



## HÖGSKOLAN I GÄVLE

### Remote Sensing and GIS Analysis 7.5 cr

*Fjärr- och GIS-analys 7,5 hp*

Set by Faculty of Engineering and Sustainable Development

**Version**

**Set at**

**Valid from**

2/27/19

**HT2019**

<b>Level</b>	G1F
<b>Education level</b>	First cycle
<b>Course identifier</b>	SBG553
<b>Credits</b>	7.5 cr
<b>Main field of study</b>	Spatial Planning, Geospatial Information Science, Geomatics, Geography, Surveying Technology
<b>Subject group</b>	Geographic Information Technology and Surveying
<b>Disciplinary domain</b>	Technology 100.0 %

**Learning outcomes**

After completion of the course, the student should be able to

1. combine data from different sources
2. demonstrate an understanding of analysis methods in remote sensing and GIS
3. classify satellite images
4. demonstrate an understanding of the characteristics between different interpolation methods and the resulting outcome
5. apply different interpolation methods to produce digital elevation models
6. analyse data with multicriteria techniques
7. summarise and evaluate scientific literature
8. carry out 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		
<b>Teaching</b>	Lectures, assignments, seminars, project.		
<b>Prerequisites</b>	GIS Raster/Vector 7,5 credits, GIT in Land Management 7,5 credits or equivalent		
<b>Examination</b>	Written exam, Assignments and Project work.		
<b>Grade</b>	A, B, C, D, E, Fx, F		
<b>Other regulations</b>	Degree Criteria for final grade will be handed out by the course responsible or examiner latest at the beginning of the course.		
<b>Sustainable environment</b>	A minor part of the course content deals with sustainable development.		
<b>Module</b>			
	0010	Written exam	2.5 cr      Grade: AF
	0020	Assignments	2 cr      Grade: AF
	0030	Project	3 cr      Grade: AF