Course Syllabus

Code - Course Title	**DOT204 - Game Engine II**
Course Type	IV. SEMESTER
Laboratory + Practice	3+2
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	DR. ÖĞR. ÜYESİ FATİH ÖZER

Mode of Delivery	The mode of delivery of this course is face to face.
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	Homo Ludens, The Art of Game Design, Fundamentals of Game Design, Game Mechanics: Advanced Game Design
Work Placement	N/A

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Introduction to advanced concepts in game engines	
Week - 2		Advanced render pipeline structure and shader systems	
Week - 3		Physics engine integration and collision detection	
Week - 4		Real-time lighting systems and global illumination	
Week - 5		Particle systems and visual effects management	
Week - 6		Artificial intelligence movement systems and pathfinding	
Week - 7		Blueprint and visual programming logic	
Week - 8		UI systems and HUD design	
Week - 9		Camera controls and player perspective systems	
Week - 10		Multiplayer games and basic principles of networking	
Week - 11		Performance monitoring and optimization techniques	
Week - 12		Version control systems and project management	
Week - 13		Working on advanced application scenarios	

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 14		Application presentation and evaluation	

Learning Outcomes

#	Learning Outcome
1	Define and apply advanced systems of game engines
2	Produce advanced visual output using shader and render systems
3	Integrate AI, UI, and effect systems in a holistic manner
4	Apply performance optimization and multiplayer configurations
5	Develop prototypes using advanced game engine capabilities

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.