### Objective and general description


**Lectures**

1-2. Ecotoxicology as an interdisciplinary science. The basic terms of ecotoxicology: xenobiotic, harmful chemical, pollutant, poison, toxicology, bioassays, biomarkers and biosensors.

3-5. Fate of toxic substances in the ecosystem (toxic substances and their division, toxic substances routes, bioaccumulation and biomagnifications coefficients).


8-10. Fate of toxic substances in living organism. Biochemical mechanisms of the toxic action of selected chemical groups. Methods of detoxication.


14-15. Health and Ecological Risk Assessment

**Classes**


4-6 Assessment of toxicity of soil and bottom sediment contaminated with heavy metals for plants – Phytotoxkit test.

7-10. Assessment of concentration of heavy metal in soil and plants – calculation of Bioaccumulation Coefficientes.

11-14. Assessment of toxicity of soil contaminated with WWA and heavy metals for earthworm.

15-17. Assessment of toxicity of freshwater using the crustacean Daphnia magna.

18-20. Toxicity of natural substance – Assessment of oxalates concentration in selected stimulants (coffee, tea).

21-23. Toxicity of salt – Assessment of chloride concentration in food (bread).


27-30. Reactive oxygen species and oxidative stress in plants.
| Assessment method | Tests  
- Assessment of each exercise - will take into account the correctness of this exercise, efficiency and organization of work in a team lectures  
- Oral examination |
|------------------|---------------------------------------------------------------|