IFI7041	**Data Analysis: Descriptive Statistics**		
4 ECP	Approximate load of contact hours: 24	Study semester: A	Exam
Objectives:	To create opportunities for acquiring theoretical knowledge and practical skills for processing statistical data and carrying out elementary data analysis with the aid of SPSS software. The course is also set up to support developing ones ability to chose appropriate methods for analysis and presentation, as well as to understand and interpret correctly the meaning of statistical results.		
Course outline: (including description of independent work)	▪ Classification and main features of research approaches and methods. ▪ Basics of the data collection. Statistical data and preparation for analysis. Different types of data. ▪ Descriptive statistics: frequency and summary tables, statistics and charts. ▪ Relationships: measures of association and crosstables. ▪ Course consists of seminar type lectures and practical classes where students are expected to be actively involved. In addition every student must submit home assignment, where (s)he demonstrates the command of all statistical data analysis techniques presented in the course.		
Learning outcomes:	▪ ability to choose appropriate research methods and approaches to solve the formulated research problems; ▪ skills for setting up research questions and choosing the appropriate methodology according to the questions set; ▪ ability to design simple instruments for data collection; ▪ ability to create statistical data-tables with an appropriate structure; ▪ understanding of the principles of data analysis; ▪ experience in setting up questions about data which lead to statistical analysis; ▪ understanding of main concepts of descriptive statistics, knowledge of prerequisites for their correct application and ability to interpret the results of the analysis correctly; ▪ ability to recognise different types of variables and choose appropriate statistical techniques accordingly; ▪ knowledge of main and the most important terminology of data analysis; ▪ skills to structure the research while writing up and format the thesis according to the requirements; ▪ skills to use the SPSS software with the aid of the manual for simple data processing and analysis.		
Assessment:	Exam		
Teacher responsible for the course:	Prof. Katrin Niglas; Kairi Osula, MSc		
Name of course in Estonian:	Andmeanalüüs: statistiline andmestik ja kirjeldav statistika		
Prerequisite subject:	Computer skills according to the program set for IFI6001		
Compulsory literature:	Introductory statistics textbook on students' choice.		
Replacement literature: (enabling students to pass the course on the basis of student	Lecture videos by Katrin Niglas Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research (3rd Edition) by John W. Creswell Statistics, Fourth Edition (4th Edition) by David Freedman, Robert Pisani and		

independent work without participating in lectures)	Roger Purves Understandable Statistics (8th Edition) by Charles Henry Brase and Corrinne Pellillo Brase SPSS Survival Manual (2nd Edition) by Julie Pallant SPSS for Windows Step-by-Step: A Simple Guide and Reference, 14.0 update (7th Edition) by Darren George and Paul Mallery
Ways of assessment	Exam. The assessment grade is based on two parts: 1) the written test will be assessed on a scale of "A" - excellent 91-100% "B" - very good 81 - 90% "C" - good 71 - 80% "D" - satisfactory 61-70% "E" - sufficient 51 - 60% "F" - fail 0-50% 2) home assignment will be assessed on a scale "+" - a very good job (the test score increases by one grade), "0" - good work (leaves the test score change) "-" - decent work (take a test score by one grade) "F" - fail (the work isn't reported or the unsatisfactory and should be re-submitted) Keeping score for a positive outcome it is necessary that both works are done (written test, home assignment).

Schedule and program of the course

Date	Planned topics and activities
3.11.2011 17.00-20.30 T-416	Preparing data for analysis. Types of scales/variables/data. Summarising data by frequency taples and diagrams.
10.11.2011 17.30-21.00 T-416	Basic methods for statistical analysis of data.
17.11.2011 17.00-20.30 T-416	Methods for analysing relationships.
24.11.2011 16.15-19.45 S-303	Introduction to SPSS. Principles for composing statistical database. Defining variables. Managing data and output in SPSS. Frequency tables, crosstables.
1.12.2011 16.15-19.45 S-303	Diagrams: histogram, pie chart, bar chart.
8.12.2011 16.15-19.45 S-303	Measures of central tendency and dispersion. Normal distribution, proportions under the normal curve. Standardization of values. Analysing relationships: correlation.
Deadline will be agreed in lecture	Deadline for submission of home assignment.
Date will be agreed in lecture	Exam.