Course description
Analysis of survey data, 7.5 hp, ST726A

CONTENTS OF THE COURSE

The course comprises one module:

1. Analysis of survey data, 7.5 ECTS.

The course covers how to use data collected in sample surveys for other purposes than purely descriptive ones. The course covers both simple and complex sample designs, for example, designs with varying selection probabilities and a selection of statistical analyses, such as linear and logistic regression and multilevel models. The course also addresses the use of auxiliary data in the analysis. The concepts of inference population and survey population are explained.

With easy access to easy-to-use software, the use of survey data in complex analyses has become commonplace. The course provides skills that are often needed in order to exploit data fully, both in public debate and in research in the social and behavioural sciences.

The course provides also a basis for further advanced studies and research studies in statistics.

The teaching consists of lectures and exercises.

LEARNING GOALS
After completing the course students should be able to
- apply a variety of model-based and design-based methods to analyse survey data that has been collected with different sampling designs
- use frame information to enhance analyses
- understand the difference between inference population and survey population

COURSE LITERATURE
- Lohr, S. (2010), *Sampling: Design and Analysis*, 2nd edition, Boston: Brooks/Cole

- Additional material distributed during the course, for example, lecture notes and other material

All documents posted on Mondo, https://mondo.su.se/portal, or the course website (see below), are considered as being distributed during the course.

EXAMINER AND TEACHERS
The Department of Statistics is located on the 7th floor in the B-building (Södra Husen). General information about the department (office hours, phone numbers, schedules etc.) is posted on the department website, www.statistics.su.se.

Teacher	Reception hours	Room	E-mail
Dan Hedlin – lecturer, examiner, course coordinator	On agreement	B795	Dan.Hedlin@stat.su.se
Edgar Bueno – assisting teacher	On agreement	B730	edgar.bueno@stat.su.se

SCHEDULE

The teaching consists of ten sessions. The schedule is posted on the course website (Swedish name Analys av surveydata): http://www.statistics.su.se/utbildning/avancerad-niv%C3%A5/analys-av-surveydata-7-5-hp-1.128772

MANDATORY PRESENCE

Attendance is mandatory at the session on 27 November, at 9-12 am, because part of the examination takes place at this session. See further below under 'examination schedule'.

Although attendance at other sessions is not mandatory, it is strongly recommended that students attend all teaching sessions in order to better achieve the learning goals.

EXAMINATION

Students are assessed by examination of the learning outcomes of the student with respect to the learning goals. The examination consists of two parts:

1. Oral presentation and active participation in discussion of a scientific paper or similar. To pass students should present the paper clearly and accurately. To pass students also need to contribute to the discussion. This component is graded as either pass or fail.
2. One coursework.

Grades

Grading of the course is on a criterion-referenced seven-grade scale:

A   Excellent
B   Very good
C   Good
D   Satisfactory
E   Pass
Fx   Inadequate
F   Totally inadequate

The oral presentation + active participation in discussion (point 1 above and referred to as 1 below) is either pass or fail. The coursework (point 2 above and referred to as 2 below) is graded A-F. To pass the course at least grade E on 2) and grade pass on 1) are required. The grading of the course will be based solely on the grading of 2), provided that 1) is a pass. If you pass 1) but fail 2), the grade of the course will be Fx.

- Students who have obtained at least grade E on the course cannot redo the coursework to achieve a higher grade.

- Students with either Fx or F on the course can redo the examination at least four times, provided that the course is still offered, to achieve at least grade E.
- A student who has obtained either grade Fx or F twice on the same examination has the right to demand another examiner the next time the student takes the same examination. This must be done in writing to the head of department.

EXAMINATION SCHEDULE

1. Oral presentation and active participation in discussion of a scientific paper or similar	This will take place on 27 November at 9-12 am, in room B705. If you either fail to be present or fail by insufficient quality a second opportunity will be organised in November 2019 – February 2020. If you fail at this second opportunity, there may not be another opportunity before the autumn term 2020.
2. Coursework	Handed out on 18 November, to be handed in by email to the examiner no later than December 6. If you hand in nothing or do not pass, there will be an extension to February 28, possibly with a different coursework. If you fail at this second opportunity, there may not be another opportunity before the autumn term 2020.

Important notes:
If you pass the oral presentation + active participation in discussion but do not pass the coursework, neither at the first nor the second opportunity, then you cannot use the result of the part of the examination that consists of the oral presentation + active participation in discussion. That is, the result of the oral presentation + active participation in discussion is not transferable after February 28, 2020.

The coursework must be done independently, without help from any other people. A student who has emailed the coursework on time may fail if she or he is unable to answer oral questions about the coursework. Should the examiner wish to ask questions about the coursework orally, a time, not later than February 28, 2020, will be agreed on with the student.

The coursework will be run through software which will detect plagiarism. Plagiarism will be considered a disciplinary offence.

GRADING CRITERIA

Grade	Criteria
A	*Knowledge*. The paper demonstrates excellent knowledge and understanding of the particular type of analysis of survey data that the paper addresses or uses. The paper demonstrates also some knowledge of the broad field of analysis of survey data.

Competence and skills. The student has demonstrated excellent ability to identify and formulate issues critically, autonomously and creatively as well as to plan and, using appropriate methods, undertake advanced tasks, surpassing a level that is ordinarily expected of master of science, within predetermined time frames as well as the ability to evaluate this work. The student has demonstrated excellent ability to critically and systematically integrate knowledge and analyses, assess and deal with complex phenomena, issues and situations even with limited information. The student has made a clear account of the arguments that form the basis of the conclusions presented in the paper. |

	Judgment and approach. The student has shown excellent ability to form sound judgments, both in terms of scientific judgments and judgments in choice of problem solving methods (including choice of focus and assumptions that are appropriate for the problem). The student has through her or his way of working and achievements shown excellent ability to assess her or his own work. The student has demonstrated ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.
B:	Meets the criteria for C and partially the criteria for A.
C:	***Knowledge***. The paper demonstrates considerable knowledge and understanding of the particular type of analysis of survey data that the paper addresses or uses. The paper demonstrates also some knowledge of the broad field of analysis of survey data.
	Competence and skills. The student has demonstrated considerable ability to identify and formulate issues critically and autonomously as well as to plan and, using appropriate methods, undertake advanced tasks, at a level expected of master of science, as well as the ability to evaluate this work. The student has demonstrated considerable ability to critically and systematically integrate knowledge and analyses, assess and deal with complex phenomena, issues and situations even with limited information. The student has made a clear account of the arguments that form the basis of the conclusions presented in the paper.
	Judgment and approach. The student has shown considerable ability to form sound judgments in choice of problem solving methods (including choice of focus and assumptions that are appropriate for the problem). The student has demonstrated ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.
D:	Meets the criteria for E and partially the criteria for C.
E:	***Knowledge***. The paper demonstrates knowledge and understanding of the particular type of analysis of survey data that the paper addresses or uses. The paper demonstrates also some knowledge of the broad field of analysis of survey data.
	Competence and skills. The student has demonstrated ability to identify and formulate issues critically and autonomously as well as to plan and, using appropriate methods, undertake advanced tasks. The student has demonstrated ability to assess and deal with complex phenomena, issues and situations even with limited information. The student has made a reasonably clear account of the arguments that form the basis of the conclusions presented in the paper.
	Judgment and approach. The student has shown ability to form sound judgments in choice of problem solving methods (including choice of focus and assumptions that are appropriate for the problem). The student has demonstrated the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.
Fx:	The student's achievements with respect to at least one of the criteria in E has serious shortcomings.
F:	The learning outcomes have not been achieved.