

Discipline	<i>TECHNOLOGIES FOR RESTORATION OF DAMAGED SOILS</i> code: 19a winter semester			
Specialty	AGRONOMY			
ECTS credits: <b>4</b>	Form of assessment: Continuous assesment			
Lecturer	Assoc. prof. Pavlina Naskova, PhD Room: NUK 303 Phone: +359 52 383 368 E-mail: pnaskova@abv.bg			
Department	PLANT PRODUCTION			
Faculty	<i>FACULTY OF MECHANICAL ENGINEERING AND TECHNOLOGIES</i>			
<p>Annotation:</p> <p>The course "Technology for Recovery of Damaged soils" is designed for the students of the specialty "Agronomy" at the Technical University - Varna. The object of interpretation is the physical, mechanical and physico-chemical degradation of the soils and the associated soil and landscape functional deficiencies.</p> <p>The processes of erosion, over-wetting, disintegration of the soil cover, acidification, salinisation and alkalisation of the soils have been considered. In the interpretation of each of the problems of degradation, the diagnostics of the soil and landscape condition, the assessment of the extent of the damage, the principle of meliorative and technical solutions for overcoming the negative effects of the degradation and the technologies for their application are considered.</p>				
CONTENTS:				
Training Area			Hours lectures	Hours seminar exercises

Degradation of soils through physical destruction.	1	...
Soil erosion. Types, forms and factors of erosion. • Mechanism of water erosion. Influence of natural and anthropogenic factors on the development of water erosion. • Wind erosion Mechanism of wind erosion. • Influence of natural and anthropogenic factors on the development of wind erosion	4	...
Erosion measures and control.	1	...
Reclamation of destroyed terrains during the production of mineral raw materials.	2	...
Contamination of soils with heavy metals. Possible measures to overcome the toxicity of contaminated soils.	2	
Soil contamination with oil and oil products and reclamation of contaminated land.	2	
Reclamation of soils with unfavorable soil reaction. • Remediation of soils with an acidic reaction; • Reclamation of salt marshes; • Reclamation of soils with an increased content of exchangeable sodium (Solonians).	2	
Contamination of soils with pesticides and methods of purification.	1	
Prediction of water erosion. Universal equation of the water erosion process.		2
Protection of soils from water erosion. Anti-erosion land management Anti-erosion weeding. Anti-erosion agricultural technology.		1
Protection of soils from wind erosion. Organizational and business events.		2
Agroforestry and forest improvement measures.		2
Classification of the types of forestry melioration equipment against wind erosion soil.		2
Liming of soils with harmful acidity.		2
Phosphorylation of soils with harmful acidity. Silicification of soils with harmful acidity. Plastering of soils with harmful acidity.		2
Diagnosis of salinity. Reclamation of saline soils. Creating a rinse water regime. Mechanical removal of salts. Plowing the saline horizons. Flushing the water-soluble salts from the profile.		2
<b>TOTAL: 30 h</b>	<b>15</b>	<b>15</b>

