



HÖGSKOLAN I GÄVLE

Remote Sensing and GIS Analysis in Land Management 7.5 cr

Fjärranalys och GIS-analys i land management 7,5 hp

Set by Board of Technology and Built Environment

Version

Set at

Valid from

9/26/07

HT2007

Level	G1F
Education level	First cycle
Course identifier	SB281C
Credits	7.5 cr
Main field of study	Geomatics
Subject group	Geographic Information Technology and Surveying
Disciplinary domain	Technology 100.0 %

Learning outcomes

Upon completion of the course, the student should be able to:

- combine data from different sources
- demonstrate an understanding of analysis methods in remote sensing and GIS
- classify satellite images
- demonstrate an understanding of differences in different interpolation methods and the resulting outcome
- apply different interpolation methods to produce digital elevation models
- analyse data with multicriteria techniques
- summarise and evaluate scientific literature
- perform a project work.

Course content

- Basics of electromagnetic radiation
- Properties of satellite images
- Satellite image manipulation and interpretation
- Unsupervised and supervised classification of satellite images
- Interpolation methods for spatial data
- Digital elevation modeling
- Basic hydrological modeling in GIS
- Spatial multicriteria analysis

	• Remote sensing and GIS within the field of land management
Teaching	Lectures, assignments, seminars, project.
Prerequisites	Upper secondary school Mathematics and Physics as well as GIS Raster/Vector, 7.5 credits, or equivalent.
Examination	Written exam, Assignments and Project work.
	To pass the course, all assignments, seminar[s], project work[s], written examination[s], etc. must receive a passing grade.
Grade	A, B, C, D, E, Fx, F
Other regulations	Certificate of the course is only awarded after completed course and only upon request. In order to satisfactory complete the course, the student is expected to input a workload corresponding to 5 weeks of full time studies.
Sustainable environment	A minor part of the course content deals with sustainable development.
Module	
	0010 Written examination 2.5 cr Grade: AF
	0020 Assignments 2 cr Grade: AF
	0030 Project work 3 cr Grade: AF