Study Programme : BSc in Biology / Ecology

Degree level: Bachelor degree

Course Title: Botanical Microtechnique

Professor: dr Lana Zoric

Required/Elective Course: Elective Course

Number of ECTS: 5

Prerequisites: -

Course Objective: Managing the techniques of microscopic slides making, microscopic measurements and methods of identification of some organic compounds in plant cells.

Course Outcome: After finishing this course, students should be able to:

- make temporary microscopic slides, using different cutting techniques and permanent microscopic slides using paraffine method.
- do microscopic measurements using image analysing programs
- detect the presence of different groups of organic compounds in plant material.

Course Content:

Practical part – Preparation of plant material for microscopic slides making. Types of microscopic slides. Methods of sections making. Types of microtoms and principles of their work. Methods of temporary and permanent microscopic slides making. Temporary slides. Permanent slides – parafine method. Special methods (maceration, print method, tissue enlightening method and squash method). Microscopis measurements. Methods of microscopic measurement and data processing (standard and stereological method; measurements using Image Analysing System and light microscope). Basic histological methods.

Reading List: 1. Blazencic, J. (1994): Praktikum iz anatomije biljaka sa osnovama mikroskopske tehnike. Naucna knjiga, Beograd.

2. Jensen, W.A. (1962): Botanical Histochemistry. W.H. Freeman and Company, USA.

3. Ruzin, S. (1999): Plant Microtechnique and Microscopy. Oxford University Press Inc, Oxford.

Total hours:				
Lectures:	Practicals:	Other: 4	Student research work:	

Methods of instruction: exercises, consultations

Assessment (maximum number of points 100)

Requirements	**points**	**Final exam**	**points**
Active participation in lectures		Test	50
Active participation in practicals		Oral exam	
Colloquia	50		
Pre-exam testing			