Discipline	**Plant Physiology and Biochemistry** code: 9 **summer semester**	
Specialty	Agronomy	
ECTS credits: **5**	Form of assessment: Exam	
Lecturer	Assoc. Prof. Dr. Miglena Drumeva Room 331 Phone: +359 52 385 725 E-mail: m_drumeva@tu-varna.bg m_drumeva@abv.bg.	
Department	Plant Production	
Faculty	Faculty of Manufacturing Engineering and Technology	

Learning objectives:

The curriculum is intended for students of a Bachelor's degree program in Agronomy. The course "Plant Physiology and Biochemistry" provides knowledge about the vital functions and processes in the plant organisms, their adaptive modifications and reactions, and the related phenomena and properties. Students are acquainted with the nature, meaning and mechanisms of water exchange, photosynthesis, respiration, mineral nutrition, growth and development of plants, as well as the relationship between these basic physiological processes. The general theory of plant stress and the physiology of adaptive reactions are explained. Students gain knowledge about the plant metabolism, energy transformations and biochemical processes and reactions that underlie the metabolism of the plant organism.

The development of modern agriculture requires knowledge of the physiological and biochemical bases of biological phenomena in order to rationally use of the factors to guide and regulate the growth and development of plants, thereby increasing the yield and quality of agricultural production, while preserving the environment. The knowledge that the future agronomists will acquire about the essence of the biochemical and physiological processes in plants is directly related to the other agricultural disciplines - plant growing, plant breeding, soil science, melioration, agrochemistry, plant protection, agroecology and others.

CONTENTS:

Training Area	Hours lectures	Hours seminar exercises
Main physiological processes in plant organisms – water exchange, photosynthesis, respiration, mineral nutrition, growth and development.	15	15
Biochemistry of basic life processes in plant organisms.	15	15
TOTAL: 60 h	**30**	**30**