

Study programme: Bachelor with honours in Geography			
Course title: Remote sensing of geospatial data (GI404)			
Teacher(s): dr Miško M. Milanović			
Status: elective			
ECTS: 6			
Requirements: none			
Learning objectives			
The objectives of course refer to the basic and applied knowledge in the field of remote sensing.			
Learning outcomes			
Digital display elements, features and processes of geospatial area by image processing (satellite and aero photo).			
Syllabus			
<i>Theoretical instruction</i>			
<ol style="list-style-type: none"> 1. Introductory remarks on the principle of functioning remote sensing (case study-Earth, electromagnetic energy, sensors, platforms, recording, interpretation). 2. Products of remote sensing (terrestrial images, aero photo, satellite images). 3. Rectification shots (basic image processing procedures used in remote sensing). 4. Improvement of visual interpretation (basic image processing procedures used in remote sensing). 5. Supervised and unsupervised classification (basic image processing procedures used in remote sensing). 6. Biophysical modelling (basic image processing procedures used in remote sensing). 7. Global positioning and remote monitoring (GPS technology). 8. The integration of images with GIS, software packages at remote sensing (software Idrisi and TNT – school version). 9. Aero Photo – Processing for Geospatial Research (georeferencing, integration, etc.). 10. Satellite imagery for Geospatial Research (proceedings of the image processing). 11. Photographic interpretation of geospatial area. 12. Measurements on remote images (dotted, line and polygon objects). 13. Digital display elements, features and processes of geospatial area by images processing – aero photo. 14. Digital display elements, features and processes of geospatial area by images processing – satellite images. 15. The application of geographical science. 			
<i>Practical instruction:</i> Practical applications, in lectures, presented concepts, based on the image processing procedures (at legal software). From the first up to fifteen weeks are work in software Idrisi or TNT.			
Literature			
<ol style="list-style-type: none"> 1. Campbell J., Wynne R., (2011): Introduction to Remote Sensing, Guilford Press, New York. 2. Chen C.H. (Ed.) (2008): Image Processing for Remote Sensing, CRC Press, New York. 3. Jensen J.R., (2007): Remote Sensing of the Environment: An Earth Resource Perspective, Upper Saddle River, NY: Prentice-Hall. 4. Konecny G. (2003): Geoinformation – Remote Sensing <i>Photogrametry and Geographic Information Systems</i>, University of Hannover, Hannover, Germany. 5. Milanović M., Lješević M. (2009): Teledetekcione metode istraživanja životne sredine, Geografski fakultet, Univerzitet u Beogradu, Beograd. 			
Weekly teaching load 3 (45)	Lectures 2	Exercises 1	
Methods of Teaching			
Lectures, Illustration and Demonstration, Practical skills			
Grading method (maximu 100 points)			
Pre-examination assignments	points	Final examination	points
Activities during lectures	0-5	Written examination	
Activities during exercises	0-5	Oral examination	30-45
Colloquia	20-40	
Seminar paper	0-5		