



HÖGSKOLAN I GÄVLE

Spatial Databases and SDI 5 cr

Spatiala databaser och datainfrastruktur 5 hp

Set by Faculty of Engineering and Sustainable Development

Version

Set at	Valid from
8/22/16	HT2017
9/5/19	HT2019

Level	A1N
Education level	Second cycle
Course identifier	SBA004
Credits	5 cr
Main field of study	Geospatial Information Science, Geomatics, Computer Science
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. analyze, design, and describe in writing appropriate IT tools in a geographic information system, as well as essential concepts of geodata infrastructure
2. employ a database management tool to perform operations on geographic databases
3. explain the political and economic rationales of creating infrastructures for spatial information, like the Spatial Data Infrastructure (SDI)
4. describe the importance of the INSPIRE Directive, the PSI Directive (Public Sector Information) and the National Geodata Strategy
5. describe the technical problems within common geodata infrastructures
6. communicate, discuss and critically assess own, as well as others work, and to present their own conclusions in seminars.

Course content

The course provides students theoretical and practical skills to develop an information system that makes use of geographic information. Relational databases as well as their support for spatial data are reviewed. The course also covers the EU directives INSPIRE and PSI, as well as Swedish laws and regulations. It also gives an introduction to web services such as Geodata Portal, technological solutions for retrieval and presentation (WMS), download services

(WFS), transformation services (WPS) and communication services (incl. geospatial open access solutions). The course also covers validation and testing of these services. Throughout this course students get acquainted with practical use of UML, XML (incl. GML) and they will implement a system model into a working computer system.

Teaching	Lectures, practicals and seminars
Prerequisites	Introduction to Studies on Advanced Level in Geospatial Information Science 5 cr and Programming and Scripting for GIS 5 cr, or equivalent
Examination	Practicals, seminars and written exam
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 Practicals 2 cr Grade: UG
	0030 Written exam 2 cr Grade: AF
	0040 Seminars 1 cr Grade: AF