Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

# SLUkurs

## Syllabus

## PVS0134 GIS in Animal Science, 2.0 credits

## Syllabus approved

2016-04-12

## Subjects

Animal Science

## Education cycle

Third cycle

## Grading scale

Pass / Failed
The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

## Language

English

## Prior knowledge

Admitted to a postgraduate program in animal science, biology, veterinary medicine or related subjects, and basic knowledge in R (for ex. the course "Introduction to R" by VMAS)

## Objective, including learning outcomes

After completing the course the student shall be able to
1) describe and explain fundamental concepts related to spatial data and GIS,

2) use basic spatial analysis tools and perform basic spatial analysis in R and QGIS
3) produce and interpret basic maps and spatial information
4) use Geographic Information Systems (GIS) and spatial analysis as a tool in an oral report presented at the course

**Content**

- GIS basics and GIS in Animal Science (epidemiology)
- How can I use GIS in my research? Short presentations of how the participants use GIS or want to use the GIS in their research.
- GIS at SLU (data access and programs)
- Open access GIS (Installation of QGIS, plus knowledge of other open source software in GIS)
- GIS in R
- Introduction to spatial modeling (interpolation methods, spatial correlations etc.)
- Presentation of GIS-assignment by the participants

**Requirements for examination**

Participation in at least 4 meetings and oral presentation of course-project

**Additional information**

The course consists of five half or whole-day meetings with lectures and computer exercises. In addition the students are expected to do individual work in between meetings. The students will bring their own computers to work on.

**Responsible department**

Department of Animal Nutrition and Management