

<b>Module title</b>		<b>Abbreviation</b>
Introduction to Advanced Mathematics 2		10-M-EHM-2-242-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	(not) successfully completed	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	undergraduate	--
<b>Contents</b>		
The lecture deepens higher mathematics and covers the following topics: Extension of topics of higher mathematics to complex numbers, integral calculus, eigenvalues and eigenvectors as well as quadratic forms; differential calculus of several variables (especially applications as well as advanced topics); basics of probability theory		
<b>Intended learning outcomes</b>		
Students can build on their previous knowledge of higher mathematics and have an in-depth understanding of the listed topics in higher mathematics. They are able to apply their theoretical knowledge and the methods they have learned to different contexts.		
<b>Courses</b> (type, number of weekly contact hours, language – if other than German)		
V (2) + Ü (1) Module taught in: German and/or 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 (60 to 120 minutes) or b) oral examination of one candidate each or in groups of up to 2 candidates (15 to 30 minutes per candidate) or c) project work (e. g. written solutions and corresponding explanations, 10 to 15 pages total) Language of assessment: German and/or English creditable for bonus		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
Teaching cycle: once a year, summer semester		
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)		