Applications of Geographic Information Systems (GIS) for Ecologists

Programme course

6 credits

Tillämpning av geografiska informationssystem (GIS)

för ekologer

NBIB43

Valid from: 2017 Spring semester

Determined by
Board of Studies for Chemistry, Biology and Biotechnology

Date determined
2017-01-25

Replaced by
NBIB51

Main field of study

Biology

Course level

First cycle

Advancement level

G1X

Course offered for

- Biology

Entry requirements

Note: Admission requirements for non-programme students usually also include
admission requirements for the programme and threshold requirements for
progression within the programme, or corresponding.

Prerequisites

One year of university studies in biology

Intended learning outcomes

After the course you should have basic knowledge of, and be able to handle
geographic information systems (GIS). You should also know how to use it in
ecology. The course focuses on recording, compiling, analyzing and presenting
geographically bounded data in an ecological context. After the course you should
be able to:

- conduct an ecological survey where geographically bounded data is
  collected and transferred to GIS-software
- manage and edit data in a GIS-software
- present data in reports with information rich maps
- perform basic spatial analysis of data

Course content

The course consists of two main parts that run in parallel. One part is lectures,
seminars labs, and workshops. Here we will deal with data management and how
to handle a GIS-software. The examination is by LAB1. The second part consists of
group work where students collect, analyze and present (written and oral)
geographically bounded data in an ecological context. Examination by UPG3 and
2.

Teaching and working methods

The course consists of lectures, seminars, labs, workshops and group work. Focus will be on group work with collecting data in field, analyzing and preparing a report.

Examination

LAB1	Laboratory work	1 credits	U, G
UPG2	Presentation of analysis	2 credits	U, G
UPG3	Data collection and written report	3 credits	U, G

Grades are given as 'Fail' or 'Pass'.

Grades

Two-grade scale, U, G

Department

Institutionen för fysik, kemi och biologi

Director of Studies or equivalent

Agneta Johansson

Examiner

Lars Westerberg

Course website and other links

http://cms.ifm.liu.se/edu/coursescms/NBIB43/

Education components

Preliminary scheduled hours: 74 h
Recommended self-study hours: 86 h

Course literature

Geografisk informationsbehandling - teori, metoder och tillämpningar (fjärde omarbetade upplagan). Redaktör L. Harrie (2008). ISBN:978-9-540-6015-3

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.