

ERASMUS MUNDUS MASTER PROGRAMME IN SOIL SCIENCE – emiSS

2020-2021 ACADEMIC YEAR - MODULE SYLLABUS

Name of course:

SOIL CLASSIFICATION SYSTEMS

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>

Field of Study:

Agriculture

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>

The lecturer module:

The name of faculty	<i>Ondokuz Mayıs Univ. Faculty of Agriculture</i>
The name of department	<i>Soil Science & Plant Nutrition</i>

Educational outcomes:

Description of the learning effect

KNOWLEDGE - student knows and understands:

1	<i>Student knows many various soil types in the different ecosystems on the world</i>
2	<i>Student knows the soil classification processes</i>
3	<i>Student knows the use classification for soil survey mapping purposes</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 gain systematic approach for common soil classification systems (Soil Taxonomy and FAO-WRB).</i>



SOCIAL COMPETENCES - graduate:	
1	<i>Student gives his or her interpretation during a discussion on various issues related to different soils</i>
2	<i>Student has the competence to participate in soil research sand discuss their results</i>

Course objectives and content:

This course is to acquaint the graduate students with fundamental concepts of advanced soil physics.

Relationships among solid, liquid and gas phases, total potential of soil water, water flow in planar, radial and spherical symmetries, heat transport in soil system, saturated and unsaturated flow, solutions for some flow problems.

Soil Classification Systems		<i>36 hours</i>
Subject of lecture	1	<i>Soil formation active and passive factors 3 h</i>
	2	<i>Profile description 3 h</i>
	3	<i>Soil macro morphologic properties 3 h</i>
	4	<i>Diagnostic surface horizons (epi pedons)3 h</i>
	5	<i>Diagnostic subsurface horizons 3 h</i>
	6	<i>Developments of the soil genesis concept 3 h</i>
	7	<i>Midterm exam</i>
	8	<i>Why classification and key concepts 3 h</i>
	9	<i>Technical soil classification3 h</i>
	10	<i>Natural soil classification 3 h</i>
	11	<i>Soil temperature and moisture regimes h</i>
	12	<i>Soil Taxonomy systems 3 h</i>
	13	<i>WRB-FAO systems 3 h</i>
	14	<i>Final exam</i>
The methods of verification and assessment criteria and principles		<i>For a positive grade, sum of 40% of midterm (100%) and 60% of final (100%) exams should be greater than 60.</i>

Literature:

Recommended Textbooks	<ol style="list-style-type: none"> 1- Rossister, D. 2001. <i>Principals of Soil Classification</i>. ITC Enschede, The Netherlands 2- <i>Keys to Soil Taxonomy</i>. 2014. Soil Survey Staff . United States Department of Agriculture Natural Resources Conservation Service, USA 3- WRB. 2015. <i>World Reference Base for Soil Resources</i>. Food and Agriculture organization of the United Nation. Reports no:106, Rome
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Complementary	<i>Current publications in scientific journals related to course issues and some course materials supported by lecturer.</i>
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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 workload (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	10	2	20
Quiz			
Assignment	10	2	20
Participate in final exam	1	2	2
Individual study for final exam	6	3	18
Literature critical review			
Oral exam			
Individual study for problem solution	11	2	22
Consultations			
Participate in researches			
Mandatory practices and internships			
	Total workload (h)		150

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

Name Surname
of Lecturer :

Sign:|

Date: