Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PFG0071 Enhancing forest resilience for an uncertain future, 3.0 credits

Syllabus approved

2020-03-13

Subjects

Forest Management

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

Open to PhD students but MSc students in their last year and postdocs are also welcome./ Öppen för doktorander, studenter på masternivå inne på sitt sista år och postdocs.

Objective, including learning outcomes

The purpose of the course is to acquire an in-depth theoretical understanding about forest resilience under global change, and to develop analytical skills for evaluating forest resilience using open-access statistical software. The course will address different aspects of forest resilience:

- Concepts-from gene to landscape: impact of climate and management strategies to increase resilience
- Socio-economic and political analysis; risk assessment
- Novel data and inter-disciplinary approaches to study resilience

The course organizers consist of Ignacio Barbeito (SLU, Sweden), Christian Messier (UQO, Canada) and Lluis Coll (Universitat de Lleida, Spain).

Content

The presential course week will take place at an experimental station so that the forest is around the corner and could be visited with short notice. In case that in the week chosen the experimental station would not be available, the course will take place in Alnarp and buses will be arranged for several excursions in the nearby forest. During the course students will have:

1. Pre-course assigned readings from provided scientific literature in forest resilience related to the topics in preparation for the intensive in-door and out-door classes during the course week (20 h)
2. Individual oral presentation of the students PhD project
3. Individual short assignment where students will present a forest resilience issue of the students' choice representative of the region which they come from in relation to the literature provided (2 & 3 combined, 4 h)
4. Lectures from invited national and international guests/experts in the various fields related to forest resilience (15 h)
5. Focussed group discussion topics within lectures
6. R lab sessions focussed on quantifying resilience using specific packages such as persistR- working in groups with assigned data (5 & 6 combined, 10 h)
7. Field excursions to discuss experimental design for forest resilience to various forest disturbances (8h)
8. Final group presentations (3h)

Requirements for examination

For passing the course the students are required to participate in exercises, classes, excursions and analysis of data; conduct a small group project and present it. All scheduled lectures and field trips are mandatory and in case of absence students will have to write an essay as compensation for that particular subject.

Additional information

After completing the course, the students should be able to:
1. Describe the concept of forest resilience and how to enhance it through sustainable management taking into account the natural science background together with the socio-economic and political conditions

2. Design experiments to quantify forest resilience

3. Measure and evaluate forest resilience

4. Reflect about their own work in a forest resilience context and discuss possible benefits of interdisciplinary approaches in their field

One week of mandatory attendance- weeks 41 or week 42 of 2020. Ask course leader for more detailed schedule.

Responsible department

Department of Southern Swedish Forest Research Centre