SOIL INFORMATION SYSTEMS

1	Course Title:	SOIL INFORMATION SYSTEMS	
2	Course Code:	TOP5954	
3	Type of Course:	Optional	
4	Level of Course:	Second Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	none	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ERTUĞRUL AKSOY	
15	Course Lecturers:	Doç. Dr. Gökhan ÖZSOY	
16	Contact information of the Course Coordinator:	Uludağ Üniversitesi, Ziraat Fakültesi, Toprak Bilimi ve Bitki Besleme Bölümü 16059 Görükle Kampüsü, Nilüfer/Bursa Tel: 0-224-2941534 E-posta: aksoy@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	Learning the bases of Geographic Information Systems, various models and data analyses of preparing soil information systems with its applications.	
19	Contribution of the Course to Professional Development:	Can upload, transform, analyze and interpret soil data in the GIS environment for the purpose of sustainable use and management of soils.	
20	Learning Outcomes:		
		1	To understand basic map contents.
		2	TTo learn fundamentals and use of GIS
		3	To comprehend soil database and it's design
		4	To perform basic GIS analyses for agriculture
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	What is GIS? History.	Introduction to commonly used GIS softwares
2	What is an information system? What is a Soil Information System?	Introduction to commonly used GIS softwares
3	Basic mapping info	Topographic maps and interpretation

4	Mapping projections	Aerial photos , satellite images and soil reflection
5	Data sources and methods for obtaining data	Aerial photos, satellite images, hardcopy maps, digital maps
6	Data construction, raster data, vector data	Raster and vector data conversion
7	Raster and vector data, preprocessing on data input	Soil maps and reports
8	Digitizing and data input, data input methods and tools	Digitizing applications (screen and tablet digitizing)
9	Preparing and designing databases	Setting up a database
10	Use of digital soil data in GIS analyses and modeling	Setting up a database: significant errors and taypes in GIS
11	Comparative analyses of morphological physical, chemical and biological properties of soils in GIS.	data transformation and Modeling
12	Compilation of data at soil survey reports and their structures	data transformation and Modeling
13	Data integration and standardization	Preparing map output
14	Homework presentation and evaluation; discussions on weakness	Recclassification, Fertility and suitability analyses

22	Textbooks, References and/or Other Materials:	Aksoy, E. GIS course notes.25p. Burrough, P.A., 1986. Principles of Geographical Information Systems for Land Resurces Assesment. Univ. Of Utrecht, The Netherlands. Clarendon Press, Oxford. Arctur, D. and Zeiler, M. 2004. Designing Geodatabases:Case studies in GIS data modeling. ESRI Mitchell, A. 2005. The ESRI Guide to GIS Analysis:Vol 2 238p.

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	2.00	28.00
Practicals/Labs		14	2.00	28.00
Self study and preperation		14	2.00	28.00
Homeworks		5	15.00	75.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm Exams		0	0.00	0.00
Others		0	0.00	0.00
Final Exams		1	20.00	20.00
Total Work Load				179.00
Total work load/ 30 hr				5.97
ECTS Credit of the Course				6.00

TERM LEARNING ACTIVITIES	**NUMBE**	**WEIGHT**
Midterm Exam	0	0.00
Home work-project	0	0.00
Total	1	100.00
Contribution of Term (Year) Learning Activities to Success Grade		0.00
Contribution of Final Exam to Success Grade		100.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Term homeworks, attandes performance to lecture and final exam

24	**ECTS / WORK LOAD TABLE**

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	2	2	0	5	0	0	0	3	0	0	0	0	0	0	0	0
ÖK2	2	2	0	5	0	0	0	3	0	0	0	0	0	0	0	0
ÖK3	2	2	0	5	0	0	0	4	0	0	0	0	0	0	0	0
ÖK4	2	2	0	5	0	0	0	4	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**			**3 Medium**			**4 High**			**5 Very High**				