

Course Annotation

Course Title: **Ecology and human health**

ECTS Credits: 4 (144 h.)

Course objective

Mastering theoretical knowledge and practical skills to detect and use the protection from negative influence of geoabnormal zones, as well as to assess and analyze the environmental risk and estimation the ecological state of the environment in terms of population morbidity.

Course task

Developing knowledge about the physical nature of geoabnormal zones, their impact on human health and protection, the sources and consequences of environmental risk and population morbidity.

Course main chapters

The physical nature of emissions from geoabnormal zones and their impact on human health. Determination of geoabnormal zones. Protection from geoabnormal zones. Recreation areas. Choosing a place for living.

Risk definition. Risk classification and characteristics. Risk, environmental risk and hazard. Sources and effects of environmental risk. Dangerous factors. Scale of safety. Risk development at industrial works. Acceptable risk. Risk analysis. Requirements for risk analysis. Risk assessment. Risk management. Mathematical definition of risk.

Diseases related to environmental pollution. Environmental sanitation.

Learning outcomes

After attending the course students will be able to:

- Define the geoabnormal zones and zones that have a health-improving effect;
- Use protection means against the negative effects of geoabnormal zones;
- Justify the selection of places for living.
- Determine the risk using mathematical methods;
- Estimate and analyze the risks for the region;
- Calculate pollutants dispersion from a single source.
- Calculate and evaluate the intensive indices of public morbidity as well as the state of the environment in terms of population morbidity.

Teaching methods used:

- lectures and practical training sessions.

Final **assessment** of student's knowledge and practical skills is **test**.

**Head of the Ecology Department,
Professor**

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