysis

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 11	LO-3	Logistic regression	Lecture, Question & Answer, Discussion, Problem Solving, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 12	LO-4	Exploratory factor analysis: basic concepts and applications	Lecture, Question & Answer, Discussion, Problem Solving, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 13	LO-4	Confirmatory factor analysis and measurement invariance	Lecture, Question & Answer, Discussion, Practice/Practical Work/Workshop, Document/Text/Data Analysis
Week - 14	LO-4	Structural equation modeling and path analysis	Lecture, Question & Answer, Discussion, Problem Solving, Practice/Practical Work/Workshop, Document/Text/Data Analysis

Learning Outcomes

#	Learning Outcome
1	Students will be able to analyze multifactor analysis of variance models according to research designs.
2	Students will be able to evaluate research data using covariance and multivariate analysis techniques.
3	Students will be able to model relationships among variables using regression-based statistical techniques.
4	Students will be able to evaluate measurement models using factor analysis and structural equation modeling approaches.

Sustainable Development Goals

✓ Quality Education

Course Theme

✓ Educational Sciences and Educational Technologies ✓ Data Science

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	3.00	14	42
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	3.00	14	42
Ödevler	10.00	2	20
Proje - Rapor - Sunum Hazırlama	0.00	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	13.00	2	26
Final Sınavı Hazırlığı (sınav süresi dahil)	15.00	1	15
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0.00	0	0
Staj Uygulaması	0.00	0	0
		Calculated ECTS	**6.0**

Assessment Method and Passing Requirements

No content has been provided.