



PFS0172, Sampling, 4.0 Hp

Syllabus

Finalized by: Institutionen för Skoglig resurshushållning, 2020-02-19

Valid from: 2020V

Level within study regulation:

Third cycle

Subject:

- Mathematical Statistics

Grading scale:

Pass / Failed

Course language:

Swedish

Entry requirements:

Statistics I: Basic statistics, 4 hp or similar.

Objectives:

The objective of the course is to give a broad introduction to basic sampling theory and related statistical inference. The course is built on lectures, exercises and computer exercises. Exercises and computer exercises are mandatory.

On completion of the course, the student will be able to:

- understand basic concepts of sampling from finite and infinite populations

- describe some basic sampling methods including conditions and assumptions
- describe and apply basic estimators for survey sampling
- select an appropriate sampling method for a given problem
- carry out a basic probability sampling survey
- interpret and evaluate results from basic surveys correctly and draw reasonable conclusions
- clearly and concisely communicate results and conclusions
- use statistical software for sampling

Content:

The main contents are as follows:

- Simple random sampling
- Systematic sampling
- Cluster sampling
- Stratified sampling
- The Horvitz-Thompson estimator and unequal probability sampling
- Two-stage and two-phase sampling
- Basic point and plot sampling of an infinite population
- Line-intercept sampling
- Detectability in sampling
- Line-transect sampling
- Capture-recapture estimation

Modes of assessment:

Passed exercises and passed examination in written and/or oral form.

Grading scale: Pass/Failed - If a student has failed an examination, the examiner has the right to issue supplementary assignments. This applies if it is possible and there are grounds to do so.

- The examiner can provide an adapted assessment to students entitled to study support for students with disabilities following a decision by the university. Examiners may

also issue an adapted examination or provide an alternative way for the students to take the exam.

- If this syllabus is withdrawn, SLU may introduce transitional provisions for examining students admitted based on this syllabus and who have not yet passed the course.
- For the assessment of an independent project (degree project), the examiner may also allow a student to add supplemental information after the deadline for submission. Read more in the Education Planning and Administration Handbook.

Organisation:

Department of Forest Resource Management

Supplementary information

Other information:

- The right to participate in teaching and/or supervision only applies for the course instance the student was admitted to and registered on.
- If there are special reasons, students are entitled to participate in components with compulsory attendance when the course is given again. Read more in the Education Planning and Administration Handbook.