**Ecology of Plants**

The study of the discipline is aimed to provide the students with the academic background on the main ecological factors of plants’ life, physiological processes occurring in a vegetative organism under the influence of various biotic and abiotic environmental factors, their influence on generation of life forms in plants, their organs, as well as phyto- and biocoenoses.

Principal task of the discipline is to provide a comprehensive idea of the high adaptive capacity of plants to the various environmental conditions at all levels of a vegetative organism organization.

Upon the study of the course the students shall

*know:* patterns for the influence of ecological factors on plants, peculiarities of their adaptive responses and possibility of their practical use, general concepts on Population Ecology of Plants, fundamentals of Geobotany and Phytocenology;

*be capable:* to apply main principles of intra- and inter-population interactions of vegetable organisms, as well as the key methodical approaches to research of the interaction of plants with the environment and with each other at various levels of organized matter.

**Basic topics of the discipline**

1. Basic ecological concepts and patterns

1.1 Ecological factors and their classification.

1.2 General patterns for the influence of ecological factors on living organisms.

1.3 Biotic factors.

1. Adaptation of plants to the unfavorable environmental conditions.

2.1 Adaptations types

2.2 Drought- and heat-resistance

2.3 Cold- and frost-resistance

2.4 Salt-resistance

2.5 Radiation stress

2.6 Immunity to diseases

3. Ecology of vegetable associations

3.1 Main types of vegetable associations

3.2 Productivity of phytocoenoses

3.3 Development of vegetable associations.