Course Syllabus

Code - Course Title	**DİT506 - Advanced Technologies in Digital Games**
Course Type	II. SEMESTER
Laboratory + Practice	4+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	DR. ÖĞR. ÜYESİ FATİH ÖZER

Mode of Delivery	Face-to-face
Prerequisites	-
Courses Recomended	-
Recommended Resources	-
Work Placement	-

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Introduction to Advanced Technologies in Digital Games: Current Trends and the Role of Emerging Technologies in the Game Industry	
Week - 2		Game Engines and Advanced Graphics Technologies: Real-Time Rendering Techniques	
Week - 3		Fundamentals of Artificial Intelligence: Decision-Making Systems and Behavioral Models in Games	
Week - 4		Advanced Game AI: Machine Learning and Procedural Content Generation	
Week - 5		Virtual Reality (VR) and Augmented Reality (AR) Technologies	
Week - 6		Extended Reality (XR) and Immersive Experience Design	
Week - 7		Cloud Gaming and Distributed Systems	
Week - 8		Project Proposal Presentations	
Week - 9		Big Data and Data-Driven Systems in Games	
Week - 10		Real-Time Physics Simulations and Advanced Game Mechanics	
Week - 11		Multiplayer Systems: Network Architectures and Synchronization Techniques	
Week - 12		Applications of Blockchain and NFT Technologies in Games	
Week - 13		Ethics, Security, and Sustainability: Implications of Advanced Technologies in Games	
Week - 14		General Evaluation and Final Project Presentations	

Learning Outcomes

#	Learning Outcome
1	Explains advanced technologies used in digital games and their role in the game industry.
2	Analyzes and compares real-time graphics, physics systems, and game engine technologies.
3	Evaluates artificial intelligence techniques used in games and explains their various application areas.
4	Applies virtual, augmented, and extended reality technologies within the context of game design.
5	Analyzes advanced systems such as cloud gaming, multiplayer infrastructures, and distributed architectures.
6	Evaluates the use of big data, blockchain, and next-generation technologies in game development processes.
7	Designs, develops, and presents a game project based on advanced technologies within an academic framework.

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.