

*Intro*

# Basic Statistics for Economists

Spring 2020

Department of Statistics

# Website and course info

## Course webpage

- <https://www.statistics.su.se/english/>  
⇒ Course webpages ⇒ Basic Statistics for Economists, 15 credits
- Syllabus etc.

**ATHENA** – almost all that you'll need

- Start the Athena app or log on at <https://athena.itslearning.com/>
- Log on ⇒ course "**Basic Statistics for Economists-VT20**"
- All essential course documents and materials, including our Schedule

# About the schedule

- During this first week, the schedule will remain unchanged.
- For the rest of the course, there will be some changes.
- The schedule will be posted as a spreadsheet on Athena. This will be updated once per week
- Please ignore the official schedule!

# Three documents

- **Syllabus (*kursplan*)**
  - Course contents, learning goals, overall conditions and requirements (legally binding document)
- **Course description (*kursbeskrivningen*)**
  - what applies to this semester, general info, deadlines, etc. and more details on assessment criteria
- **Teaching Plan and Reading list (*läsanvisningar*)**
  - what and when
  - lectures, seminars, computer labs
  - chapters and sections in the course literature, exercises, etc.

# Teachers

Ulf Högnäs                           examiner, coordinator, lectures

Susy Caraza                         seminar groups 1-4

Anna Stenkvist                     seminars groups 5-8

Contact info, reception hours etc.: [www.statistics.su.se](http://www.statistics.su.se)

Or the latest version of the **course description** (on Athena)

# Course literature

**NCT** = Newbold, P., Carlson, W. L. and Thorne, B. (2012).

**Statistics for Business and Economics with  
MyMathLab Global XL.** 8<sup>th</sup> edition. Global edition. NJ:  
Prentice Hall

**JB** = Bethlehem, J. (2009). **Applied survey methods – a  
statistical perspective.** 1<sup>st</sup> edition. Hoboken, N.J.: Wiley  
& Sons

Additional material such as the **Exercise booklet** (= **EX**), practice exams, home assignment instructions, lecture notes etc. will be posted on **Mondo**

# Note:

- **JB** is **available for free** as an electronic resource in pdf-format.
- You can download each chapter separately via Stockholm University's library; link <http://su.se/biblioteket/> search on book title and/or author's name.

# Course literature, cont.

- Main focus is on **NCT**
  - descriptive statistics, probability theory, statistical theory and regression analysis, time series etc.
  - cf. **Teaching Plan and Reading list**
- Less focus on survey methodology and the course book **JB**
  - parts of **JB** will be addressed sporadically in the first couple of lectures and especially lecture **L11**
  - You are expected to read selected sections of JB mostly on your own
  - **NOTE! JB** is included in the course – necessary especially for Assignment 2

# Scheduled teaching sessions

- **23** Lectures (**L**)
  - traditional reviews of contents + exercises and examples
- **7** Plenary exercises (**PE**)
  - lecture hall exercises
- **9** Seminars (**S**)
  - exercises in smaller groups of at most 30 students (if time permits discussion of the home assignments)
- **2** computer labs (**CL**)
  - seminar groups, intro to statistics with Excel, opportunity to start working with the home assignments, teacher assisted

# Compulsory attendance

- Attendance is **not** required to pass the course, formally
- Attendance is voluntary, you decide when you want to attend
- However, the following seminars are mandatory: **S6**

**S6** Wednesday **May 8**: oral presentations by students of part A of Assignment 2 (part of the examination)

**We will return with information on how this will work under our new circumstances.**

Contact your seminar teacher if you can't participate!

- Read the **Course description!**

# Examination

If you miss out on or fail any of the four tests, you are required to re-do only those tests, not the tests you've already passed!

The course is examined through four tests:

- **Assignment 1 – Data for Decisions, 1,5 credits**
  - two parts, one written report
- **Assignment 2 – Market Survey, 3 credits**
  - two parts, one written report
  - oral presentation of first part
- **Assignment 3 – Econometrics, 3 credits**
  - two parts, one written report
- **BSFE Written exam – 7,5 credits:**
  - individual written test

# Examination, cont.

- **Home Assignments**
  - Carried out as **group work** (2-4 students)
  - Two chances for each of the assignments
    - First deadline and Second deadline
  - If you fail on the first deadline you can correct and revise your work and re-submit; second deadline
  - You cannot revise and complete a failed assignment after the second deadline
    - if you fail the second time you'll have to come back next semester and re-do the assignment in question
  - If you miss (or fail) the oral presentation (Assignment 2) contact your seminar teacher!



# Examination, cont.

- **Home Assignments, cont.**
  - Cooperation is allowed and encouraged
  - Even between groups!
  - **Plagiarism is not allowed!**
  - Text matching software may be used

*"You must acknowledge your sources whenever you paraphrase or summarise another person's ideas or points, or when you quote another person's work, or use tables, graphs, images, etc. which you have found from another source, be it from a printed document or from the web."*

Cardiff University (year unknown), Citing and Referencing in the Harvard Style, Cardiff University [www.cardiff.ac.uk](http://www.cardiff.ac.uk)

# Examination, forts.

Exactly how the examination will be carried out is still unknown.

- **Written test - individual exam**

- Two dates – see Course description and Schedule
- Outline - minimum 50 points of 100 for a pass
  - Multiple choice questions (circa 60 % of total)
  - Problems with written solutions (circa 40 %)
- Approved aids during the exam
  - “Formula sheet and Statistical Distribution Tables” will be provided on site
  - Calculator without stored text and data
    - cell phone is not an approved calculator
  - For special requirements (secluded room, extra time, dictionary etc.) contact our Student councilor
  - English-Swedish dictionaries available on site

# Examination, cont.

## Grading:

- Assignments 1-3: Pass or Fail (G or U)
- Written exam: A, B, C, D, E, Fx, F
  - F and Fx are both failing grades that require re-examination
- Minimum requirement: pass on all home assignments + at least E on the written test
- Final grade = grade on the written exam

# Contents of the course

- **Descriptive statistics** – summarize and structure data, numerically and graphically, e.g. as a basis for decision making
- **Probability theory** – how plausible is a given event? Basic foundations and models for calculating probabilities
- **Statistical inference** – how to draw conclusions from data
- **Basic econometrics** – simple regression & time series models
- **Survey methodology** – how to do a survey

# Math skills: what is required/expected?

- General skills with numbers, use of common sense, e.g. being able to assess if a solution is reasonable or not
- Understanding how formulas and notation works, being able to use and express notions using math, formulas
- **Basic algebra, set theory, basic combinatorics, functions, the sum notation, powers, ...**
- ... and perhaps just some basic calculus (derivatives) but it isn't required
- We'll be reviewing some of the above in class

# Computer & software skills?

- Advanced skills are not necessary nor required
- **MSOffice – Word and Excel**
  - assignments (and exercises)
- Compile a report using Word
  - equations and mathematics
- Handle data and do calculations using Excel
  - using functions and writing formulas
- Programming using statistical software (SAS, SPSS, Stata Matlab, R, Python etc.) is not part of the course but use it if you prefer it and know how to use it!

# Time: what is required/expected?

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Teacher-led activities:

|                      |      |      |
|----------------------|------|------|
| - lectures           | 23×2 |      |
| - plenary exercises  | 7×2  |      |
| - seminars/exercises | 9×2  |      |
| - computer labs      | 2×2  | 82 h |

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|                                      |          |
|--------------------------------------|----------|
| Reading & exercises on your own time | ca 160 h |
|--------------------------------------|----------|

|                        |         |
|------------------------|---------|
| Home assignments (1-3) | ca 80 h |
|------------------------|---------|

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|------------------------------|---------|
| Travelling time (on average) | ca 60 h |
|------------------------------|---------|

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|              |                 |
|--------------|-----------------|
| <b>Total</b> | <b>ca 382 h</b> |
|--------------|-----------------|

|   |                |
|---|----------------|
| <b>About 10 full weeks (considering holidays)</b> | <b>= 400 h</b> |
|---|----------------|

# Advice from former students – a sample

- Set off at least 8h per day since this is a time-consuming course
- Stay alert from the start, it isn't possible to cram it all in the last week as it might be in other courses.
- Full pace from the start and review the lecture notes beforehand, or it'll all be going to fast for you and you'll have no idea of what's going on and you'll have spent 2 hours for nothing.
- Spend time on the assignments, they're useful as a preparation for the final exam.
- Study a while every day so that all isn't left for the last weeks before the final exam. Doing the exercises in the literature, other exercises and the quizzes was very helpful!
- Be active from the start, even smallest things you don't understand or it'll create problems when you start studying for the exam.
- ...