



**LUND**  
UNIVERSITY

Faculty of Science

## **NGEA09, Physical Geography: Land Surface Processes and Landscape Dynamics, 15 credits**

*Naturgeografi: Markytans processer och landskapsdynamik, 15 högskolepoäng*

**First Cycle / Grundnivå**

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### **Details of approval**

The syllabus was approved by Study programmes board, Faculty of Science on 2007-06-14 and was last revised on 2012-11-21. The revised syllabus applies from 2012-11-21, spring semester 2013.

### **General Information**

The course is an elective course for first-cycle studies for a Bachelor of Science in physical geography and ecosystem analysis. The course is also given as a freestanding course.

*Language of instruction:* Swedish and English  
The course is given in English when necessary.

*Main field of studies*

Physical Geography

*Depth of study relative to the degree requirements*

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

### **Learning outcomes**

Knowledge and understanding The student is expected to be able to: describe at a general level the energy systems of the Earth as driving force to the dynamics of the Earth and the landscape formation describe the Earth's cyclic transport of matter (water, rock, soil) and the landscape geodynamics over the time account for the Earth's endogenic respective exogenic geomorphological processes'importance for land forms'and landscape's dynamics in detail describe mass movement, weathering and erosion processes in different climates explain the relationships between mass movements, weathering and erosion processes and land forms in different climates account for history of science and basic theories of the cycles of the landscape describe conceptual numerical models of simulation of different geomorphological processes summarise human influence on the landscape in a global or local

perspective Skills and abilities The student is expected to be able to: independent and in groups carry out basic observations of the landscape to be able to discuss and summarise its origin and dynamics present procedure and results from observations, collection and analysis of landscape data in oral and written form for specialists and laymen, assess human influence on the landscape and describe the sensitivity of different landscapes to the influence of man and climate. Judgement and approach The student is expected to: had obtained a consciousness about the importance of, and self-confidence for, use of geographic information and analysis regarding the forms and dynamics of landscapes within natural sciences other application fields, have achieved a critical approach to analysis and description of landscape concerning global and local assessments/scenarios of the landscape's "sustainability", particularly land degradation and desert encroachment in different time perspectives.

## Course content

The aim of the course is to give advanced and applied knowledge of the landscapes of the Earth and the processes (particularly abiotic), through which the landscapes are developed and changed in different climates and and spatial context. The course focuses on the land forms, origin and development of the Earth's surface, and treat: landscapes, land forms, land forming processes and their connection to climate and anthropogenic factors the role of geomorphological processes in landscape dynamics natural resource planning, soil conservation, land degradation and and landscape changes in a local, regional and global perspective Central parts are to understand the human influence on the dynamics and permanent changes of the landscape. The course focus on both nordic conditions and the conditions in tropical and subtropical environments. Strong emphasis is placed at analysis of the present-day landscape as a results of the development in a long time perspective under different climates.

## Course design

The teaching consists of lectures, laboratory sessions, field exercises, seminars, group work and project work. Participation in laboratory sessions, field exercises, seminars, group work and project work and thereby integrated other teaching is compulsory.

## Assessment

Examination takes place via written assignments and project presentations during the course and via written examination. For students who have not passed the regular examination, additional examination in close connection to this is offered.

*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.

The grades in the course are passed with distinction, passed and failed. To pass the entire course, approved examination and passed results of written assignments and project presentations and participation in all compulsory parts are required.

## **Entry requirements**

General entry requirements and 120 credits scientific studies including NGEA01 (Introduction to the environment of the soil), NGEA07 (Physical geography theory and methodology), NGEA04 (Ecosystem analysis), NGEA06 (The Climate system), NGEA11 (Geographic information systems) and NGEA03 (Remote sensing for landscape studies) or the equivalent.

## **Further information**

The course may not be included in a higher education qualification together with NGE607 the processes and landskapsdynamik of the Surface 10 p.

Subcourses in NGEA09, Physical Geography: Land Surface Processes and Landscape Dynamics

Applies from V08

0701 Land Surface Processes and Landscape Dynamics, 15,0 hp  
Grading scale: Fail, Pass, Pass with distinction