

**ERASMUS MUNDUS MASTER PROGRAMME IN SOIL SCIENCE – emiSS**  
**2020-2021 ACADEMIC YEAR - MODULE SYLLABUS**

<b>Name of course:</b>	
<i>SOIL AND WATER CONSERVATION TECHNIQUES</i>	
ECTS	6
Type of Course	<i>Elective</i>
Form of Examination	<i>Written Examination</i>
Prerequisites	<i>Basic knowledge in the soil science, agricultural, forestry, environmental, geology or earth science.</i>

<b>Field of Study:</b>	
<i>Agriculture</i>	
Education profile	<i>Academic</i>
Code of study form and level of education	<i>Master of Science</i>
Academic year/Semester	<i>First year/Fall Semester</i>
Specialization	<i>Agriculture</i>
Language of education	<i>English</i>

<b>The lecturer module:</b>	
The name of faculty	<i>Ondokuz Mayıs Univ. Faculty of Agriculture</i>
The name of department	<i>Soil Science &amp; Plant Nutrition</i>

**Educational outcomes:**

**Description of the learning effect**

**KNOWLEDGE - student knows and understands:**

1	<i>Student knows to soil erosion, its causes and contributing factors</i>
2	<i>Student knows to basic applications of soil and water conservation techniques</i>
3	<i>Student knows to conservation of natural resources and their sustainable use</i>
4	<i>Student knows to land use planning</i>

**SKILLS - the graduate can**

1	<i>Student obtains the necessary scientific information from literature, databases or other sources</i>
2	<i>Student shows the ability to correctly interpret the management of natural resources.</i>


**SOCIAL COMPETENCES - graduate:**

1	<i>Student shows activity during a discussion on various issues related to soil and agricultural engineering</i>
2	<i>Student has the competence to participate in agricultural research and discuss their results</i>

**Course objectives and content:**

This course is to acquaint the graduate students with fundamental concepts of soil and water conservation techniques.

Definition and forms of erosion, erodibility of soil, land use and soil conservation, soil and water conservation principles.

**Soil And Water Conservation Techniques**

36 hours

Subject of lecture	1	<i>Conservation and the environment 3 h</i>
	2	<i>Infiltration, evaporation, transpiration and runoff 3 h</i>
	3	<i>The mechanics of erosion, geological and accelerated erosion 3 h</i>
	4	<i>Forms of erosion, water erosion 3 h</i>
	5	<i>Wind erosion 3 h</i>
	6	<i>Soil degradation and phases of soil erosion 3 h</i>
	7	<i>Midterm exam</i>
	8	<i>Factors effecting the soil erodibility, soil physical characteristics, vegetation. 3 h</i>
	9	<i>Topography, land use, soil cultivation and conservation 3 h</i>
	10	<i>Rainfall and estimating runoff 3 h</i>
	11	<i>Estimating amount of the soil loss 3 h</i>
	12	<i>Physical erosion control measures, water management, terracing 3 h</i>
	13	<i>Erosion research methods 3 h</i>
	14	<i>Final exam</i>

The methods of verification and assessment criteria and principles

*For a positive grade, sum of 40% of midterm (100%) and 60% of final (100%) exams should be greater than 60.*

**Literature:**

Recommended Textbooks	1- Hudson, N. 1995. <i>Soil Conservation. Fully Revised and Updated Third Edition.</i> Iowa University Press. Ames Iowa . 2- Schwab, G.O., Fangmeier, D.D., Elliot, W., Frevert, R.K., 1993. <i>Soil and Water Conservation engineering. Fourth Edition.</i> John Willey and Sons, New York.
Complementary	<i>Current publications in scientific journals related to course issues and some course materials supported by lecturer.</i>


**Structure of learning outcomes:**
**The area of study:** agricultural, soil science, environmental science, natural resources **6 ECTS\***
**The structure of student activity:**

<i>Learning Activities</i>	<i>Amount</i>	<i>Time (h)</i>	<i>Total work-load (h)</i>
Participate in lecture	12	3	36
Participate in midterm exam	1	2	2
Individual study for midterm exam	6	3	18
Individual study for lectures	12	1	12
Laboratory study			
Quiz			
Assignment	10	2	20
Participate in final exam	1	2	2
Individual study for final exam	6	3	18
Literature critical review	10	2	20
Oral exam			
Individual study for problem solution	11	2	22
Consultations			
Participate in researches			
Mandatory practices and internships			
	<b>Total workload (h)</b>		<b>150</b>

\*ECTS Credits = Total Workload (Hours) / 25 (Hours/1 ECTS) = 150 / 25 = 6 ECTS

Name Surname  
 of Lecturer : .....

Sign:.....

Date: .....