Course Syllabus

Code - Course Title	**İST552 - Teaching Statistics and Probability**
Course Type	I. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	DR. ÖĞR. ÜYESİ AYŞEGÜL ERYILMAZ ÇEVİRGEN

Mode of Delivery	This course will be given online.
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	There is no recommended optional programme component for this course.
Recommended Resources	Akkoç, H. & Yeşildere İmre, S. (2015). Teknolojik Pedagojik Alan Bilgisi Temelli Olasılık ve İstatistik Öğretimi. Pegem Akademi Yayınları.Altun, M. (2013). İlkokullarda (1., 2., 3. ve 4. Sınıflarda) Matematik Öğretimi. Alfa Aktüel Yayınları (ISBN: 9789752532229)Altun, M. (2015). Ortaokullarda (5., 6., 7. ve 8. Sınıflarda) Matematik Öğretimi. Alfa Aktüel Yayınları (ISBN: 9789752532540)Altun, M. (2022). Olasılık ve İstatistik Öğretimi.APA. (2010). Publication Manual of the American Psychological Association, Sixth Edition. American Psychological Association.Baltacı, S. & Bütüner, S. Ö. (2021). Etkinlik temelli olasılık ve istatistik öğretimi. Nobel Yayınevi.Batanero, C., Burrill, G. & Reading, C. Teaching Statistics in school mathematics-challenges for teaching and teacher education. Springer. Batanero, C., Garfield, J., Ottaviani, M. G., & Truran, J. (2000, May). Research in statistical education: Some priority questions. Statistical Education Research Newsletter, 1(2), 2–6. Retrieved December 3, 2006, from http://www.stat.auckland.ac.nz/~iase/serj/newsmay00.pdfBen-Zvi, D. & Makar, K. The teaching and Learnind of Statistics. Springer. Ben-Zvi, D., & Garfield, J. (2004). The challenge of developing statistical literacy, reasoning, and thinking. Dordrecht, the Netherlands: Kluwer Academic Publishers.Dani Ben-Zvi, Koeno Gravemeijer, Janet Ainley. Design of statistics learning environments. Eleventh Congress of the European Society for Research in Mathematics Education (CERME11), Utrecht Uni- versity, Feb 2019, Utrecht, Netherlands. hal-02410840 Güven, B., Özmen, Z. M., Gürbüz, R. &Akkan;, Y. (2023) Teoriden Pratiğe Olasılık ve İstatistik Öğretimi. Vizetek Yayıncılık. Joliffe, F. (1998). What is research in statistics education? In L. Pereira-Mendoza (Ed.), Proceedings of the fifth international conference on teaching statistics (pp. 801–806). Singapore: International Statistical Institute. Retrieved April 20, 2008, from http://www.stat.auckland.ac.nz/~iase/publications/2/Topic6x.pdfJones, G. A., & Thornton, C. A. (2005). An overview of research into the teaching and learning of probability. In G. A. Jones (Ed.), Exploring probability in school: Challenges for teaching and learning, (pp. 65–92). New York: Springer.Lajoie, S. P. (1998). Reflections on statistics: Learning, teaching, and assessment in grades K-12 (studies in mathematical thinking and learning series). Mahwah, NJ: Lawrence Erlbaum Associates.Lovett, M. C., & Shah, P. (Eds.) (2007). Thinking with data (Carnegie Mellon Symposia on Cognition Series). Mahwah, NJ: Lawrence Erlbaum Associates.Shaughnessy, J. M. (2007). Research on statistics learning and reasoning. In F. K. Lester (Ed.), Second handbook of research on mathematics teaching and learning (pp. 957–1010). Information Age Pub Inc.Van De Walle, J. A., Karp, K. S., & Bay-Williams J. M. (2014). İlkokul ve Ortaokul Matematiği Gelişimsel Yaklaşımla Öğretim. Nobel Yayınevi.
Work Placement	NA

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Historical Development of Probability and Statistics	
Week - 2		The Importance of Learning Probability and Statistics	
Week - 3		Statistics and Probability as a Learning Area	
Week - 4		Statistics and Probability in Mathematics Curriculum of Different Countries	
Week - 5		Basic Concepts in Statistics: Research question, Types of data representation, Descriptive statistics, Inferential statistics	
Week - 6		Basic Concepts in Statistics: Research question, Types of data representation, Descriptive statistics, Inferential statistics	
Week - 7		Components and Development of Statistical Thinking	
Week - 8		Student Difficulties and Misconceptions in Learning Statistics.	
Week - 9		Student Difficulties and Misconceptions in Learning Statistics	
Week - 10		Basic Concepts in Probability: Probability, Experiment, Sample Space, Event, Simple Event, Compound Event, Conditional Probability	
Week - 11		Basic Concepts in Probability: Probability, Experiment, Sample Space, Event, Simple Event, Compound Event, Conditional Probability	
Week - 12		Components and Development of Probabilistic Thinking	
Week - 13		Student Difficulties and Misconceptions in Learning Probability.	
Week - 14		Student Difficulties and Misconceptions in Learning Probability.	

Learning Outcomes

#	Learning Outcome
1	Remember the basic concepts of probability and statistics.
2	Explains the place of probability and statistics in mathematics curriculum.
3	Explains the importance of probability and statistics in mathematics learning.
4	Explains the importance of probability and statistics in daily life.
5	Analyzes the learning of concepts related to probability and statistics.
6	Analyzes the use of materials in the teaching and learning of probability and statistics.

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

No content has been provided.

Assessment Method and Passing Requirements	Quamtity	Percentage (%)
1.Midterm Exam	1	40
Final Exam	1	60
	Sum (%)	**100**