Course Syllabus

Code - Course Title	**VBA403 - Spatial Data Science**
Course Type	VII. SEMESTER
Laboratory + Practice	3+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		Geospatial Data Types: Working with vector data	
Week - 2		Analyzing raster data formats	
Week - 3		Managing coordinate reference systems (CRS)	
Week - 4		Spatial Analysis: Executing spatial joins	
Week - 5		Performing buffer analysis	
Week - 6		Analyzing point patterns	
Week - 7		Conducting spatial autocorrelation tests (Moran's I)	
Week - 8		Spatial Modeling: Implementing geographically weighted regression	
Week - 9		Performing spatial interpolation (Kriging)	
Week - 10		Designing interactive web mapping applications	
Week - 11		Open Spatial Data: Utilizing satellite imagery	
Week - 12		Processing demographic census data	
Week - 13		Applying spatial science to urban planning	
Week - 14		Environmental monitoring case studies	

Learning Outcomes

#	Learning Outcome
1	Manage coordinate reference systems and spatial data types
2	Execute spatial joins and buffer analysis efficiently

Learning Outcomes

#	Learning Outcome
3	Implement geographically weighted regression models
4	Utilize open satellite and demographic census spatial data

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.