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|--|--------------------------|---|
| <b>Module title</b>  |                          | <b>Abbreviation</b>                         |
| Selected Topics in Complex Analysis  |                          | 10-M=VAFTin-222-m01                         |
| <b>Module coordinator</b>  |                          | <b>Module offered by</b>                    |
| Dean of Studies Mathematik (Mathematics)   |                          | Institute of Mathematics                    |
| <b>ECTS</b>  | <b>Method of grading</b> | <b>Only after succ. compl. of module(s)</b> |
| 5  | numerical grade          | --  |
| <b>Duration</b>  | <b>Module level</b>      | <b>Other prerequisites</b>                  |
| 1 semester   | graduate                 | --  |
| <b>Contents</b>  |                          |   |
| Advanced methods and results of complex analysis on the basis of selected topics such as spectral complex analysis or operator theory as well as exemplary applications of this, e.g. in functional analysis, harmonic analysis, approximation theory, the theory of partial differential equations or mathematical physics.   |                          |   |
| <b>Intended learning outcomes</b>  |                          |   |
| The student is familiar with the basic concepts, methods and results of higher complex analysis and in particular has a familiarity with the properties of holomorphic functions. He/she can relate the acquired skills to other branches of mathematics and application subjects.   |                          |   |
| <b>Courses</b> (type, number of weekly contact hours, language – if other than German)   |                          |   |
| V (3) + Ü (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)   |                          |   |
| a) written examination (approx. 90 to 120 minutes, usually chosen) or<br>b) oral examination of one candidate each (approx. 20 minutes) or<br>c) oral examination in groups (groups of 2, 15 minutes per candidate)<br>Language of assessment: English<br>Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus |                          |   |
| <b>Allocation of places</b>  |                          |   |
| --   |                          |   |
| <b>Additional information</b>  |                          |   |
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| <b>Workload</b>  |                          |   |
| 150 h  |                          |   |
| <b>Teaching cycle</b>  |                          |   |
| --   |                          |   |
| <b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)   |                          |   |
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| <b>Module appears in</b>   |                          |   |
| Master's degree (1 major) Mathematics International (2022)   |                          |   |