


Data:	FOURANA MA. / Examination number: 10710	Version: 05.05.2021 	Start Year: WiSe 2023
Module Name:	Fourier Analysis		
(English):			
Responsible:	Bernstein, Swanhild / Prof. Dr. Reissig, Michael / Prof. Dr. Waurick, Marcus / Prof. Dr.		
Lecturer(s):	Bernstein, Swanhild / Prof. Dr. Reissig, Michael / Prof. Dr. Waurick, Marcus / Prof. Dr.		
Institute(s):	Institute of Applied Analysis		
Duration:	1 Semester(s)		
Competencies:	Die Studierenden sollen Fourierreihen und die Fouriertransformation kennen und zur Lösung von Problemen innerhalb und außerhalb der Mathematik einsetzen können. Students know the concepts of Fourier series and Fourier transformation. They apply these concepts to problems within and outwith mathematical theory.		
Contents:	<ul style="list-style-type: none"> - Theorie und Anwendungen der Fourier-Transformation - Konvergenz von Fourierreihen - Fourier-Transformation in verschiedenen Funktionenräumen - Theory and application of the Fourier transformation - Convergence of Fourier series - Fourier transformation in different spaces 		
Literature:	Pinsky: Introduction to Fourier Analysis and Wavelets Brigola: Fourier-Analysis und Distributionen, Eine Einführung mit Anwendungen Plonka, Potts, Steidl, Tasche: Numerical Fourier Analysis		
Types of Teaching:	S1 (WS): In odd-numbered years. / Lectures (2 SWS) S1 (WS): In odd-numbered years. / Exercises (1 SWS)		
Pre-requisites:	Recommendations: Analysis 4 (Funktionalanalysis), 2021-05-04 Analysis 3 (Gewöhnliche Differentialgleichungen), 2021-05-04		
Frequency:	every 2 years in the winter semester		
Requirements for Credit Points:	For the award of credit points it is necessary to pass the module exam. The module exam contains: MP [30 min]		
Credit Points:	5		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): MP [w: 1]		
Workload:	The workload is 150h. It is the result of 45h attendance and 105h self-studies.		