

International Degree Course
of Industrial and Environmental Biology ISTAB (BSc)
Hochschule Bremen – University of Applied Sciences



Study Program for Incoming Students - Winter term 18/19 (Industrial Biology)

Since 2009 ISTAB (Industrial Biology profile) welcomes guest students from abroad on a regular basis mostly from our partner universities. For these students a one semester's / one year's program has been put together which is conducted entirely in English. In the winter term the students will mix with the ISTAB regulars doing advanced project work in the setting of the virtual company TiGer BioTec. In the summer term there is a possibility to organize individual scientific research projects for incoming students in the labs of ISTAB. In the middle of September 2018 guest students and ISTAB students of the industrial biology/ biotechnology profile (in their seventh and last semester of ISTAB B.Sc.) coming back from their year abroad, and maybe some ISTAB M.Sc. students in their first semester will meet. They will be introduced to this year's subject and will then be in charge of forming the R&D department of the virtual company TiGer BioTec.

Program

	Module	Exam	ECTS
Winter term 2018/19	Module 7.1: Project Conception & Design	Presentation	6
	Module 7.6: Lab Techniques	Oral exam	6
	Module 7.2: Project Implementation	Presentation	6
	Individual research projects	Lab report	6
	English Stream / Language classes	<i>as announced</i>	3/6

Note: Specific time schedules of each module will be announced later. Winter term for incoming students will likely end in the beginning of February 2019.

Additional information

Please make sure to have a lab coat and safety goggles with you, as you are obligated to wear them for your own safety during lab work.

Students will experience working conditions in applied research where they have

- to team up,
- to develop communication skills (highly formalized documentation like the development of an intranet communication platform, regular scientific presentations, team discussions),
- to do scientific background research (bibliography, patent research, contact to companies and research institutions etc.),
- to carry out a market analysis (again contact to companies and suppliers of primary matters and products, comparison of prices, consumer analysis etc.), and
- to set up a quality assurance/control unit responsible for the entire team (including implementation of GLP/GMP working conditions, assuring safety aspects (lab work in a safety zone respecting regulations of safe work in the lab, handling of potentially hazardous substances etc.), documentation, regular control of lab journals, writing standard operating procedures (SOPs) etc.

At the end of this first module (7.1 Project module I) students likely in groups of two will elaborate a detailed project plan roughly for the upcoming three months. Thereby students will apply professional project managing tools (definition of a work plan including a work breakdown structure with work packages, milestones etc.) taking the overall project plan of the entire team into consideration. Besides getting hands-on experience with project management methods on a challenging research project students are also asked to do a market analysis. At the end of this module both the project planning as well as the market analysis will be graded in an oral presentation.

The following module (Module 7.6: Lab techniques) will lead our students into the lab, where methods (micro-biology, (bio-) chemistry incl. enzymology, methods of product conservation and analysis) relating to the tasks will be established (or existing methods will be adapted), validated, and documented in a way which is generally binding for the team. This module will last for about three weeks and it will end with an oral examination based on the lab work and individual lab journals.

In the third module (7.2 Project module II) lasting from about the beginning of Nov until the Christmas break our students will apply the methods which were developed and validated in module 7.6. Results from the entire team will then allow the establishment of a feasibility study. A final presentation of the outcome of each of the smaller teams as well as the entire group will then be graded. During the entire TiGer project period regular presentations (PowerPoint, once per week) will take place.

Our incoming students will of course also have time for German language courses, trips organized by ERASMUS and many more. In addition a number of activities (like guest seminars, compact courses of guest colleagues, visits to science fairs etc) will be organized.

There will be a Christmas break likely from Saturday, Dec 22 2018 till (likely) Monday, Dec 31 2018. During January our guest students will have to write a concluding report on modules 7.1, 7.6, and 7.2, which will be graded. ISTAB regulars will write their bachelor thesis during period.

In the beginning of February 2019 our ISTAB Board of Advisors (Biotechnology) will meet here in Bremen. We will have a **Scientific Symposium** where our incoming students along with the entire team will present the results of their work in modules 7.1, 7.6, and 7.2. For the ISTAB regulars this will be the defence of their Bachelor Thesis.

There will be a **break between semesters** from the beginning of February until Friday, Mar 08, 2019. **Summer term courses** 2019 will start Monday, Mar 11. The program for the summer term 2019 (opt. including project work) has not yet been established. For explanations and details please get into contact with Prof. Gerd Klöck or Prof. Stefan Veltel. There will also be **Easter break** (Monday, April 15 till Monday, April 22, 2019).

Guest students will earn ECTS points in their language classes as well.

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