Course Syllabus

Code - Course Title	**BTÖ526 - Artificial Intelligence Applications in Education**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. MUHAMMET RECEP OKUR

Mode of Delivery	Face to face
Place of Delivery	On Campus
Used Educational Platforms	Face-to-face
Prerequisites	None
Courses Recomended	None
Recommended Resources	Recommended reading Luckin, R. (2018). Machine Learning and Human Intelligence: The Future of Education for the 21st Century.Holmes, W., Bialik, M., & Fadel, C. (2019). Artificial Intelligence in Education: Promises and Implications for Teaching and Learning.
Work Placement	None
Aims of the Course	The aim of this course is to enable graduate students to critically analyze artificial intelligence concepts and their applications in education, to evaluate these applications on the basis of evidence, and to develop an original application project. The course covers an introduction to artificial intelligence, systematic reviews of AI research in higher education, the national AI strategy and action plan, the DigComp and DigCompEdu competence frameworks, large language models, personalized learning, automated assessment and feedback, chatbots, learning analytics, and ethics, bias, and data privacy. Using this knowledge, students are expected to design an AI-supported educational application, present their projects, and take part in peer evaluation.

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Introduction to artificial intelligence: Definitions, history, and basic concepts	
Week - 2		The place and importance of artificial intelligence in education	
Week - 3		Introduction to personalized learning systems	
Week - 4		Artificial intelligence-supported personalized learning applications	
Week - 5		Automatic assessment systems: Exam, homework and performance tracking	
Week - 6		Feedback mechanisms and AI-based feedback tools	
Week - 7		Learning interaction with virtual teachers and chatbots	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 8		Ethical and security issues: AI, data privacy, and bias	
Week - 9		Smart educational tools and virtual teachers	
Week - 10		Chatbots and interactive learning systems	
Week - 11		Applied Project Development	
Week - 12		Applied Project Development	
Week - 13		Project Presentations and General Evaluation	
Week - 14		Project Presentations and General Evaluation	

Learning Outcomes

#	Learning Outcome
1	Will be able to explain the basic principles of artificial intelligence
2	Will be able to explain individualized education systems supported by artificial intelligence
3	Will be able to discuss the principles of ethical use of artificial intelligence in education.

Sustainable Development Goals

✓ Quality Education ✓ Industry, Innovation and Infrastructure ✓ Reducing Inequalities

Course Theme

✓ Educational Sciences and Educational Technologies ✓ Artificial Intelligence

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

✓ Open-Ended Test ✓ Multiple Choice Test ✓ Project ✓ Homework ✓ Presentation

Community Service Activity

This course does not include any Community Service activities.