Qualification profile MSc in Statistics (2014)

The Master’s degree programme in Statistics provides a grounding in theoretical principles and a wide overview of classical and modern statistical methods. It helps students to develop the skills required for professional, computer-based application of statistical concepts in practice. The degree qualifies holders to work in specialized, interdisciplinary teams in industry, research, development and consulting, where they assume responsibility for the gathering and analytical evaluation of data or the re-design of statistical methods.

Subject-specific knowledge and understanding:

Holders of a Master’s degree in Statistics
• possess profound knowledge of the mathematical foundations of statistics;
• possess profound knowledge in important areas of statistics (multivariate statistics, regression, variance analysis, statistical planning of experiments and time series analysis), this knowledge having been consolidated and extended in additional electives;
• possess – in addition to the Bachelor’s degree – basic knowledge in a selected area of interest which lies outside of statistics but where statistical application is relevant.

Analytical skills:

Holders of a Master’s degree in Statistics
• are able to transpose verbally described problems into statistical models and to analyse them appropriately;
• are able to deploy statistical software efficiently for statistical evaluation;
• are able to assess existing statistical analyses critically and reveal false conclusions.

Developmental skills:

Holders of a Master’s degree in Statistics
• are able to research problem-specific analytical methods in the specialist literature, and to select and apply appropriate methods;
• are able to define requirements for approaching and compiling statistical data from the perspective of statistical analysis;
• are able to refine or re-design statistical methods as required according to context, and to deploy statistical software efficiently for this purpose.

Personal and social skills:

Holders of a Master’s degree in Statistics
• are able to assemble written or oral presentations of ideas, problems and solutions for specialists and non-specialists in a clear and understandable form;
• are able to advance dialogue fostering understanding in an interdisciplinary team in order to delineate analytical questions and develop appropriate solutions;
• consistently orient themselves according to the standards of reproducibility and scientific integrity.