Course Unit Descriptor

Study Programme: Sustainable Agriculture, Food Production and Food Technology in the Danube Region

Course Unit Title: GIS APPLICATIONS IN LAND CONSOLIDATION

Course Unit Code:

Name of Lecturer(s): Pavel Benka, Atila Bezdan

Type and Level of Studies: MASTER ACADEMIC STUDIES

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): winter

Language of instruction: english

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 6

Prerequisites:

Course Aims:

The goal of this course is to introduce the student with applications of geographic information systems in order to examine the effects of the measures implemented in land consolidations process.

Learning Outcomes:

After successful completion of this course, the students should:
1) be able to understand and critically analyze measures implemented in land consolidations process,
2) be able to use the acquired knowledge in its own research work or in practice and
3) improve the IT skils.

Syllabus:

Theory

Introduction to land consolidation, purpose and objective of the implementation of measures in land consolidation. Methods of performing consolidations. Types of improving the conditions of agricultural production land management. Indirect effects of land consolidation. Basics of geographic information systems. Types of spatial data, spatial data organization, databases in GIS. Sources of spatial data. Spatial analyses in land consolidation process: analyzing grouping plot process, analyzing size of new plots, analyzing shape of plots, analyzing access to plot from field road network, analyzing non-forest greenery at consolidated area.

Practice

Term paper.

Required Reading:

Benka P.: Effects of restructuring of land territory by consolidation on the plot suitability for agricultural production, International scientific conference and XXIV meeting of serbian surveyors ″Professional Practice And Education In Geodesy And Related Fields″ 24-26, June 2011, Proceedings, pp.348-511, Kladovo - „Djerdap“ upon Danube, Serbia. 2011

Benka P., Damjanović T.: Evaluation of agricultural plots according to their size and shape, Zemljište i biljka, Vol 53, No 2, pp. 111-118, Beograd, 2004

Longley P, Goodchild M, Maguire D. Rhind D.: Geographic Information Systems and Science, John Wiley & Sons, LTD, 2002

T. Sutton, O. Dassau, M. Sutton: A Gentle Introduction to GIS, Spatial Information Management Unit, Office of the Premier, Eastern Cape,
South Africa.2009.

Weekly Contact Hours:	**Lectures: 2**	**Practical work: 2**

Teaching Methods:

Consultations, Research work

Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Active class participation		written exam	40
Practical work		oral exam	
Preliminary exam(s)		…….	
Seminar(s)	60		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			