

Module	<b><i>Group Theory</i></b>
Code	74088
Instruction language	English
ECTS credits	4
Credit hours	4
Duration	1 semester
Cycle	Each summer semester
Coordinator	Dean of Physics Studies
Lecturer	Prof. Peter Reineker
Allocation to study programmes	Physics M.Sc., elective module, 1 <sup>st</sup> or 2 <sup>nd</sup> semester Physik B.Sc., elective module, 5 <sup>th</sup> or 6 <sup>th</sup> semester
Formal prerequisites	None
Recommended prerequisites	Quantum Mechanics
Learning objectives	Students who successfully passed this module <ul style="list-style-type: none"> <li>• can apply group theory in molecular physics, condensed matter physics, defects and impurities</li> </ul>
Syllabus	<ul style="list-style-type: none"> <li>• Mathematical basis</li> <li>• Discrete groups</li> <li>• Applications in condensed matter theory and spectroscopy</li> </ul>
Literature	Will be announced during the lecture
Teaching and learning methods	Lecture (2 hours per week) Exercise (1 hours per week)
Workload	30 hours lecture (attendance time) 15 hours exercise (attendance time) 75 hours self-study and exam preparation Total: 120 hours
Assessment	Written or oral examination..
Examination	14088 Group Theory
Grading procedure	The module grade is the examination grade.
Basis for	Application in Bachelor-, Master- and PhD- thesis