POPULATION BIOLOGY OF PHYTOPATHOGENIC MUSHROOMS
Department of plant protection

Academic term	**2**
Educational level	**the third (educational and scientific)**
Number of ECTS credits	**4**
Form of control	**credit**
Audit hours	**120 (12 hrs. of lectures, 24 hrs. practical classes, 84 hrs. of individual work)**

A general description of the discipline

The study of the course aims to help students to understand the populations of phytopathogenic fungi, the peculiarities of their formation, the causes of changes. The methods of study of the structure of populations of phytopathogenic fungi will help to define the directions of research of postgraduate students in the modern direction. Molecular methods for the study of populations of phytopathogenic fungi are essential in modern plant protection.

Topics for learning:

The understanding the population of phytopathogenic fungi.
The study of polymorphism of populations by virulence.
Genetic differentiation of races of phytopathogens.
The study of populations resistant to fungicides.
Nucleic acid structure in population studies of phytopathogenic fungi.
Factors which influence on the formation of phytopathogen populations

Topics of practical classes:

(seminars, practical and laboratory classes)

The study of wheat rust pathogen population with the help of sorts- differentiators.
The study of brown rust pathogen population with the help of sorts- differentiators.
The study of wheat rust pathogen population with the help of sorts- differentiators.
The study of the population of durum wheat with the help of sorts- differentiators.
The study of the population of the causative agent of wheat flour with the help of sorts-differentiators.
The study of the population of the causative agent of wheat septoria with the help of with the help of sorts- differentiators.
The study of the population of the causative agent of wheat septoriosis by molecular methods.
The study of the population of the causative agent of brown spot of tomato using differentiators.
The study of the population of the pathogen of potato blight with the help of sorts-differentiators.
Determination of resistance of the population of the potato pathogen to fungicides.
The study of the population of the causative agent of dark brown barley spot with the help of sorts-differentiators.
The study of the barley population of barley stain using sorts-differentiators.
Molecular methods for the study of barley mesentery population.
Studying the role of vegetative unrelentingness in the formation of a chestnut pathogen population.
The study of the population structure of rhizoctonia solani.
The study of intraspecific Fusarium oxysporum polymorphism.

The study of the Pyrenophora tritici-repentis population.
The study of the population of the causative agent of cucumber peronosporosis.
The study of the population of the causative agent of grape odium.
The study of the population of the causative agent of apple scab.
The study of the genetic structure of the Villosiclava virens population using microsatellite markers.
The study of the Serpula lacrymans population.
The study of the population structure of Botrytis cinerea.