

Study Programme : MSc in Ecology			
Degree level: Master degree			
Course Title: Aerobiology			
Professor: Smiljka Šimić, PhD			
Elective Course			
Number of ECTS: 6			
Prerequisites:			
Course Objective: Introduction to aerobiology – scientific discipline that studies biological particles suspended in the atmosphere (transport, release, deposition and influence to environment).			
Course Outcome: Obtained basic aerobiological knowledge will enable active involvement of students in work of laboratories that perform aerobiological research or use their results (for example: plant protection, occupation health, meteorology, allergology and forensics).			
Course Content:			
<i>Theoretical part:</i> Definition and historical development of aerobiology as well as application of aerobiological results in medicine, agriculture, forestry, climatology and forensic sciences. Introduction to biological particles suspended in the atmosphere, their origin, release, transport, elimination from the air as well as their influence to the environment. Teaching the most often used sampling methods (sedimentation, inertial, electron), their physical background and devices in use (Cour, Durham, Tauber, Andersen, Hirst, Rotorod, Ciclon). Special attention will be given to sampling and analysis (quantitative, qualitative, temporal as well as forecasting) of pollen, fungal spores and bacteria suspended in the atmosphere.			
<i>Practical part:</i> Work with Rotorod, Durham, Tauber, Andersen and Hirst samplers. Preparation of samples and their analysis under light microscope. Identification of the most important allergenic pollen (birch, grass, mugwort, ragweed, olive) and the most frequent and abundant airborne fungal spores (Cladosporium, Alternaria, Epicoccum).			
Reading List:			
Christopher S. Cox, Christopher, M. Wathes <i>Bioaerosols Handbook</i> , Academic Press, New York, 115 pp 656.			
Šimić, S., Radišić, P., Šikoparija, B. i Dulić, I. <i>Palinologija</i> . Novi Sad, 2007.			
Moore, P.D. i Webb, J.A. <i>An illustrated guide to pollen analysis</i> . Hodder and Stoughton, London 1978, pp 279.			
Punt, W., Blackmore, S., Nilsson, S., Le Thomas, A. (1994): <i>Glossary of Pollen and Spore Terminology</i> . Lpp Foundation, Utrecht			
Total hours:			
Lectures: 2	Practicals: 2	Other:	Student research work: 5
Methods of instruction:			
Lectures, practical exercises, seminars			
Assessment (maximum number of points 100)			
Requirements	Points	Final exam	Points
Activities during lectures and practical work	15	Test	55
Seminar 1 (essay)	15		
Seminar 2 (review of scientific paper)	15		