**Module title**  
Cell Biology - Focus Cytoskeleton and Microskopic Imaging

**Abbreviation**  
03-98-PZB2-202-m01

**Module coordinator**  
holder of the Chair of Experimental Biomedicine and holder of the Professorship of Molecular Microscopy

**Module offered by**  
Faculty of Medicine

**ECTS**  
5

**Method of grading**  
Only after succ. compl. of module(s)

**Duration**  
1 semester

**Module level**  
undergraduate

**Other prerequisites**  
May not be combined with 03-98-PZB1 or 03-98-PZB3.

**Contents**

Becoming familiar with basic cell biological principles via hands-on training and seminars. Major topics are the structural organisation, the stability and the dynamics of the cytoskeleton in eukaryotic cells. Biochemical analysis of cytoskeletal components. Complementary imaging using modern microscopic approaches and implementation of the results into the dynamic processes of the cytoskeleton living cells.

**Intended learning outcomes**

Problem-oriented handling of eukaryotic cells under sterile conditions and understanding principles of techniques for the analysis of the cellular cytoskeleton. Understanding the molecular basis of cell biology and recognising targets for drugs affecting the cytoskeleton. Principles and limitations of classical and modern forms of microscopic imaging for the analysis of the cytoskeleton. Cellular malfunctions and their significance for the disease development. Independent extraction of relevant information and presentation of selected examples of the current literature.

**Courses**

P (5) + S (1)  
Module taught in: German / English

**Method of assessment**

a) written examination (45 to 90 minutes)  
b) oral examination of one candidate each (20 to 30 minutes)  
Language of assessment: German and/or English

**Allocation of places**

Bachelor’s Biomedicine: 12 places

**Additional information**

Duration: 2 weeks

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

**Module appears in**

Bachelor’ degree (1 major) Biomedicine (2020)