AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Geographic Information System and Remote Sensing For Mapping and Managing Natural Resource						
Course Code	ZPM510		Couse Level	Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	Objective of this course is to give information about mapping and managing natural resource such as geology, geomorphology, soil, vegetation, land use / land cover using Geographic Information System and Remote Sensing technologies and to interpret and process aerial photographs and satellite images.						
Course Content	Content of this course; Information about mapping and managing natural resource, Importance of natural resource management, Natural resource mapping techniques, Geographic information system and remote sensing application on natural resource management; image analysis, image interpret, digitizing and classification of images, mapping land use/ land cover and vegetation.						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods		Explanation (Presentation), Discussion, Case Study, Individual Study					
Name of Lecturer(s)							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Wang, G., Weng, Q. (eds.), 2013. Remote Sensing of Natural Resources, CRC Press, 580 pages.
2	Cushman, S.A., Huettmann, F. (eds), 2010. Spatial Complexity, Informatics, and Wildlife Conservation, Springer, New York, 458 pages.
3	Wang, Y. (ed), 2010. Remote Sensing of Coastal Environments, CRC Press, Taylor&Francis Group, Boca Raton, FL, USA, 413 pages.
4	Franklin, S.E., 2010. Remote Sensing for Biodiversity and Wildlife Management: Synthesis and Applications,. McGraw-Hill Companies, 335 pages.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to course: content, reason, importance, process method and needs
2	Theoretical	Information about mapping and managing natural resource, Importance of natural resource management
3	Theoretical	Natural resource mapping techniques; traditional and accurate mapping techniques (Geographic Information System and Remote Sensing)
4	Theoretical	Geographic information system and remote sensing application on natural resource management; natural resource inventory, damage and risk assessment
5	Theoretical	Geographic information system and remote sensing application on natural resource management; change detection, suitability analysis
6	Theoretical	Geographic information system and remote sensing application on natural resource management: environmental monitoring, environmental impact assessment
7	Theoretical	Natural resourse problems: deforestation (management of forest), soil losses (prevention on desertification)
8	Intermediate Exam	Mid-term exam
9	Theoretical	Natural resourse problems: watershed management, air pollution, loss of habitat (biodiversity management), Defining area, collecting data and data interpratation
10	Theoretical	Defining area, collecting data and data interpratation
11	Theoretical	Geometric correction and diğitizing data
12	Theoretical	Classification of data
13	Theoretical	Mapping forest and agricultural areas
14	Theoretical	Mapping Landuse/landcover and vegetation
15	Theoretical	Mapping Hidrology, soil and geology
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	4	2	84
Lecture - Practice	14	4	2	84
Midterm Examination	1	15	1	16
Final Examination	1	15	1	16
			Total Workload (Hours)	200
		[Total Workload (Hours) / 25*] = **ECTS**		8

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to understand mapping and managing natural resource
2	To be able to understand why geographic information system and remote sensing application is important for natural resource management
3	To be able to examine the problems of natural resource
4	To be able to interpret natural resource mapping techniques
5	To be able to obtain natural resource map using geographic information system and remote sensing software.

Programme Outcomes *(Landscape Architecture Master)*

1	e
2	e
3	e
4	e
5	e

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	3	4	3	5	5
P2	3	4	3	5	5
P3	5	5	5	5	5
P4	5	5	5	5	5