Course Syllabus

Code - Course Title	**İKT186 - Platform Ekonomileri ve Yapay Zeka**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**4.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. SELİM YILDIRIM

Mode of Delivery	Distance Learning, online.
Prerequisites	None. (Since the course content is interdisciplinary, fundamental concepts will be introduced from scratch.)
Courses Recomended	Prior completion of Microeconomics, Competition Law, or Introduction to Data Science is recommended to deepen understanding, but is not required.
Recommended Resources	Main Textbook: Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). Platform Revolution. W. W. Norton & Company.For AI Economics: Agrawal, A., Gans, J., & Goldfarb, A. (2018). Prediction Machines: The Simple Economics of Artificial Intelligence. Harvard Business Review Press.Simulation Materials: Google Colab notebooks and Q-learning simulation interfaces provided by the instructor.Legislation: Summary texts of the EU Digital Markets Act (DMA) and Digital Services Act (DSA).
Work Placement	None.

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Course Introduction and Fundamental Concepts; Two-sided markets, cross-side network effects, and the critical mass (chicken-egg) problem.	
Week - 2		Platform Pricing Strategies; Cross-subsidization, penetration pricing, and analysis of user acquisition costs (burn rate).	
Week - 3		Trust Mechanisms and Reputation Systems; The role of trust in market design, rating systems, reputation inflation, and social biases.	
Week - 4		Algorithmic Management on Platforms; The invisible hand of ranking and matching algorithms on the market.	
Week - 5		AI Fundamentals for Economists; The logic of Reinforcement Learning (RL), exploration-exploitation trade-off.	
Week - 6		Algorithmic Pricing and Competition; Pricing algorithms and the risk of tacit collusion; analysis of the Calvano model.	
Week - 7		Recommender Systems and Consumer Welfare; Collaborative filtering, filter bubbles, and discussions on algorithmic diversity.	
Week - 8		Midterm Assessment and Case Analysis; Integrated analysis of platform strategies through real-world cases.	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 9		Data Economy and Market Power; Data-driven network effects (data flywheel), data ownership, and barriers to entry	
Week - 10		The Privacy and Personalization Paradox; Targeted advertising, the iOS ATT case, and the economics of privacy technologies (differential privacy).	
Week - 11		The Gig Economy and Labor; Algorithmic control, surveillance capitalism, and the legal status of platform workers (gig workers).	
Week - 12		Digital Markets and Regulation I (Labor Focus); Discussions on the EU Platform Work Directive and demands for algorithmic transparency	
Week - 13		Digital Markets and Regulation II (Competition Focus); Digital Markets Act (DMA), self-preferencing, and interoperability.	
Week - 14		General Synthesis and Future Outlook; The AI Act, the impact of Generative AI on platforms, and end-of-term review.	

Learning Outcomes

#	Learning Outcome
1	(Conceptual Analysis): Distinguish the structural differences between traditional firms and platform business models by analyzing multi-sided market dynamics, network effects, and the critical mass problem.
2	(Mechanism and Impact): Evaluate the effects of algorithmic pricing, ranking, and matching mechanisms on market efficiency, competition, and tacit collusion.
3	(Data and Ethics): Interpret the trade-offs between privacy, personalization, and consumer welfare, as well as the risks of algorithmic bias within the context of the data economy.
4	(Regulation): Discuss current digital market regulations (DMA, DSA, AI Act) from a critical perspective within the framework of competition law and the gig economy (labor).
5	(Application): Design experiments on digital market scenarios using AI and simulation tools (e.g., Colab, LLMs) and use the obtained data in strategic decision-making processes.

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

AKTS Workload

Activity	Duration (Hour)	Count	Workload
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.