Course Syllabus

Code - Course Title	**VBA209 - Data Acquisition and APIs**
Course Type	III. SEMESTER
Laboratory + Practice	2+0
ECTS	**4.0**
Language of Instruction	İngilizce
Course Type	Required Courses
Course Instructor(s)	DR. ÖĞR. ÜYESİ ÖNDER DORAK

Mode of Delivery	Face to face

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Data Collection: Web scraping basics	
Week - 2		Advanced scraping techniques (Scrapy)	
Week - 3		Dynamic page control using Selenium	
Week - 4		Scraping ethics and rate limiting protocols	
Week - 5		Web Services: Using RESTful APIs	
Week - 6		Exploring GraphQL APIs	
Week - 7		Processing JSON and XML data structures	
Week - 8		Open API endpoints integration	
Week - 9		Data Integration: OAuth and API key management	
Week - 10		Converting raw API data to tabular formats	
Week - 11		API pagination handling techniques	
Week - 12		Data Pipelines: Automation with scripts	
Week - 13		Fault-tolerant data extraction workflows	
Week - 14		Cloud storage integration for pipelines	

Learning Outcomes

#	Learning Outcome
1	Utilize web scraping tools and control dynamic pages
2	Process JSON and XML data via RESTful APIs

Learning Outcomes

#	Learning Outcome
3	Manage OAuth and automated API key integrations
4	Build fault-tolerant automation pipelines for data extraction

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.