

The Rhine-Waal University of Applied Sciences in Kleve and Kamp-Lintfort offers an innovative, international environment combined with first-rate teaching in interdisciplinary Bachelor and Master's degree courses, taught mainly in English. It is strong in conducting research in disciplines such as technology, natural sciences and social sciences. More than 7,000 students have already enrolled at the Rhine-Waal University of Applied Sciences.

The University of Applied Sciences has to award for the faculty Life Sciences in the Bachelor's degree courses Bioengineering, B.Sc. at the campus in Kleve in the winter term 2021/2022 the following

## **Lectureship (freelance teaching position)**

within the meaning of Section 43 of the Law regarding the Universities in the State of North Rhine-Westphalia (HG NRW):

**Reference number 19/LA/21**

**Subject area/Module: „Data analysis and applied statistics “**

The lecturer shall take over lecture in the amount of 4 lecturing hours (2 hours seminar + 2 hours exercise) in the English module " Data analysis and applied statistics" (3<sup>rd</sup> semester) of the bachelor course Bioengineering, B.Sc..

### **Teaching contents**

**Data Analysis:** statistics in the analysis of biological data; computer-assisted (CA) analysis of large data sets, CA of spectral data, AI for data analysis

**Applied Statistics:** Probability theory, random variables, probability distributions; Inferential statistics; correlation, hypothesis testing; univariate, multivariate regression analysis; analysis of variance, post hoc test; parameter estimation, Bayesian inference, time series

### **Learning objectives**

On successful completion of this module, students should

- understand<sup>1</sup> and provide<sup>3</sup> quantitative and visual summaries on data sets
- be able to identify<sup>2</sup> underlying probability distributions
- be able to judge determinations, correlations and information through regression analyses<sup>2,3</sup>
- be able to estimate parameters<sup>3</sup> and test hypotheses<sup>3</sup>
- be able to analyse time series<sup>3</sup>
- be able to apply statistical methods on the analysis of biological data
- be able to apply computer-assisted analysis of large data sets and spectral data

<sup>1</sup>Knowledge; <sup>2</sup>Comprehension; <sup>3</sup>Application; <sup>4</sup>Analysis; <sup>5</sup>Synthesis and judgement

**Requirements:**

The lecturer shall have a corresponding university degree and have practical experience. Didactic skill and the ability to hold the course with an international group of students in the English language are required (the language level shall be C1 according to the European reference framework).

The Rhine-Waal University of Applied Sciences offers lectures a systematic networking with the university as well as the opportunity of a specific training development to ensure a sustainable skill improvement, a closely link between theory and practice and a support for the personal development of lectures.

Please send your application via e-mail **stating the reference number and the module title** addressed to

**Contact person:**

Prof. Dr. Sylvia Moenickes

E-mail: [sylvia.moenickes@hochschule-rhein-waal.de](mailto:sylvia.moenickes@hochschule-rhein-waal.de)

For questions and further information please contact the mentioned contact person above.