

<b>Module title</b>		<b>Abbreviation</b>
Biophysics and Molecular Biotechnology F1		07-MS2BTF1-152-m01
<b>Module coordinator</b>		<b>Module offered by</b>
holder of the Chair of Biotechnology and Biophysics		Faculty of Biology
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
10	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	graduate	--
<b>Contents</b>		
<p>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.</p>		
<b>Intended learning outcomes</b>		
<p>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.</p>		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
P (14) + S (1) Module taught in: German and/or English		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
<p>a) written examination (30 to 60 minutes, including multiple choice questions) or  b) log (15 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 (30 to 60 minutes) or  e) presentation (20 to 45 minutes)  Language of assessment: German and/or English</p>		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
300 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
<p>Master's degree (1 major) Biology (2015)  Master's degree (1 major) FOKUS Life Sciences (2015)  Master's degree (1 major) Biosciences (2016)  Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)  Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)</p>		

Master's degree (1 major) Biosciences (2017)  
Master's degree (1 major) Biosciences (2018)  
Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)  
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)  
Master's degree (1 major) Biosciences (2021)  
Master's degree (1 major) Biosciences (2023)  
Master's degree (1 major) Biosciences (2024)