

Course Summary

Course Title: **EARTH SURFACE AND INTERIOR PROTECTION**

Credits: 3 (108 h.)

Course objective

The acquisition of the knowledge about the structure and up-to-date state of land use in Ukraine, study of the mechanisms and consequences of earth surface violation, the development of land protection measures.

Course tasks

The creation of knowledge about the promising directions in the land resource use and protection management, applied aspects of land protection while doing business activities, industrial and municipal waste treatment, the study of the technical and biological reclamation of disturbed lands and evaluation of the natural and man-made slope stability for soil exogenous process prevention.

Course outlines

Land legislation of Ukraine. The land use and protection management. Structure of Land Resources of Ukraine. Legislation on wastes. The study of the contemporary state of land resource use in Ukraine. Overall assessment of land use and soil quality in Ukraine. Land protection while doing business activities on agricultural lands. Land reclamation requirements. Land protection from waste pollution. Protection of lands against erosion and landslides. Evaluation of natural and man-made slope stability. Land conservation. Land reclamation. Land and soil quality monitoring. Technical reclamation of disturbed lands. Biological reclamation of disturbed lands. Soil erosion. Soil suffusion.

Learning outcomes

After completing the course students should be able to:

- know the basics of the land legislation of Ukraine;
- analyze the types of the earth's surface deformations in the form of displacements, erosion, suffusion, etc. and carryout the environmental evaluation of ecosystem geological environment resilience to the influence of external factors;
- to justify the feasibility of the range of activities for technical and biological reclamation of disturbed lands;
- evaluate natural and man-made slope stability on different stability criteria for the prevention of external geological processes in soils.

Training activities: lectures and practical works.

End-of-the-term assessment: test.

**Head of the Ecology Department,
Professor A.I. Gorova**