Otto-Friedrich-Universität Bamberg
Lehrstuhl für Statistik und Ökonometrie
Prof. Dr. Timo Schmid

Statistical Methods II (Methoden der Statistik II)

Organization:

Course type:	Lecture + Exercise
Semester hours per week:	3 + 2
Prerequisites:	-
Turn:	Every turn (summer term + winter term)
Exam type:	Exam (90 min)
ECTS:	6 (variations possible)

Learning objectives:

The students of "Statistical Methods II" will be familiarized with the principles of inductive statistics. For this purpose, they will learn to make decisions based on statistical data and to evaluate the measures of these decisions. In this, they will be able to draw conclusions from a sample to the population, investigate statistical hypotheses, and calculate simple model evaluation measures. In addition, the students will be able to apply these techniques using empirical data with a statistical software (R-Studio).

Course description:

The course "Statistics II" deals with methods of inductive statistics. Inductive statistics are used to draw conclusions for the population from a sample. Before dealing with methods directly, the course introduces basic concepts of important continuous distributions. Then, the course focuses on three techniques: a) estimating an unknown parameter of a distribution (point estimation), b) specifying a confidence interval for the unknown parameter (confidence intervals), and c) making statements about the equality or inequality of distribution parameters (hypothesis testing). Towards the end of the course, students will learn how to do a linear regression analysis based on these three techniques.

Content overview:

Continues from the course "Statistical Methods I":

7. Continuous probability distributions
8. Normal distribution
9. Sample statistics
10. Estimation of parameters
11. Confidence intervals
12. Hypothesis tests
13. Regression analysis