

<b>Module Name</b> Lecture Advanced Biochemistry and Molecular Medicine						
<b>Type of Module</b> ○ Basic Module				<b>Module Code</b> Biochemistry Lecture		
<b>Identification Number</b> MN-B-B 1	<b>Workload</b> 180 h	<b>Credit Points</b> 6 CP	<b>Term</b> 1 <sup>st</sup> term of studying	<b>Offered Every</b> Winter term	<b>Start</b> Winter term only	<b>Duration</b> 1 term
<b>1</b>	<b>Course Types</b> Lecture		<b>Contact Time</b> 49 h	<b>Private Study</b> 131 h		<b>Planned Group Size</b> 50-70 students
<b>2</b>	<b>Module Objectives and Skills to be Acquired</b> Students who successfully completed this module <ul style="list-style-type: none"> <li>• have acquired an understanding of advanced concepts and technologies related to the molecular basis of biochemical principles.</li> <li>• possess the ability to develop hypotheses through problem analysis and will be able to develop experiments to test these hypotheses.</li> <li>• have acquired a knowledge of important concepts in biochemistry such as reaction mechanisms, molecular basis of diseases, development and use of model systems and key technologies</li> </ul>					
<b>3</b>	<b>Module Content</b> The lecture series is organized into 6 blocks (see below) consisting of 4-5 lectures with a review tutorial at the end of each block. <ul style="list-style-type: none"> <li>• Structure &amp; proteomics</li> <li>• Extracellular matrix &amp; transport</li> <li>• Metabolism &amp; hereditary disease</li> <li>• Mitochondria &amp; death, immunity, cancer</li> <li>• Regulation &amp; proteostasis</li> <li>• Engineering + tools</li> </ul> We bring together a wide range of local researchers to give you a broad overview of advanced biochemistry and molecular medicine topics, spike your curiosity regarding new areas, and lead to research projects for you.					
<b>4</b>	<b>Teaching Methods</b> Research-oriented, interactive lectures (incl. e.g. audience response systems and concept mapping)					
<b>5</b>	<b>Prerequisites (for the Module)</b> Enrollment in the Master's degree course "Biological Sciences" or "Biochemistry" <b>Additional academic requirements</b> Knowledge of basic and specific biochemistry, cell biology and genetics at the level of general biochemistry/biology text books (e.g. Voet, Stryer, Lehninger, Alberts and Lewin) is required.					

6	<p><b>Type of Examination</b></p> <p>Two hours written examination about topics of the lectures (100 % of the total module mark)</p>
7	<p><b>Credits Awarded</b></p> <p>Written examination at least “sufficient”</p>
8	<p><b>Compatibility with other Curricula*</b></p> <p>Master’s degree course “Biochemistry”</p>
9	<p><b>Proportion of Final Grade</b></p> <p>7.5 %</p>
10	<p><b>Module Coordinator</b></p> <p>Dr. Jakob Suckale, phone 478-84072, jsuckale@uni-koeln.de</p>
11	<p><b>Further Information</b></p> <p><b>Participating faculty:</b> Prof. Dr. U. Baumann, Prof. Dr. E. Behrmann, Prof. Dr. T. Benzing, Prof. Dr. B. Brachvogel, Prof. Dr. U. Brandt, Prof. Dr. J. Chai, Dr. M. Escobar-Henriques, Prof. Dr. M. Gather, Prof. Dr. S. Höning, Prof. Dr. P. Huesgen, apl. Prof. Dr. K. Niefind, Prof. Dr. S. Kath-Schorr, Prof. Dr. N. Kononenko, Prof. Dr. M. Krüger, Prof. Dr. T. Langer, Prof. Dr. M. Lemberg, Prof. Dr. I. Neundorf, Prof. Dr. M. Pasparakis, Prof. Dr. J. Riemer, Prof. Dr. H.-G. Schmalz, Prof. Dr. G. Schwarz, Prof. Dr. G. Sengle, Prof. Dr. H. Walczak, Prof. Dr. B. Wirth</p> <p><b>Literature:</b> Information about textbooks and other reading material will be given on the ILIAS representation of the course (<a href="https://www.ilias.uni-koeln.de/ilias/goto_uk_cat_2815610.html">https://www.ilias.uni-koeln.de/ilias/goto_uk_cat_2815610.html</a>)</p> <p><b>General time schedule:</b> Weeks 1-14: Tue. and Fri. from 8:15 to 9:45 am; Week 15 (Mon.-Fri). Preparation for the written examination</p> <p><b>Introduction to the module:</b> October 11, 2022 at 8:15 am in seminar room 170, 1<sup>st</sup> floor, Biochemistry Institute. Further information will be provided via email and an accompanying ILIAS course.</p> <p><b>Written examination:</b> February 14, 2023, second/supplementary examination March 14, 2023; the latter date may vary if students and module coordinator agree. More details will be given at the beginning of the module.</p>