Department of Earth and Enironmental Sciences

NGEA07, Theory and Methods of Physical Geography, 15 credits

Naturgeografi: Naturgeografisk teori och systemmetodik, 15 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2007-06-14 (N2007266) and was last revised on 2013-01-08 (N2007266). The revised syllabus comes into effect 2013-01-08 and is valid from the spring semester 2013.

General information

Language of instruction: Swedish and English

Main field of study	*Specialisation*
Physical Geography	G1F, First cycle, has less than 60 credits in first-cycle course/s as entry requirements

Learning outcomes

The aim of the course is that students on completion of the course should have acquired the following knowledge and skills:

Knowledge and understanding

- Knowledge and understanding of the scientific method as a basis for scientific studies
- Knowledge and understanding of basic mathematical and statistical methods of relevance to describe and analyse physical geography phenomena
- Knowledge and understanding of physical processes in the bio-geosphere, the atmosphere and the hydrosphere and their mathematical formulations
- Ability to formulate conceptual and simple mathematical models and to apply these to analyse systems and their dynamics

- Ability to collect data on different physical, chemical and biological phenomena by means of various measuring equipment

Application and assessment

- Ability to tackle different problems and issues within physical geography and ecosystem analysis by - collecting and compiling relevant data; - choose appropriate statistical or mathematical analytical method; - interpret results considering the limitations of data and the analytical method

Communication skills

- Ability to communicate information, ideas, problem and solutions orally and in writing with or without help of different computer-based tools

Study skills and information competence

- Consciousness about the importance of, and self-confidence for, applying different methods to solve physical geography problems
- A critical approach to physical geography data, analysis result and interpretations of these
- Improved skills in the usage of computer-based analysis and presentation tools
- Improved skills in information retrieval

Course content

Starting from the participants' prior knowledge, basic physical, mathematical and statistical methods with relevance for treatment of physical geography issues are introduced. Further, the relationship between measurement and modelling is introduced
as a way to describe spatial and temporal phenomena. The methods and their application are highlighted with examples from various fields of physical geography such as climatology, hydrology, micro-meteorology and ecosystem analysis . Exercises in usage of computer based analysis
and presentation tools, information retrieval and oral and written presentation techniques are included in certain learning activities.

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 at the end of the course. Re-sit examinations are offered soon after the examination to students who do not pass.

Grades

Grading scale includes the grades: Fail, Pass, Pass with distinction

The grades on the course is pass with credit, passed and failed.
To pass the course requires approved examination and passed results on written assignments and project presentations and participation in all compulsory parts.

Entry requirements

General entry requirements and Mathematics D, Physics A and 15 credits of scientific studies including NGEA01 (Physical Geography: Introduction to the Global Environment), or the equivalent.

Further information

The course may not be included in a higher education degree together with NGE603 physical geography theory and methodology 10p.