Study Programme : Msc. in Ecology	
Degree level: Master degree	
Course Title: Biodiversity modelling	
Professor: dr Snežana Radenković, dr Dubravka Milić	
Required/Elective Course: Elective	
Number of ECTS: 6	
Prerequisites: -	

Course Objective: Introduction to the simple techniques and models in biodiversity modeling. These models help to get knowledge about relations between human activities, environment and biodiversity. At the same time they give answers to legislation impact on biodiversity, resources, ecosystem services and poverty. In addition, they indicate the main causes of negative changes in ecosystems and identify areas with high negative impact.

Course Outcome:

It is expected that students will learn how to make predictive models of the distribution of species or potential habitat for species and use them in biodiversity conservation planning.

Course Content:

Theoretical part Different models and their definitions. Identifying of biodiversity indicators for specific habitat types. Target species to biodiversity modeling. Modeling of terrestrial and aquatic ecosystems. Biodiversity modeling of areas with historical data – continuous modeling. Modeling of rare and endangered species. Monitoring of abundance by models of climate and land use changes.

Practical part Practical use of particular model and target species. Interpretation of different simulations according to adequate type of biodiversity modeling. Interpretations of results. Differences between short and long time (continuous) modeling. Examples in practice.

Reading List:

1. Trisurat, Y., Shrestha, R.P., Alkemade, R. (2011): Land Use, Climate Change And Biodiversity Modeling: Perspectives And Applications. Information Science Publishing.
2. Michael Gillman (2009): An Introduction to Mathematical Models in Ecology and Evolution: Time and Space. Second edition. Wiley-Blackwell.
3. Pratap K. Mohanty (2008): Monitoring and modelling lakes and coastal environments. Springer.
4. Matthias Ruth, James Lindholm (2002): Dynamic modeling for marine conservation. Springer-verlag.
5. Francisco Dallmeier, Comiskey, J.A. (1998): Forest biodiversity research, monitoring and modeling. Crc Press.

Total hours:				
Lectures: 2	Practicals: 2	Other:	Student research work:	

Methods of instruction:
Video presentations.

Assessment (maximum number of points 100)				
Requirements	**points**	**Final exam**		**points**
Active participation in lectures		Practical exam		10
Active participation in practicals		Oral exam		60
Test(s) or	10			
Pre-exam testing	20			
Remark:				