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|---|--------------------------|---|
| <b>Module title</b>   |                          | <b>Abbreviation</b>                         |
| Developmental Neurobiology and Chronobiology  |                          | 07-MS1NEC-152-m01                           |
| <b>Module coordinator</b>   |                          | <b>Module offered by</b>                    |
| holder of the Chair of Neurobiology and Genetics  |                          | 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>Lecture and seminar <i>Endogenous Clocks</i>: Students acquire an overview of endogenous clocks in unicellular organisms, fungi, plants, and animals with a focus on the neuronal organisation of the endogenous clock in the brain of mammals and insects. Students learn about the biological purpose of endogenous clocks, their function on a molecular, cellular, and organismic level, as well as their adaptation to 24 hour days with varying hours of daylight. Related aspects of jetlag and shift-work are discussed. Lecture <i>Neuronal Development</i>: Fundamentals of neuronal development on the molecular level. Main focus is the establishment of the neuroectoderm, pattern formation, regional subdivision, neuronal progenitor cells, cell growth, differentiation of neurons, axonal navigation, and neuronal circuitry.</p> |                          |   |
| <b>Intended learning outcomes</b>   |                          |   |
| <p>Students acquire a fundamental knowledge and understanding of endogenous clocks and neuronal development and gain an insight into current research. Students also learn to independently work on reading assignments and to research specific questions that arise in their reading. Results of the students' independent study are critically discussed in the seminar.</p>   |                          |   |
| <b>Courses</b> (type, number of weekly contact hours, language — if other than German)  |                          |   |
| V (2) + S (1)<br>Module taught in: 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<br/> c) oral examination of one candidate each (30 to 60 minutes) or<br/> d) oral examination in groups of up to 3 candidates (30 to 60 minutes)<br/> Language of assessment: German and/or English</p>  |                          |   |
| <b>Allocation of places</b>   |                          |   |
| --  |                          |   |
| <b>Additional information</b>   |                          |   |
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| <b>Workload</b>   |                          |   |
| 300 h   |                          |   |
| <b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)  |                          |   |
| --  |                          |   |
| <b>Module appears in</b>  |                          |   |
| <p>Master's degree (1 major) Biology (2015)<br/> Master's degree (1 major) FOKUS Life Sciences (2015)<br/> Master's degree (1 major) Biosciences (2016)<br/> Master's degree (1 major) Biosciences (2017)<br/> Master's degree (1 major) Biosciences (2018)<br/> Master's degree (1 major) Biosciences (2021)<br/> Master's degree (1 major) Biosciences (2023)</p>   |                          |   |

