



HÖGSKOLAN I GÄVLE

Spatial Analysis for Planning 5 cr

Spatial analys för samhällsplanering 5 hp

Set by Faculty of Engineering and Sustainable Development

Version

Set at

Valid from

8/22/16

HT2017

Level	A1N
Education level	Second cycle
Course identifier	SBA064
Credits	5 cr
Main field of study	Spatial Planning, Geospatial Information Science, Geomatics, Geography
Subject group	Geographic Information Technology and Surveying
Disciplinary domain	Technology 100.0 %

Learning outcomes

After completion of the course the student shall be able to

1. describe GIS-based spatial analysis for spatial planning and decision making
2. describe basic complexity theory such as topology and scaling hierarchy for spatial planning
3. conduct advanced spatial analysis to understand the underlying morphological structure
4. write a scientific report based on a case study applied to a set of cities.

Course content

- GIS-based spatial analysis and modeling
- Topological and scaling ways of thinking for spatial analysis
- Space syntax modeling and urban morphology
- Complex networks modeling for geographic systems
- Agent-based modeling and cellular automata

Teaching

Lectures, project, practicals, and seminars

Prerequisites

English language proficiency equivalent to (the Swedish upper secondary school) English course 6/B
GIS data structures and algorithms, 5 cr, or equivalent

Examination

Written examination, assignments, seminars, and project work

Grade A, B, C, D, E, Fx, F

Other regulations Degree criteria for final grade will be given by examiner or course responsible latest at the beginning of the course.

Sustainable environment A minor part of the course content deals with sustainable development.

Module

0010	Written examination	2 cr	Grade: AF
0020	Assignments and seminars	1.5 cr	Grade: UG
0030	Project work	1.5 cr	Grade: AF