Course Unit Descriptor

Study Programme: Fruit science, viticulture and horticulture, module Fruit science and viticulture

Course Unit Title: GEOGRAPHIC INFORMATION SYSTEMS

Course Unit Code: 19.URV045

Name of Lecturer(s): Ass. Prof. Pavel Benka, PhD; Ass. Prof. Atila Bezdan, PhD

Type and Level of Studies: UNDERGRADUATE ACADEMIC STUDIES

Course Status (compulsory/elective): elective

Semester (winter/summer): winter

Language of instruction: serbiam

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

Number of ECTS Allocated: 6

Prerequisites: No

Course Aims: Introducing students to the theoretical fundamentals of Geographic Information Systems (GIS) and training students to use basic computer application software for Geographic Information Systems.

Learning Outcomes: Students ability to apply the acquired knowledge in the further process of education as well as in future professional work and engineering problem solving.

Syllabus:

Theory: Introduction, differences of GIS from related systems, application and history. Types of spatial data, organization of spatial data. Spatial data sources. Working with raster data, working with vector data. Databases in GIS. Spatial data analysis. Making a cartographic representation. Distribution of spatial data over the Internet.

Practice: Introduction and work on GIS applications. Raster and vector data entry, spatial analysis and research of databases, production of thematic maps. Independent preparation of elaborate.

Required Reading:

Sutton, T., Dassau, O., Sutton, M., A Gentle Introduction to GIS, Chief Directorate: Spatial Planning & Information, Department of Land Affairs, Eastern Cape, South Africa, 2009

Bolstad, P., GIS Fundamentals: A First Text on Geographic Information Systems, Eider Press, 2012

Tian, B., GIS technology applications in environmental and earth sciences, CRC Press Taylor & Francis Group, 2017

Chang, K. T., Introduction to geographic information systems, Mc Graw Hill, NY, 2019

Weekly Contact Hours: 4	**Lectures: 2**	**Practical work: 2**

Teaching Methods:

Lectures and Practical classes in computer room, Elaborate preparation, Consultations.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam	30
Elaborate preparation	25	oral exam	20
Test 1	10	…….	
Test 2	10		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.