

Module title		Abbreviation
FOKUS Research Module Topological Insulators		11-FM-TI-131-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
10	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
Topological insulators are a new class of materials with special electrical properties. In this research module, we present and discuss the principles necessary to understand these materials on the basis of current research results.		
Intended learning outcomes		
The students have special and advanced knowledge of independent scientific work in the field of topological insulators, and are able to reproduce the acquired knowledge, to apply the acquired methods and to summarise a sub-area of the current research area in an oral presentation.		
Courses (type, number of weekly contact hours, language – if other than German)		
Quantentransport in Halbleiter-Nanostrukturen (Quantum Transport in Semiconductor Nanostructures): V (3 weekly contact hours) + Ü/P (1 weekly contact hour), German or English, once a year (summer semester) Kompaktseminar Topologische Isolatoren (Block Taught Seminar Topological Insulators): S (2 weekly contact hours), German or English, details on availability to be announced (block taught seminar (1 to 3 days) held towards the end of semester break or at the beginning of the subsequent semester)		
Method of assessment (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
This module has the following assessment components 1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages) 2. Seminar: talk (approx. 30 to 45 minutes) Assessment components 1 and 2 will be offered in German or English. Students must register for assessment components 1 and 2 online (details to be announced). Assessment component 1 will be offered once a year in the summer semester; details on when assessment component 2 will be offered to be announced. To pass this module, students must pass both assessment component 1 and assessment component 2.		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
Bachelor' degree (1 major) Nanostructure Technology (2010) Master's degree (1 major) FOKUS Physics (2010) Master's degree (1 major) FOKUS Physics (2011)		