

Course title :

Course Basic Information			
Academic Unit:	Faculty of Civil Engineering		
Course title:	Mathematical cartography		
Level:	Bachelor		
Course Status:	Mandatory		
Year of Study:	Year 3, Semester 6		
Number of Classes per Week:	2+2		
ECTS Credits:	6		
Time /Location:	According to the Timetable		
Teacher:	Prof.Asoc.Dr. Bashkim Idrizi		
Contact Details:	bashkim.idrizi@uni-pr.edu + 383 45 341098		
Course Description:	The course starts with the Earth's geometric elements approximated to the ellipsoid, sphere and plain. After it continues with cartographic projections, respectively scale and shapes, classification of cartographic projections. The course ends with automatic build of cartographic projections with software as well as automatic data transformation between different coordinate systems with the use of computer software.		
Course Goals:	Within this course students have the opportunity to gain basic theoretical and practical knowledge about shape and size of the Earth the ways of approximating the physical surface of the Earth to the ellipsoid, sphere and plain, types of cartographic projections and the importance of their use.		
Expected Learning Outcomes:	<ol style="list-style-type: none"> 1. The student is presented with mathematical cartography as a subdiscipline, he shape and dimensions of the Earth, as well as cartographic projections 2. The student is presented with mathematical models and geometric elements in ellipsoid and sphere 3. The student is presented with cartographic projections 4. The student is presented with methodology-standards for creating cartographic projections 5. The student is presented with contemporary trends in mathematical mapping. 		
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			
Study for intermediate test			
Consultations with the teacher	1	13	13
Field Work			

Test, seminar paper	2	2	4
Homework	1	15	15
Self-study (library or home)	2	15	30
Preparation for final exam	1	15	15
Assessment time (test, quiz, final exam)			
Projects, presentations, etc.	1	15	15
Total			152

Teaching Methods:	Lectures, exercises during class using different materials, one project work in group of 2-3 students (independent work), individual homework
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Assessment Methods:	Attendance: 5% Working seminar: 5% Individual work: 5% Essay: 5% First valuation: 10% Second Valuation: 10% Final Exam: 60% Total: 100%
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Primary Literature:	Idrizi B.: Hartografia matematike – dispensë, FNA, Prishtinë, 2010.
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Additional Literature:	Shehu A., Samimi E.: Hartografia 1 – hartografia matematike, Tiranë, 1985. Çene S., Skuka Q.: Gjeodezia e lartë 1, Tiranë, 1995. INSPIRE: Map projections for Europe, European Commision, 2001.
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Designed teaching plan

Week	Title of the Lecture
Week 1:	Earth's ellipsoid and its elements
Week 2:	Earth's ellipsoid and its elements
Week 3:	Earth sphere and its elements
Week 4:	Earth sphere and its elements
Week 5:	Plane cartographic and approximations projection
Week 6:	The theory of cartographic projections
Week 7:	Azimuth and perspective projections
Week 8:	First valuation
Week 9:	Conical projections
Week 10:	Cylindrical projections
Week 11:	Cylindrical projections
Week 12:	Different projections
Week 13:	Automation of cartographic projections
Week 14:	Automation of cartographic projections
Week 15:	Second Valuation

Academic Policies and Code of Conduct

- *Regular attendance of lectures and exercises*
- *Being quiet during the sessions*
- *Shutting down mobile phones*
- *Being on time*

Note | If a student has more than 3 class assignments evaluated below 50% he/she loses the right on taking the final exam. Evaluation is done from 0-100 %.