Module title
Biophysics and Molecular Biotechnology (Practical Course and Seminar 1)

Abbreviation
07-MS2BTf1-102-m01

Module coordinator
holder of the Chair of Biotechnology and Biophysics

Module offered by
Faculty of Biology

ECTS
10

Method of grading
numerical grade

Duration
1 semester

Module level
graduate

Other prerequisites
--

Contents
This practical course provides students with an insight into different biotechnological and biophysical topics and methods. Under expert guidance, students will perform selected experiments on the following topics: cellular and molecular biotechnology, nano and microsystems biotechnology, biomaterials and biosensors, high-resolution fluorescence microscopy, fluorescence spectroscopy, analysis and electromanipulation of cells.

Intended learning outcomes
Students will have acquired a knowledge of fundamental biotechnological and biophysical methods and their applications that will enable them to independently review relevant literature. In addition, they will have become acquainted with - or, where necessary, will be able to independently acquaint themselves with - biophysical mechanisms. Students will have acquired practical experience performing experiments, using a variety of scientific tools. In the seminar, students will have acquired detailed theoretical knowledge on these experiments and will have delivered a short presentation (15 minutes) on one of the experiments they performed.

Courses (type, number of weekly contact hours, language — if other than German)
S + P (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
Students will be informed about the length and scope of the assessment prior to the course. Usually, one of the following options will be chosen: a) written examination (30 to 60 minutes, including multiple choice questions) or b) log (approx. 10 to 30 pages) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (approx. 30 to 60 minutes) or e) presentation (20 to 45 minutes)

Allocation of places
--

Additional information
--

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

Module appears in
Master’s degree (1 major) Biology (2011)
Master’s degree (1 major) Biology (2010)
Master’s degree (1 major) Biology (2014)