

MODULE HANDBOOK

Module Name	:	Group Theory and Symmetry in Physics
Module Level	:	Bachelor
Abbreviation, if applicable	:	FI3212
Sub-heading, if applicable	:	
Semester/ term	:	6
Module Coordinator(s)	:	
Lecturer(s)	:	
Language	:	Bahasa
Classification within the curriculum	:	Elective Studies
Teaching format/ class hours per week during the semester	:	2 hours per week
Workload	:	2 hours lectures with 4 hours individual studies and structured activities,
Credits Points	:	2
Requirements	:	
Learning goals	:	<p>Knowledge:</p> <p>1. Demonstrate knowledge of simple concepts and methods in differential geometry with its application especially in special relativity theory and classical field theory.</p> <p>Skill:</p> <p>(1) Demonstrate ability in problem solving, think deductively and creatively</p> <p>Competencies:</p> <p>(1) Prepare student to join study in higher grade</p>
Content	:	The course will discuss in depth basic concepts of group and its applications in physics. The course will cover the following topics: Groups, Rings, and Fields; Geometry and Vector Space; Relativistic Wave equations; Lagrange formulation; Yang-Mills theory and SSB; Monopole and Solitons.