

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



Study Program for Incoming Students - Winter term 23/24 (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 program has been put together which is conducted in English. In the winter term the students will mix with the ISTAB regulars doing advanced project work in the setting of a R&D department of the virtual company TiGer BioTec.

Students interested in the ISTAB-Environmental Biology profile have the chance to perform an individual research project.

Program ISTAB for Incomings

	Modules	ECTS	Contact
Winter term 2023/24	TiGer Biotech – Guided Team Research Project (start 4.10.23)	18-30	Prof. Grunwald, Dr. Peer, Prof. Veltel
	Individual Research Project in Environmental Biology	6-12	Prof. Klefoth

	Modules	ECTS	Contact
Summer term 2024	Molecular Biomedicine	6	Prof. Veltel
	Proteomics	6	Prof. Grunwald
	N.N. (Module from Industrial Biology Strain)	6	Prof. Veltel
	Ecosystems Field Work	6	Prof. Klefoth
	Individual Research Project in Environmental Biology	6-12	Prof. Klefoth

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.

The TiGer Biotech project starts at the 4.10.23. At the end of the first module (Project module I - 6 ECTS) students likely in groups of two-three 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 (Lab techniques – 6 ECTS) will lead our students into the lab, where methods from microbiology, biochemistry, biotechnology as well as methods of product conservation and analysis relating to the tasks will be established, 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 (Project module II – 6 ECTS) our students will apply the methods which were developed and validated in previous modules. 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.

There will be a Christmas break likely from Saturday, Dec 23 2023 till Sunday, Jan 7 2024. The experimental part of the project finishes in the mid of January. Afterwards, our guest students will have the opportunity to write a concluding report on the project equivalent to a Bachelor thesis (12 ECTS).

For explanations and details please get into contact with Prof. Ingo Grunwald, Prof. Stefan Veltel or Dr. Tina Peer.

Contacts

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ISTAB Homepage:
<https://www.hs-bremen.de/en/study/degree-programme/international-degree-programme-industrial-and-environmental-biology-bsc/>

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