Course Syllabus

Code - Course Title	**VBA101 - Introduction to Algorithms**
Course Type	I. SEMESTER
Laboratory + Practice	3+0
ECTS	**5.0**
Language of Instruction	İngilizce
Course Type	Required Courses
Course Instructor(s)	ÖĞR. GÖR. KUTLU AKÇORAL

Mode of Delivery	Face to face

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Definition of algorithms and fundamental concepts	
Week - 2		Basic problem-solving strategies	
Week - 3		Introduction to algorithm complexity	
Week - 4		Algorithmic Thinking: Flowcharts	
Week - 5		Algorithmic Thinking: Pseudocode	
Week - 6		Heuristic problem-solving strategies	
Week - 7		Computational logic basics	
Week - 8		Data Structures: Arrays and Linked lists	
Week - 9		Data Structures: Stacks and Queues	
Week - 10		Hash tables and implementations	
Week - 11		Karmaşıklık Analizi: Big-O, Big-Omega, Big-Theta	
Week - 12		Time and space complexity evaluations	
Week - 13		Worst-case scenarios analysis	
Week - 14		Applied Sorting and Searching: Bubble, Merge, Binary	

Learning Outcomes

#	Learning Outcome
1	Define and evaluate algorithm complexity
2	Apply heuristic problem-solving strategies

Learning Outcomes

#	Learning Outcome
3	Implement fundamental data structures
4	Execute sorting and searching algorithms

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.