



Faculty of Science

## NGEU25, Physical Geography: Spatial Analysis, 7.5 credits

*Naturgeografi: Rumslig analys, 7,5 högskolepoäng*

Second Cycle / Avancerad nivå

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### Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2020-01-23 to be valid from 2020-01-23, spring semester 2020.

### General Information

The course is offered as a commissioned education.

The course is a compulsory course for Master of Science in geomatics and elective course for a Master of Science in physical geography.

*Language of instruction:* English

*Main field of studies*

Geomatics

Physical Geography and Ecosystem Science

*Depth of study relative to the degree requirements*

A1N, Second cycle, has only first-cycle course/s as entry requirements

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### Learning outcomes

The course intends to give basic knowledge and practical skills in spatial analysis methodology.

### Knowledge and understanding

On completion of the course, the students shall be able to:

- explain correlations between geographic data,
- interpret, discuss and apply regression of geographic data explain and
- apply geostatistics explain thoroughly the problem of scales within spatial analysis and geographic data, describe at a general level analytical methods for large amounts of geographic data, and explain basic structure of geographic decision support systems.

## Competence and skills

On completion of the course, the students shall be able to:

- independently carry out analyses and interpret results of regression analyses and understand and apply special spatial analytical methods on geographic data.

## Judgement and approach

On completion of the course, the students shall be able to:

- independently relate to both spatial and common statistical measures and methods,
- critically relate to geographic data and different analysis technologies,
- and evaluate the reliability of analyses carried out with different methods.

## Course content

The course consists of 5 subparts:

- regression and other basic modelling methods,
- geostatics, scale problems,
- analysis of large amounts of data, and
- spatial decision support systems.

## Course design

The theoretical part of the course is given as lectures that are followed by related thematic sections with practical assignments.

## Assessment

Examination takes place through written examination at the end of the course. Submission of practical assignments and participation in laboratory sessions are compulsory. For students who have failed the regular examination, additional occasion in close connection to this is offered.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

*Subcourses that are part of this course can be found in an appendix at the end of this document.*

## Grades

Marking scale: Fail, Pass, Pass with distinction.

To pass the entire course, approved examination, passed written assignments and passed attendance on compulsory sessions are required. The final grade is decided through joining the results of the parts that are included in the examination.

## **Entry requirements**

For admission to course is required at least 90 credits within the fields of technology or science of which at least 30 credits should be within geographic information science or the equivalent. Further, basic knowledge in statistics is required equivalent NGEA07 physical geography theory and methodology, 15 credits, GISN21 GIS and statistical analysis, 5 credits or GISN02 GIS and statistical analysis, 7.5 credits.

## **Further information**

The course may not be included in a higher education qualification together with GISN01 GIS and geostatics, 7.5 credits and NGEN11 Spatial Analysis, 7.5 credits.

## Subcourses in NGEU25, Physical Geography: Spatial Analysis

Applies from H21

2101 Spatial Analysis, 7,5 hp  
Grading scale: Fail, Pass, Pass with distinction

Applies from V20

2001 Spatial Analysis, 7,5 hp  
Grading scale: Fail, Pass, Pass with distinction