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 Rheine-Westphalia (HG NRW):

Reference number 02/LAFKLS/21
Subject area/Module: „Environmental Biotechnology and Microalgae“

The lecturer shall take over lecture in the amount of 4 lecturing hours in the English module "Environmental Biotechnology and Microalgae" (5th semester) of the bachelor course Bioengineering, B.Sc..

Teaching contents

Environmental Biotechnology: microbial biodegradation, microbial bioaugmentation, biofuels, biogas, environmental (microbiological) bioprocessing, sustainable biotechnology, green process development. Selected environmental biotechnology approaches (e.g. biodegradation of persistent pesticides in soil, biosorption of metals, optimization of biogas production, bioconversion of lignin)

Microalgae: Prokaryotic and eukaryotic cells; Taxonomy of algae; Anatomy and physiology of algae; Growth forms and control of algal growth; Algae and the environment; Algae as bioindicators; Sampling, biomass estimation and counts of freshwater algae; Microalgae biomass production and harvesting; Microalgae as a feedstock for biofuels

Learning objectives

On successful completion of this module, students should

Environmental Biotechnology

- know the principles of microbiological environmental processes[1]
- be able to name examples[1]
- be able to develop and present a selected environmental biotechnology approach[3,4,5]

Microalgae

- have been introduced to the diversity of algae and have gained basic knowledge in anatomy, physiology, and growth patterns of algae[1]
- comprehend the ecological importance of algae in different ecosystems and how the algae's sensitivity qualifies them as bioindicators[1,2,3]
- have been introduced to the fundamentals of biological process engineering and monitoring and thus will be able to understand the technical background to the use of microalgae cultivation for the production of biofuel[1,2,3,4,5]

[1]Knowledge; [2]Comprehension; [3]Application; [4]Analysis; [5]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. Joachim Fensterle
E-mail: joachim.fensterle@hochschule-rhein-waal.de

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