Biotechnical Faculty / PLANT PRODUCTION / PHYTOPATOLOGY

Course:	PHYTOPATOLOGY			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
4806	Mandatory	5	6	4+0+1
Programs	PLANT PRODUCTION			
Prerequisites	None			
Aims	Aims of the course are to enable students to adopt scientific knowledge about plant diseases - the mechanism of their development, causal agents, and the interaction between causal agent, host plant and the environment, as well as distribution and economic importance of certain plant diseases, symptoms, morphological features of the pathogen, its life cycle, hosts and possible measures to combat pathogens and diseases of cultivated plants			
Learning outcomes	After passing this exam, student will be able to: - differentiate causes of plant diseases - recognize the symptoms of the most important diseases of agricultural crops - describe the basic features of plant pathogens - explain the interaction between causal agent, host plant and the environment - explain the most important fungal, bacterial and virus diseases of cultivated plants and their agents, the life cycle and transmission - indicate the control measures that can be applied in combating the most important agricultural plant pathogens			
Lecturer / Teaching assistant	Full Professor Jelena Latinović, PhD - teacher, Bogoljub Kandić, MSc - assistant			
Methodology	Lectures, Exercises, Individual work, Consultations, Colloquiums and Final exam			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction, importance and causal agents of plant diseases			
I week exercises	Introduction with the work in plant pathology lab - equipment			
II week lectures	Non-parasitic diseases, Parasitic diseases			
II week exercises	Introduction with the work in plant pathology lab – laboratory accessories and glassware, nutrient media			
III week lectures	Basic characteristics of plant diseases causal agents			
III week exercises	Introduction with the work in plant pathology lab – microscope and microscopy			
IV week lectures	Symptomatology, Pathogenesis			
IV week exercises	Recognizing the symptoms of diseased plants			
V week lectures	Epidemiology, colloquium I			
V week exercises	Recognizing the symptoms of diseased plants			
VI week lectures	Plant resistance to diseases, Basic control measures, correctional colloquium I			
VI week exercises	Examination of herbarized plant material			
VII week lectures	Mycosis: Fungi classification, Kingdom Protozoa, Kingdom Chromista			
VII week exercises	Examination of herbarized plant material and microscopy			
VIII week lectures	Kingdom Fungi: Phylum Chytridiomycota, Phylum Ascomycota (Archiascomycetes and Erysiphales			
VIII week exercises	Laboratory exercises: microscopy			
IX week lectures	Kingdom Fungi: Phylum Ascomycota (Pyrenomycetes, Loculoascomycetes			
IX week exercises	Laboratory exercises: microscopy			
X week lectures	Kingdom Fungi: Phylum Ascomycota (Discomycetes), colloquium II			
X week exercises	Laboratory exercises: microscopy			
XI week lectures	Kingdom Fungi: Fungi imperfecti, correctional colloquium II			
XI week exercises	Laboratory exercises: microscopy			
XII week lectures	Kingdom Fungi: Fungi imperfecti			
XII week exercises	Field exercises			

XIII week lectures	Kingdom Fungi: Phylum Basidiomycota
XIII week exercises	Samples processing and microscopy
XIV week lectures	Bacterial diseases of plants, Parasitic plants
XIV week exercises	Basic methods in identification of plant pathogenic bacteria
XV week lectures	Viral diseases of plants
XV week exercises	Basic methods in identification of plant pathogenic viruses
Student workload	weekly 7 credits x 40/30 =9 hours and 20 minutes Structure: 4 hours of lectures 2 hours of exercises 3 hours and 20 minutes of individual work, including consultations During the semester Teaching and the final exam: (9 hours and 20 minutes) x16 = 149 hours and 20 minutes Necessary preparation before the semester (administration, enrollment and verification): 2 x (9 hours and 20 minutes) = 18 hours and 40 minutes Total workload for the course: 7 x 30 = 210 hours Additional work to prepare the corrective final exam, including the exam taking 0 to 42 hours Structure of workload: 149 hours and 20 minutes (lectures) + 18 hours and 40 minutes (preparation) + 42 hours (additional work

Per week	**Per semester**
6 credits x 40/30=8 hours and 0 minuts 4 sat(a) theoretical classes 1 sat(a) practical classes 0 excercises **3 hour(s) i 0 minuts** of independent work, including consultations	Classes and final exam: **8 hour(s) i 0 minuts x 16 =128 hour(s) i 0 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **8 hour(s) i 0 minuts x 2 =16 hour(s) i 0 minuts** Total workload for the subject: **6 x 30=180 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **36 hour(s) i 0 minuts** Workload structure: **128 hour(s) i 0 minuts (cources), 16 hour(s) i 0 minuts (preparation), 36 hour(s) i 0 minuts (additional work)**
Student obligations	Students are required to attend classes, as to accomplish all laboratory and field exercises, seminar work, both colloquiums and final exam
Consultations	
Literature	Agrios, G.N. (1997): Plant Pathology. Academic Press, USA.
Examination methods	Activity on lecturers and exercises _____ 5 points Seminar work _____ 5 points Two colloquiums, 28 points each_____(56 points in total) Final exam _____34 points (28 points test + symptoms recognition)
Special remarks	
Comment	

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points