This module component will acquaint students with the legal provisions and ethical guidelines for work in both the laboratory and clinical context, including clinical research, as well as in pharmaceutical, chemical and biotechnological production. The course will discuss the guidelines for safeguarding good scientific practice that are in place at American, European and German authorities, universities and organisations that are active in the abovementioned areas. In addition, the course will teach students basic rules regarding everyday lab procedures, e. g. designing experiments, the sensible use of checks, keeping lab notebooks, handling of reagents, storage and disposal, maintenance of lab equipment, handling of radioactivity; background knowledge on electrophoresis, centrifugation and light microscopy. In addition, the course will discuss fundamental cell culture techniques (eukaryotic and bacterial) as well as fundamental techniques for the molecular biological analysis of DNA, RNA and proteins.

Intended learning outcomes

Students have acquired an overview of general and specific rules and regulations governing scientific research, work in research labs, clinical trials as well as pharmaceutical and biotechnological production. They are familiar with the competent national and international regulatory bodies and standardisation authorities and, where necessary, are able to come up with answers to specific problems, referring to the relevant regulations. Students are able to adhere to existing guidelines, both during lab courses at university and in their future workplace. They are able to effectively structure research projects - from experiment design through to the publication of findings -, to design relevant follow-up experiments if initial experiments suggest certain findings, and to progress from hypotheses to ready-to-publish results.
of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants’ position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor’s degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

Referred to in LPO I (examination regulations for teaching-degree programmes)

Module appears in

Bachelor’ degree (1 major) Biology (2011)
Bachelor’ degree (1 major) Biology (2013)
Bachelor’ degree (1 major) Biology (2010)