



**Stockholm  
University**

Department of Statistics  
2019-10-03/PGA

## **Course description**

### **Statistical Inference**

7.5 Higher Education Credits (ECTS Credits), advanced level

Course code: ST745A

Fall 2019

### **Contents**

The course consists of one unit:

1. Statistical Inference. 7.5 ECTS credits

The course introduces basic statistical principles, e.g. the principles of sufficiency, ancillarity, invariance, and conditionality. Bayesian, likelihood-based and Neyman-Pearson inference are applied and exemplified through point-estimation, interval estimation, and hypothesis testing. Asymptotic properties of some important statistics will also be investigated.

## Course literature

- Casella G. & Berger R. L. Statistical Inference, Second Edition, Duxbury Press (Thomson Learning Academic Resource Center)
- Additional material may be distributed during the course

## Learning Goals

After completing the course the student should be able to

- derive important point estimators, interval estimators, and test statistics in some selected applications
- demonstrate understanding of important theorems in inference theory
- demonstrate understanding of convergence-properties of estimators

## Teaching

Teaching consists of lectures (L1-L12), exercises (Ex1-Ex8) and one computer exercise (C1) according to the course schedule. NOTE! The first lecture (Lecture-1) is **mandatory**.

## Course Schedule

See the webpage of the course.

## **Examination**

The examination consists of

- A written examination

## **Grading Criteria**

The written examination is graded as A, B, C, D, E, Fx and F. The passing grades are A, B, C, D and E, where A is the highest and E is the lowest. Failing grades are F and Fx, where F is lower than Fx. When obtaining a failing grade F or Fx in the written examination, we will not give extra exercises or extra assignments to obtaining a passing grade.

## **Grading criteria for the written examination**

The maximum total credit is thus 100 points for each examination. Grades are given on a seven-point rating scale:

A	90-100 points
B	80-89 points
C	70-79 points
D	60-69 points
E	50-59 points
Fx	40-49 points
F	00-39 points

To pass the course a minimum grade of E is required.

For more information about examination, see the course plan.

## **Teachers and Communication**

### **Course coordinator, examiner and lecturer**

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### **Teaching Assistant**

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