

## **Module: Biorisk Management in Research and Diagnosis**

**Module coordinator: Jürgen Mertsching**

### **Module 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.

### **Topics:**

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.

### **Practical work:**

Working with a mobile containment laboratory unit.

### **Learning: 5 ECTS**

Lectures: 28h

Seminars: 28h

Practical work: 14h

Independent work: 80h

### **Assessment:**

100% Written exam

Ungraded course work: Risk assessment

Review of a scientific paper