Course title : GIS in environment

Course Basic Information	
Academic Unit:	Faculty of Civil Engineering
Course title:	GIS in Environment
Level:	BSc
Course Status:	Mandatory
Year of Study:	3, Semester VI
Number of Classes per Week:	2+2
ECTS Credits:	6
Time /Location:	According to the Timetable
Teacher:	Prof.asoc.Dr. Perparim Ameti
Contact Details:	perparim.ameti@uni-pr.edu + 377 44 244 748
Course Description:	Application of Geographic Information Systems to studies of the natural environment.
Course Goals:	The objective of this course is to introduce the student to the most effective computer-based methods for constructing geoscience maps. Emphasis will be on the production of digital GIS maps from scratch using field data, rather than maps based on previously digitized data sets. The course primarily uses commercial and noncommercial software used in GIS.
Expected Learning Outcomes:	After completion of this course, students should be able to do as following: 1. Digitize several maps and add data 2. To use geoinformations in environment 3. To have knowledge on application of GIS for different purposes 4. To design different professional projects independently

Student Workload (should be in compliance with student's Learnign Outcomes)			
Activity	**Hours**	**Day/ Week**	**Total**
Lectures	2	15	30
Theory/ Lab Work/Exercises	2	15	30
Practical Work	1	10	10
Consultations with the teaher	5	1	5
Field Work	1	5	5
Test, seminar paper	1	15	15
Homework	1	15	15
Self-study (library or home)	1	10	10
Preparation for final exam	1	15	15
Assessment time (test, quiz, final exam)			
Projects, presentations, etc.	1	15	15

Total			**150**

Teaching Methods:	- Lecture - Discussion during lectures - Exercises - Work in group
Assessment Methods:	In evaluation, the percentage of the attendance of each partial evaluation in the final evaluation must be determined. One of the ways of evaluation would be: First Evaluation: 10% Second Evaluation: 10% Homework or other engagement: 5% Attendance 20% Final Exam 55% Total 100%
Primary Literature:	1) Ian H.: An Introduction to Geographical Information Systems, Fourth Edition, 2012 2) Robert S.: GIS for environmental management, 2006
Additional Literature:	1) An Introduction to the Theory of Spatial Object for GIS, Taylor & Francis Ltd, London, Molenaar, M (1998)

Designed teaching plan

Week	Title of the Lecture
Week 1:	Definition of GIS, history and development of GIS
Week 2:	GIS components, fields of application
Week 3:	Nature and source of geographic data
Week 4:	Maps and their historical development
Week 5:	Advantages of GIS over manual methods
Week 6:	First automatic processing of geographical information
Week 7:	Important milestones in the development of GIS, recent developments
Week 8:	Introduction to operating systems, computer hardware, and computer software applications relevant to GIS
Week 9:	Concept and planning for capturing map base map data with commercial GIS software
Week 10:	Digitizing basic map line work, map projections, creating geodatabase files, feature classes, etc
Week 11:	Introduction to map projection conversions
Week 12:	Converting projects from various GIS systems.
Week 13:	Data modeling
Week 14:	Geoprocessing tools
Week 15:	Creating DBMS queries in ArcGIS, integrating DRG and DEM with geologic maps

Academic Policies and Code of Conduct

We start and finish class on time.
Tools used during class must be cleaned and stored away at the end of class.
Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.
Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.