

Module Handbook

Module Name:	Solid State Physics
Module Level:	Bachelor
Abbreviation, if applicable:	FI 4001
Sub-heading, if applicable:	
Courses included in the module, if applicable:	
Semester/term:	Fourth Years
Module coordinator(s):	
Lecturer(s):	
Language:	Bahasa Indonesia
Classification within the curriculum:	General Studies / Major Subject / Elective Studies
Teaching format / class hours per week during the semester:	3 hours lectures
Workload:	3 hours lectures, 6 hours individual study, 16 weeks per semester, and total 144 hours a semester
Credit Points:	3
Requirements:	Quantum Physics
Learning goals:	<p>Knowledge:</p> <ol style="list-style-type: none"> 1. Demonstrate knowledge of the structure of solids and understand its physical quantities. 2. Demonstrate ability to explain the influence of the composition of the solids on the characteristics and properties of materials, especially the amount of mechanical, electrical and optical properties. <p>Skill:</p> <ol style="list-style-type: none"> 1. Demonstrate ability to use the laws of physics in solids and correlates with the amount obtained experimentally
Content:	This course is offered to equipped students with fundamental knowledge to formulate various models that use the basic laws of physics such as mechanics, electricity, magnetism, quantum mechanics, and others to explain the nature and behaviour of solids. All solid-state physics analysis should require a study of the internal elements, to the knowledge of the crystal structure is very important in the study of solid-state physics
Study/exam achievements:	Students are considered to be competent and pass if at least get 50% of maximum mark of the exams, homework, research based learning
Forms of Media:	Slides and LCD projectors, blackboards
Literature:	<ol style="list-style-type: none"> 1. M. Ali Omar; elementary Solid State Physics: principle and applications; Addison Wesley Publ. Comp, 1975 2. C. Kittel; Introduction to solid state physics; John Wiley and Son inc. 3rd Ed; 1996
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