Discipline	*GENERAL MICROBIOLOGY* code: 10 **2 semester – summer**	
Specialty	Agronomy	
ECTS credits: 5	Form of assessment: Exam	
Lecturer	Assoc. Prof. Dr. Pavlina Naskova Room 303 Phone: +35952383368 E-mail: pnaskova@abv.bg	
Department	Plant Production	
Faculty	Faculty of Manufacturing Engineering and Technology	

Learning objectives:
The discipline "General Microbiology" is an independent biological discipline whose subject matter is microorganisms. It aims to acquaint students with: the subject and tasks of microbiology and the stages of development in the process of its separation as an independent science; morphology, physiology and systematics of the major groups of microorganisms - bacteria, yeasts, actinomycetes, viruses and fungi; nutrition and metabolism of microorganisms; the influence of external factors on microorganisms; the role of microorganisms in the circles of substances and the transformation of energy; propagation and alteration of microorganisms; the relationship between microorganisms and the environment - microflora of water, soil and air

CONTENTS

Training Area	Hours lectures	Hours seminar exercises
Subject and tasks of microbiology. Historical review. Nature of microorganisms.	2	2
Morphology of microorganisms. Organization and functioning of the prokaryotic cell.	2	2
Systematics of bacteria. Farm, chemical composition, bacterial cell structure.	2	2
Bacterial growth and reproduction. Physicochemical properties of bacteria.	2	2
Actinomycetes and yeast. Morphology, physiology and systematics.	2	2
Molds. Morphology, physiology and systematics.	2	2
Viruses. Origin and nature, construction, reproduction and systematics of viruses. Bacteriophage.	2	2
Metabolism in microorganisms. Feeding. Eating mechanisms. Enzymes of microorganisms.	2	2
Microorganisms and environmental conditions. Influence of external factors on microorganisms (physical, chemical and biological factors). Variability of microorganisms.	2	2
The role of microorganisms in the circulation of substances in nature.	2	2
Microorganisms as energy transformers. Photosynthetic prokaryotes. Hydrogen bacteria. Methane-forming bacteria. Glowing bacteria.	2	2
Soil microbiology. The role of microorganisms in soil fertility and plant nutrition.	2	2
Use of antibiotics, feed yeast and entopathogenic microorganisms in agriculture.	2	2
Microbiology of food preservation and feed silage.	2	2
Microorganisms and the environment. The microflora of water and air.	2	2

Ecology of microorganisms. Microorganisms as a symbiotic partner. Microorganisms and land development. Evolution of microorganisms.		
TOTAL: 60 h	**30**	**30**