AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Introduction to Remote Sensing						
Course Code		BSM415		Couse Level	First Cycle (Bachelor's Degree)			
ECTS Credit	5	Workload	125 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		To gain knowledge and skills about the principles of Remote Sensing (RS), tools used in RS, software and digital data, RS application areas, RS applications in agriculture and natural resources monitoring.						
Course Content		Basic principles of remote sensing, usage areas, space platforms used in UA, satellite images, applications of UA in agriculture						
Work Placement		N/A						
Planned Learning Activities and Teaching Methods			Explanation (Presentation), Demonstration, Discussion, Case Study					
Name of Lecturer(s)								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Sesören, A., 1999. Uzaktan Algılamada Temel Kavramlar. Mart Matbaacılık, İstanbul.
2	Lillesand, T.M., Kiefer, R.W., 2000. Remote Sensing and Image Intrpretation. Fourth Ed. John. Wiley and Sons, Inc., New York, 710 pp.
3	Aronoff, S. 2005. Remote Sensing for GIS Managers. ESRI press, Redlands, California, USA. 487p.
4	Buiten , H.J., Clevers J.G.P.W., 1993. Land Observation By Remote Sensing Theory and Applications. Wageningen Agricultural Uni. The Netherlands. Gordon and Breach Sience Publishers.
5	Shresta, D.P., 1991. An Introduction to Remote Sensing From Space. ITC, International Institute for Aerospace Survey and Earth Sciences

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction
2	Theoretical	Remote Sensing Application Areas
3	Theoretical	Basic principles of remote sensing
4	Theoretical	Electromagnetic Radiation
5	Theoretical	Image and Digital Image Processing
6	Theoretical	Space Platforms Used in Remote Sensing
7	Theoretical	Space Platforms Used in Remote Sensing
8	Theoretical	Space Platforms Used in Remote Sensing
9	Intermediate Exam	Midterm Exam
10	Theoretical	Satellite Images
11	Theoretical	Image processing
12	Theoretical	Classification, Pixelization
13	Theoretical	Applications of Remote Sensing in Agriculture
14	Theoretical	Remote Sensing and Soils
15	Theoretical	Mapping Soils with Remote Sensing Techniques
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	5	3	112
Midterm Examination	1	5	1	6

Final Examination	1	6	1	7
		Total Workload (Hours)		125
		[Total Workload (Hours) / 25*] = **ECTS**		5

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To describe the definition of RS, basic principles and elements of RS, areas of general and agricultural use of RS.
2	To define the properties of remote sensing hardware and software commonly used in Turkey and in the World.
3	To define the basic elements of RS, digital data sources and methods of obtaining data.
4	To interpret the basic RS techniques used for monitoring natural resources such as soil, water and forest.
5	To follow the innovations on RS applications for monitoring, protecting and developing natural resources in Turkey and in the World.

Programme Outcomes *(Agricultural Biotechnology)*

1	To be able to develop skills in identifying, modeling and solving problems in agricultural biotechnology
2	To be able to synthesize life and engineering sciences for the effective resource planning of agricultural biotechnology applications
3	To be able to interpret about living organisms structure, metabolic and physiological processes in order to propose biotechnological solutions to the agricultural problems
4	To be able to analyze genomic, metabolomic and proteomic information via bioinformatic tools.
5	To have the ability to analyze collected data and interpret the results.
6	To have the ability of individual working ability and to make independent decisions, to work in inter-disciplinary and interdisciplinary teamwork, to communicate by expressing their ideas orally and in writing, clearly and concisely
7	To have the awareness of professional liabilities and ethics
8	To be able to follow current national and international problems

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	2	2	2	4	4
P2	3	2	2	4	4
P3	1	1	1	2	1
P4	1	2	1	1	1
P5	4	4	4	3	4
P6	4	4	4	3	4
P7	3	4	4	3	4
P8	4	4	3	3	4