MOODLE e-learning platform installation, courses creation and class materials prepared for downloading, February 2018

In the past period, server machine has been installed with all necessary software and network permissions to be used as e-learning platform for students. This equipment was purchased during the IT procurement throw Erasmus+ program. For many of the existing courses on DGG related to geoinformatics, a large portion of the materials for students (lecture slides, tutorials, assignments, etc.) was already available for download from the courses' web pages. For some courses, (for example, courses in geoinformatics such as: Geoinformatics 1, Geoinformatics 2, Fundamentals of Digital Image Processing, Digital Terrain Modeling), students had an option to upload all finished work (exercises) for the review by academic staff. The same applies for practical exams, where exam is conducted in computer classroom. Students are downloading assignment in electronic form and uploading results in electronic form also but much of this different software tools were not so well integrated as it is the case with Moodle platform for online learning.

Some of mentioned courses are transferred to the newly established Moodle platform for e-learning of students of DGG called eGeo (http://egeo.grf.bg.ac.rs). Now, having Moodle platform installed on mentioned server machine, all of the courses' content are better organized, especially from the basis of integration of students' personal information, exam results, prerequisites of other passed courses on this program etc. Eventually, this will be done for most of the courses at DGG. However, the whole process run gradually depending on the teaching staff involved.

Fig. 1: Moodle platform website for e-learning

Courses on BSc program: Geoinformatics 1 and Digital Terrain Modeling are possible to enroll from eGeo Moodle website and all of the teaching materials for exercises and lectures are accessible and ready for download. Certain assignments for each exercise are placed on eGeo, so that students may upload their results for each topic in the designated time. All teaching materials are updated and improved, and in near future quizzes will be created and some examples of practical exams will be posted. For each assignment student will get a proper grade in order to fulfill requirements for passing the courses. Also practical exams will be organized in computer classrooms with upload option of exam results to server for each student. Students that are attending course Digital Terrain Modeling in this semester have their own accounts and are already enrolled while students who take course Geoinformatics 1 will be enrolled in the next semester.
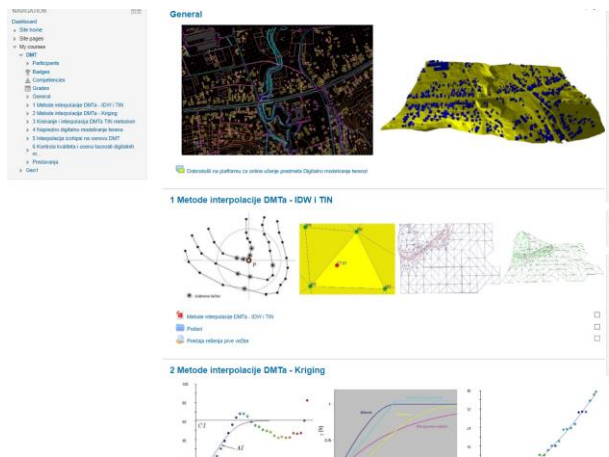
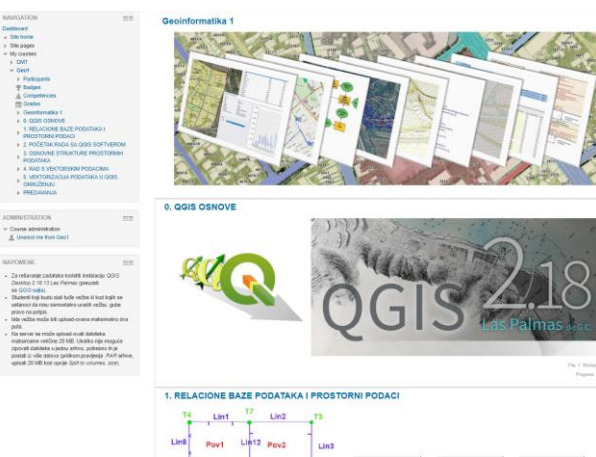

Fig. 2: Course of Digital Terrain Modeling   Fig. 3: Course of Geoinformatics 1

As it was planned on this project, Problem-based Learning methodology (PBL) will be introduced within two courses of the Geoinformatics module of the Master of Science Program. First of these courses is a course Design and Implementation of Geoinformation Systems. Students will get a suitable literature and software (CASE tools, DBMS and GIS software) for the implementation of the project assignment. They will have meetings with teachers where they will have opportunity to clarify some issues from the selected literature and to discuss some problems and solutions related to their assignment. Project assignment will be designed so that it has sufficient complexity so that student has to acquire all the knowledge and skills specified by course objective and content. The second course with PBL methodology is a course of GIS Programming. It was quite reasonable to assume that actual programming for solving some GIS task is a good way for students to acquire knowledge and skills listed in the course content. Everything said for the previous course is also valid for this one.

This PBL courses are created on Moodle platform and appropriate materials are transferred. Students will be enrolled as soon as the student groups are formed for this courses.

Local coordinator
Prof. Branko Bozic