Module Name
Lecture Advanced Biochemistry and Molecular Medicine

Type of Module	**Module Code**
o Basic Module	Biochemistry Lecture

Identification Number	**Workload**	**Credit Points**	**Term**	**Offered Every**	**Start**	**Duration**
MN-B-B 1	180 h	6 CP	1st term of studying	Winter term	Winter term only	1 term

1	**Course Types**	**Contact Time**	**Private Study**
	Lecture	49 h	131 h

2 Module Objectives and Skills to be Acquired

Students who successfully completed this module will have acquired knowledge of..

- the molecular basis of diseases
- the mechanisms of key bodily processes
- cutting edge technologies in molecular and medical research

3 Module Content

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.

- Structure and proteomics
- Extracellular matrix and transport
- Metabolism and hereditary disease
- Mitochondria and death, immunity, cancer
- Regulation and proteostasis
- Engineering and tools

4 Teaching Methods

- Lecture

5 Prerequisites (for the Module)

Enrollment in one of the Master´s of Science degree courses of the Department of Biology or in the Master´s degree course "Biochemistry"

Additional academic requirements

The 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 Type of Examination

Two hours written examination about topics of the lectures (100 % of the total module mark)

7 Credits Awarded

Written examination at least "sufficient"

8 Compatibility with other Curricula*

Obligatory lecture module in the Master´s degree course "Biochemistry"

9	**Proportion of Final Grade** 7.5 %
10	**Module Coordinator** Dr. Jakob Suckale, phone 478 84072, e-mail: jsuckale@uni-koeln.de
11	**Further Information** **Participating faculty:** 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 **Literature:** • Information about textbooks and other reading material will be given on the ILIAS representation of the course (see https://www.ilias.uni-koeln.de/ilias/goto_uk_cat_2815610.html). **General time schedule:** Weeks 1-14: Tue. and Fri. from 8:15 to 9:45 am; Week 15 (Mon.-Fri). Preparation for the written examination **Introduction to the module:** October 10, 2023 at 8:15 a.m., further information/link will be sent to your Smail-Account; for preparation to the module before this introduction see ILIAS link under literature. **Written examination:** February 13, 2024, second/supplementary examination March 12, 2024; the latter date may vary if students and module coordinator agree. More details will be given at the beginning of the module.