Course programme

Course code IFI7044	**Data analysis: inferential statistics**		
ECTS credits: 4	Amount of contact lessons: 24	Teaching semester: fall 2015	Assessment form: exam
Course objectives:	To create an understanding about significance tests of differences and correlations by theoretical and practical skills. To enhance the skills of implementing the theoretical and practical knowledge of main inferential statistics methods. To make correct decisions about appropriate method and to correctly interpret the results on their own. To introduce statistics packet SPSSs main inferential statistics methods.		
Brief description of course content: (including the description of the independent work)	Main topics: descriptive statistics, the main principles of generalization, main significance tests, T-tests, crosstabs, χ^2 test, correlation and the significance of correlation coefficient. The exam consists of two parts: one of them is a written test and the other is independent work. Each of them make 50% of the final grade. Independent work is practical written work of solving statistical assignments by using knowledge gained in class. Altogether 32 hours of work.		
Learning outcomes:	Knows different types of variables and chooses accordingly correct statistical methods for analysis. Knows how to use SPSS (with the help of guiding materials) for these inferential statistics methods. Knows how to propose analysis questions that derive from data. Knows how to correctly interpret the results of these analysis methods.		
Assessment Methods:	Exam consist of two equal parts: written test and independent work. Each of them make 50% of the final grade.		

Lecturer(s):	Triinu Jesmin jesmin@tlu.ee
Course title in English:	Data analysis: inferential statistics
Prerequisted course(s):	-
Compulsory literature:	-
Replacement literature:	http://vassarstats.net/textbook/
Participation and exam requirements:	It is highly recommended to participate in every seminar. For a positive grade, both independent work and exam, have to be at least 51% each.
Independent work:	At the end of the course students must submit an independent work that can be done in pairs. It consists of practical exercises given by the teacher. Each of the exercises must have a research question, explanation why this is the correct method for this question; outcome/results from a program; interpretation of the results. Each pair of students have to defend their work – answer questions about their work. If you wish to use your own database, please, confirm it with the teacher.
Grading criteria scale or the minimum level necessary for passing the subject:	The evaluation criteria: The final grade consists of independent work and exam, both 50% of the grade. A – 91-100% B – 81-90% C – 71-80% D – 61-70% E – 51-60% F - …- 50% **Both**, independent work and written exam have to be at least 51% completed.

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Written, open questions exam which gives 50% of the grade:

A – (46-50 pt) Excellent and wide knowledge of the course content.

B – (41-45 pt) Very good level of knowledge, some inaccuracies in details.

C – (36-40 pt) Good level of knowledge, some small mistakes in details.

D – (31-35 pt) Average level of knowledge, mistakes in details.

E – (26-30 pt) Poor level of knowledge, some mistakes in principal methods.

F – (… - 25 pt) Inadequate level of knowledge.

Independent work, done in pairs, gives 50% if the grade:

A – (46-50 pt) All the exercises are solved correctly with the best possible method.

B – (41-45 pt) Most exercises are solved correctly with the best possible method, with some mistakes in details.

C – (36-40 pt) Most exercises are solved correctly with the best possible method, with some mistakes in details and interpretation.

D – (31-35 pt) Most exercises are solved correctly with the best possible method, with some mistakes in details and interpretation, some lacking details.

E – (26-30 pt) The minimum level of exercises are solved correctly. Mistakes in choosing the correct method, missing exercises, mistakes in details and interpretation, lacking details.

F – (… - 25 pt) Most of the exercises are solved with the incorrect method.

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<tr><td>Information about the course:

(Topics by contact session, deadlines of independent works and exams/assessments times)</td><td>

1st lecture/seminar 31.10.2015 10:00 – 15:30 S-303	Introduction. Methods of Descriptive statistics. Introduction to SPSS program. The main principles of generalization, main significance tests - hypothesis. Statistical error. α

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	2nd seminar 14.11.2015 10:00 – 15:30 S-303	Compering the average of two groups. Paired samples t-test. Independent samples t-test
	3rd seminar 28.11.2015 10:00 – 15:30 S-303	Nonparametric tests. Crosstabs. χ^2 test
	4th seminar 12.12.2015 10:00 – 15:30 S-303	Correlation. Significance of correlation coefficient.
	EXAM	I 07.01.2016 12:00 II 14.01.2016 12:00
	Re-exam	21.01.2016 12:00

Teaching Unit in charge:	Institute of Informatics
Course programme is prepared by:	Triinu Jesmin
Date:	17.08.2015

The course program is registered in the academic unit:

Date:	
Name of academic coordinator:	