

Biorisk Management and Bioethics

Organization: Hannover Medical School

Teaching unit coordinator: Juergen MERTSCHING and Sabine SALLOCH

Position: Dr., Head of Biosafety Department; Prof. Dr., Head of Institute for Ethics, History and Philosophy in Medicine

Teaching unit outline

This module will extend the basics of biosafety, biosecurity and biocontainment into a comprehensive biorisk management approach. The students will be introduced to the new concept of WHO on the relationship between risk groups of organisms and containment requirements. A further topic will be the handling of ethical issues, e.g. the estimation of “Dual-use-research-of-concern - DURC”.

After successfully completing the module, the students will acquire knowledge on the 16 components of a comprehensive biorisk management programme and will be able to understand how these multiple components can be integrated into a Plan-Do-Check-Act-cycle driven management system in place.

In addition, topics such as human experimentation and sampling, scientific misconduct and ethics in life science will also be addressed.

Topics addressed

After successfully completing the module, the students will acquire knowledge on the 16 components of a comprehensive biorisk management programme and will be able to understand how these multiple components can be integrated into a Plan-Do-Check-Act-cycle driven management system in place.

The students will be trained to use different tools for risk assessment in biosafety and biosecurity in order to understand and implement safety measures to reduce the risk of spreading infectious agents during lab work. In the Journal Club, they will master theoretical basics and discuss case studies of laboratory acquired infections.

Finally, students will attend the state approved course “Genetic engineering, Biosafety and Biosecurity” and will understand the legal regulations on the handling of genetically modified organisms in Germany.

A tutorial in bioethics enables the students to comprehensively reflect on their future experiments and study design.

Practices: Working with a mobile containment laboratory unit.

ECTS	Lectures	Seminars/Tutorials	Practical work	Digital learning	Personal work
5	20 hours	22 hours	20 hours		80 hours

Assessmentmethod:

100% Written exam

Ungraded course work: Risk Assessment
Scientific paper review.