

Applied land remote sensing, 3 credits

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October 2, 2015

The aim of this course is to provide students with skills in applied remote sensing with focus on applications regarding vegetation in terrestrial environments. We will try to adjust course contents to the actual interests and background skills of the applicants.

Time frame: This course will be given February 1-5 (Monday to Friday) 2016. 2.5 days of preparatory work (reading) and 2.5 days of work after the week in Lund make a total of 2 weeks, equivalent to 3 credits within the PhD education.

Preliminary Course content/schedule

Day	Date	Topic	Contents	Responsible teacher
(2.5 days)	Jan	General Remote sensing- reading	Preparations/reading	ALL
1	Feb 1	Basic foundation of remote sensing of vegetation (radiation, reflectance, vegetation indices). Sensors and sensor systems. What type of information can be derived using remote sensing and how?	Lecture + exercise	LE+JA
2	Feb 2	Applied remote sensing – Aerial photos and LANDSAT Invited speaker	Lecture + exercise	Invited speakers
3	Feb 3	High Spatial Remote Sensing Hyperspectral (Airborne) Remote Sensing, Biodiversity, Ecology	Lecture + exercise	KH
4	Feb 4	Use of time series / vegetation modelling in remote sensing, TIMESAT/Phenology	Lecture + exercise	LE
5	Feb 5	Light Use Efficiency, vegetation productivity Concluding presentations	Lecture + exercise Seminar	JA
(2.5 days)	Feb	Writing and handing in assignments/exercises.		ALL

*A detailed schedule will be available later on. In general there will be lectures in the mornings and exercises in the afternoon.

Teachers

JA Jonas Ardö
LE Lars Eklundh
KH Karin Hall

Application, including a short description of your background skills/experience in remote sensing, no later than **November 27, 2015** to Jonas.Ardo@nateko.lu.se (phone 046-2224031).

PhD course: models and measurements in land remote sensing.

3 ECTS

Syllabus

1 Basic information

The course is at the postgraduate (PhD) level. It is intended as a continuation course for students with previous basic knowledge in remote sensing. Focus is on applied remote sensing of vegetation.

2 General information

The course is given as part of the CLIMBECO research school and is meant for 10-16 PhD students. The course is given in English.

3 Course contents (see schedule above)

4 Teaching and examination

Teaching is carried out during one week of lectures, exercises and seminars in Lund. The student is expected to actively participate in exercises and seminars, and to hand assignments and reports related to the various tasks in the schedule tasks. The examination will be based on these project reports and assignments. 2 days before the course start are dedicated to preparatory work and 3 days after the week in Lund are assigned to writing up exercises and assignments.

5 Grades

Grades are pass or fail.

6 Admission requirements

Participants must be registered as PhD students and it is *preferred* if applicants must have previously passed an introductory courses in remote sensing, e.g. one of [NGEA03 \(Remote Sensing for Landscape Studies\)](#), [NGEA05, \(GIS and Remote Sensing with focus on the Environment\)](#) or [NGEN08 \(Satellite Remote Sensing\)](#) or courses at similar level or having equivalent experience. The maximum number of students is sixteen. Minimum number of students is five. Depending on the number of applicants some flexibility in background skills is tolerable.

7 Literature

Scientific articles and book chapters, to be announced later.

8 Teacher and examination

Responsible teachers and examiners are Jonas Ardö, Lars Eklundh & Karin Hall, department of [Physical Geography and Ecosystem Science](#), Lund University. Participation in all scheduled activities is mandatory.