Course title: Geovisualization

Course Basic Information	
Academic Unit:	Faculty of Civil Engineering
Course title:	Geovisualization
Level:	Master in Geodesy
Course Status:	Mandatory
Year of Study:	Year 1; Semester 1
Number of Classes per Week:	2+2
ECTS Credits:	6 ECTS
Time /Location:	According to the timetable
Teacher:	Assoc.Prof.Dr. Bashkim Idrizi
Contact Details:	bashkim.idrizi@uni-pr.edu bashkim.idrizi@yahoo.com +383 45 341098 +389 75 712998 (viber)
Course Description:	Geovisualization is oriented mainly in topographic symbols and graphic variables: size, colors, Toponyms, orientation, models; Topographic and thematic map design and symbolisation; Map design for presentation, synthesis, analysis and exploration of spatial data; Exploratory data analysis, graphical data analysis techniques 2D, 2.5D, 3D and 4D graphics and its representation; Virtual models; Cartography on internet, publication alternatives for distribution of electronic atlases; Programming, scripting and automation for visualization and publishing electronic atlases.
Course Goals:	The basic objective of this course are teaching cartographic principles and techniques Effective visualization of spatial data. Upon completion of this course students will be able to design cartographic products analog and digital using existing GIS tools, will also catch the level of development in critical thinking that is essential in creating cartographic products.
Expected Learning Outcomes:	After completing this course students should be able : - having knowledge of cartographic symbols and data classification/categorization, - Knowledge on visual variables: spacing, size, orientation, shape, , arrangement, height, hue, value, saturation - Topographic and thematic map design and symbolization - Map design for presentation, synthesis, analysis and

| | exploration of spatial data. |
| | - Exploratory data analysis, and graphical data analysis techniques. |

Student Workload (should be in compliance with student's Learning Outcomes)

Activity	Hours	Day/ Week	Total
Lectures	2	15	30
Theory/ Lab Work/Exercises	2	15	30
Practical Work	4	4	16
Consultations with the teacher			
Field Work			
Test, seminar paper			
Homework	4	4	16
Self-study (library or home)	1	10	10
Preparation for final exam	2	10	20
Assessment time (test, quiz, final exam)	6	4	24
Projects, presentations, etc.	2	2	4
Total			**150**

Teaching Methods:	- *Lecture*
	- *Discussion during lectures*
	- *Exercises*
	- *Work in group*
Assessment Methods:	Prerequisite for assessment: more than 50% attendance in lectures and positive evaluation of seminar paper by the lecturer.
	First valuation: 15%
	Second Valuation: 15%
	Homework: 30%
	Attendance: 10%
	Final Exam: 30%
	Total: 100%

Primary Literature:	1. Terry, B. Robert, Thematic Cartography and Geovisualization, 3rd edition, 2009
	2. M.-J. Kraak & F. Ormeling, Cartography – Visualization of Geospatial Data, Prentice Hall, 2nd edition, 2003
	3. Nollenburg M. Geographic geovizualization,
Additional Literature:	1. D. Jason, A. Maceachren, M. Jan Krak: Exploring Geovisualization, 2005
	2. Idrizi B.: Hartografia e përgjithshme dhe përgjithësimi hartografik. 2006.
	3. Terry A. Slocum, Connie Blok, Bin Jiang, Alexandra Koussoulakou, Daniel R. Montello, Sven Fuhrmann, and Nicholas R. Hedley. Cognitive and Usability issues in Geovisualization. 2001.
	4. Idrizi B., Hartografia Topografike. 2021.

	5. AKK. Nomenklatura, simbolet, shenjat dhe pozicionimi i hartës topografike 1:25000. 2016.

Designed teaching plan	
Week	**Title of the Lecture**
Week 1:	Introduction to cartography and geovisualization
Week 2:	Basic concepts of geovisualization
Week 3:	Graphic variables
Week 4:	Topographic symbols
Week 5:	Classification of data
Week 6:	Multipurpose maps
Week 7:	Topographic and thematic maps
Week 8:	First evaluation: The qualifying first colloquium
Week 9:	Design of topographic and thematic maps
Week 10:	Design of manual and digital cartographic products.
Week 11:	Analysis and exploration of spatial data
Week 12:	Technical Analysis of graphic data
Week 13:	Publish online
Week 14:	Presentation of the project.
Week 15:	Second evaluation: The qualifying second colloquium

Note | If a student has more than 3 class assignments evaluated below 50%, he/she loses the right on taking the final exam. Evaluation

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.*

is done from 0-100 %.