

Module Number	Module Name	Responsible Lecturer
CMS-CLS-IBC	Introduction to Biochemistry	Prof. Dr. Simon Alberti simon.alberti@tu-dresden.de
Qualification Objectives	After completing the module, students will have knowledge of the basics of biochemistry, organic chemistry of biological molecules, their structure and their biosynthesis, primary metabolic networks, enzymology, gene expression, mutagenesis and the genetic architecture of selected biosyntheses. Students are able to explain nutrient and food-related meal planning and implement them independently.	
Content	The module includes the presentation of the most important macromolecules of the cell, its molecular building blocks, the biosynthesis and degradation of macromolecules. Furthermore, the module encompasses the flow of information in the cell from DNA to protein and methods for manipulating the genetic information.	
Teaching and Learning Methods	The module consists of lecture amounting to 2 lecture hours per week and practical amounting to 2 lecture hours per week, as well as independent study.	
Prerequisites for Participation	No previous specialist knowledge is required.	
Usability	The module is a compulsory module for students of Computational Life Science in the Computational Modelling and Simulation Master degree programme.	
Requirements for the Awarding of Credit Points	The credit points are awarded if the module examination is passed. The module examination consists of a test lasting 45 minutes and a practical training session lasting 24 hours. If there are fewer than 15 students registered at the end of the registration period, the test may be replaced by an oral examination as an individual test lasting 20 minutes; if this is the case, this will be announced to the registered students at the end of the registration period.	
Credit Points and Grades	5 credit points can be earned by completing the module. The module grade corresponds that of the graded work with the following weighting: 0.7 Test – oral examination, 0.3 practical training session.	
Frequency of the Module	The module is offered each year during the winter semester.	
Workload	The workload is 150 hours in total.	
Duration of the Module	The module takes one semester to complete.	