JÖNKÖPING INTERNATIONAL BUSINESS SCHOOL
JÖNKÖPING UNIVERSITY

COURSE SYLLABUS
Statistical Data Processing, 7.5 credits

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Course Code:	FSHK13	Education Cycle:	First-cycle level
Confirmed by:	Council for Undergraduate and Masters Education Jan 4, 2013	Disciplinary domain:	Technology
		Subject group:	ST1
Revised by:	Council for Undergraduate and Masters Education Oct 22, 2014	Specialised in:	G1F
Valid From:	Jan 19, 2015	Main field of study:	Statistics
Version:	2		
Reg number:	IHH 2014/4326-122		

Intended Learning Outcomes (ILO)

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

Knowledge and understanding
- Discuss the strengths and weaknesses of Excel, SAS, SPSS, R and Ox.
- Understand how modern statistical software's together with computers can be used to solve statistical problems that were previously impossible to solve

Skills and abilities
- Import/export datasets to/from different statistical softwares
- Conduct numerical data processing's in Excel, SAS, SPSS, R and Ox.
- Obtain graphical presentations in Excel, SPSS, R and Ox.
- Apply the technique of bootstrapping to estimate standard errors.
- Analyse the basic properties of Markov chains

Judgement and approach
- Discuss the strengths and weaknesses of Excel, SAS, SPSS, R and Ox.
- Judge when any of the above software packages is (not) suitable for a statistical analysis

Contents

Important elements of the course are:
1. The SPSS package
2. The R package
3. The SAS package
4. The Ox package
5. The Excel package
6. Sampling distributions and central limit theorems
7. Point and interval estimators
8. Markov chains
9. Bootstrapping

Type of instruction
Introductory lectures.

The teaching is conducted in English.

Prerequisites
30 credits including 7,5 credits in Statistics (or the equivalent).

Examination and grades
The course is graded A, B, C, D, E, FX or F.

Five individually written assignments, each worth 20% of the final grade.
Each assignment concerns a package (e.g. Ox) and its ILO´s. Application of the bootstrap technique is examined within the SAS package assignment and analysis of Markov chains is examined within the R package assignment.

Registration of examination:

Name of the Test	Value	Grading
Examination	7.5 credits	A/B/C/D/E/FX/F

Course evaluation
It is the responsibility of the examiner to ensure that each course is evaluated. At the outset of the course, evaluators must be identified (elected) among the students. The course evaluation is carried out continuously as well as at the end of the course. On the completion of the course the course evaluators and course examiner discuss the course evaluation and possible improvements. A summary report is created and archived. The reports are followed up by program directors and discussed in program groups and with relevant others (depending on issue e.g. Associate Dean of Education, Associate Dean of faculty, Director of PhD Candidates, Dean and Director of Studies). The next time the course runs, students should be informed of any measures taken to improve the course based on the previous course evaluation..

Other information
Academic integrity

JIBS students are expected to maintain a strong academic integrity. This implies to behave within the boundaries of academic rules and expectations relating to all types of teaching and examination.

Copying someone else's work is a particularly serious offence and can lead to disciplinary action. When you copy someone else's work, you are plagiarizing. You must not copy sections of work (such as paragraphs, diagrams, tables and words) from any other person, including another student or any other author. Cutting and pasting is a clear example of plagiarism. There is a workshop and online resources to assist you in not plagiarizing called the Interactive Anti-Plagiarism Guide.

Other forms of breaking academic integrity include (but are not limited to) adding your name to a project you did not work on (or allowing someone to add their name), cheating on an examination, helping other students to cheat and submitting other students work as your own, and using non-allowed electronic equipment during an examination. All of these make you liable to disciplinary action.

Course literature

Compulsory literature

Axczel&, A. D. and J. Sounderpandian. Complete Business Statistics. Seventh edition. ISBN 978-0-07-128753-1
Electronic manuals and tutorials (available in the softwares).