Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

hche Hamburg Center for Health Economics

IMPROVING QUALITY OF CARE IN EUROPE

PhD Course

WORKING WITH SAS®

Block course:

15.01.2018: 9:00 am - 12:30 pm / 01:30 pm - 05:00 pm

16.01.2018: 9:00 am - 12:30 pm / 02:30 pm - 06:00 pm

17.01.2018: 9:00 am - 12:30 pm / 01:30 pm - 05:00 pm

Classroom: 4029, Esplanade 36

Course Instructor: Prof. Dr. Tom Stargardt/ Dr. Simon Frey

Course Value: 5 ECTS

Course Overview: The course will cover the essentials of working with SAS as well as basic data manipulation techniques. We will start with an introduction to data management and data mining and then proceed with increasingly complex tools for the analysis of large datasets. We will followa a hands-on approach with the SAS syntax and the interpretation of analytic outputs. By the end of the course, students will be able to address challenges they will typically face with data in their research context.

The course is structured in the following modules / topics:

Module 1: Working with SAS® / data import: students will learn about the SAS frontend (Enterprise Guide®) the structure of the syntax and how to import various data formats.

Module 2: Working with SAS procedures, i.e. PROC SORT, PROC FREQ PROC MEANS, PROC TTEST: in this module, students will learn how to apply basic procedures for descriptive data analyses.

Module 3: Manipulating tables, creating variables, and conducting calculations: students will be introduced to data management in SAS together with relevant SAS functions. This includes using 'data steps' to re-code variables, for example.

Module 4: Manipulating the structure of tables, merging data, arrays: students will extend their experience with data management functions, such as merging and re-arranging tables.

Module 5: Regression techniques in SAS, diagnostics and graphical display: students will learn about procedures to conduct complex analyses used in inferential statistics and econometrics. This includes generating regression outputs and corresponding figures.

Module 6: Automated analyses, macro language/statements/variables: students will learn how to generalize code for use in loops and repeated SAS queries. By the end of the module they will be able to generate macros and array procedures that are capable of performing automated tasks.

Assessment: Students will have to complete an assignment including the programming of SAS code and (statistical) analyses of a dataset which will be provided during the course. Results have to be presented in the form of a short summary paper.

Teaching language: English