BW23: Empirical Economics					Study Programm	e: B
Module Type:	ECTS Credits:	Workload:	Study	Semester:	Module Duration:	
Optional compulsory	12	360	3	. or 5.	one semester	
Courses (HPW=ho	ours per week):			Contact	Indepen-	Planned

Courses (HPW=hours per week):	Contact hours:	Indepen- dent study:	Planned Group Size:
Course 1: Empirical Economics (4 HPW)	60h	180h	20
Course 2: Empirical Economics – Tutorial (2 HPW)	30h	90h	20

# **Intended Learning Outcomes (ILOs):**

By the end of the module, students will be able to

- describe fundamental concepts of econometrics and analyse empirical studies;
- evaluate empirical studies by applying the concepts learned in course 1;
- conduct an empirical analysis by using statistical software (R) and selected datasets.

## **Key competencies:**

- Problem solving
- Critical thinking
- Analytical skills
- Willingness to learn and accomplish
- Expressiveness (written)

# **Description/Contents:**

## **Course 1: Empirical Economic Research**

- 1. Refresher of elementary Statistics and Linear Algebra
- 2. Introduction to the Statistical Software Package R
- 3. Derivation and Properties of the classical uni- and multivariate Linear Regression (Ordinary Least Squares, OLS)
- 4. Functional Forms
- 5. Heteroskedasticity, Autocorrelation, Endogeneity
- 6. Panel Data
- 7. Newer Developments

## Course 2: Empirical Economic Research – Tutorial

- 1. Deepening contents of course 1 by exercises
- 2. Application of Empirical Analyses with R

# Language:

The language of the module is German.

#### **Teaching Methods:**

Lectures, group work, self-study.

#### **Module Applicability:**

B.Sc. Business Administration; B.Sc. Financial and Actuarial Mathematics.

## Pre-requisites/Requirements:

Admission to study "Business Administration" or "Financial and Actuarial Mathematics" for a Bachelor's degree. Basic knowledge in Statistics - as taught in the modules BS01 and BS02 - is required.

## **Examination Types:**

Comprehensive examination in the form of a written exam at the end of the winter semester (90 minutes).

## **Requirements for Award of Credit Points:**

Successful participation in the exam. The exam will be passed if the grade is at least "sufficient" (4,0).

## **Availability:**

The module will be offered generally each winter term.

#### **Assessment:**

This course will be graded and is part of the calculation for the overall grade of your bachelor degree. Particular information concerning the calculation of the overall grade can be gathered in the respective examination regulations.

## **Person Responsible and Main Lecturer:**

PD Dr. Ulrich Heimeshoff and teaching/research assistants of the DICE.

#### **Further Information:**

It is possible to write a project work during this module (BQV02, BQ05, BQ06, BQ07).

Stand: 12.01.2018