



# UIN SUNAN KALIJAGA YOGYAKARTA

## FACULTY OF SCIENCE AND TECHNOLOGY

Jl. Marsda Adisucipto Yogyakarta 55281, Telp:+62274519739, Fax:+62274540971,  
 E-mail: [fst@uin-suka.ac.id](mailto:fst@uin-suka.ac.id), website: <http://saintek.uin-suka.ac.id/>

### Undergraduate Programme in Physics

Telp : +62274 519739  
 Email : [fisika@uin-suka.ac.id](mailto:fisika@uin-suka.ac.id)  
 Website : <http://fisika.uin-suka.ac.id/>

### MODULE HANDBOOK

Module Name	Applied Science
Module level, if applicable	Bachelor
Code, if applicable	FIS415021
Subtitle, if applicable	-
Courses, if applicable	Applied Science (Sains Terapan)
Semester(s) in which the module is taught	3 <sup>rd</sup> (third)
Person responsible for the module	Dr. Asih Melati, M.Sc
Lecturer(s)	Sri Hidayati, S.Pd., M.Sc
Language	Indonesia
Relation to curriculum	Compulsory course in the second year (3 <sup>rd</sup> semester) Bachelor Degree
Type of teaching, contact hours	150 minutes lectures and 180 minutes structured activities per week.
Workload	Total workload is 136 hours per semester, which consists of 150 minutes lectures per week for 14 weeks, 180 minutes structured activities per week, 180 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam
Credit points	3
Requirements according to the examination regulations	Create a project of science applications and minimum attendance 75 %
Recommended prerequisites	No prerequisites stated on
Module objectives/intended learning outcomes	After completing this course, the students: CO 1. Mastering the theoretical concepts and main principles of classical physics and modern physics, as well as knowledge of technology based on physics and its application and integrating it with religion. CO 2. Mastering mathematical, computational and instrumentation methods to solve physics problems and apply his knowledge to a broader field. CO 3. Able to formulate and analyse scientific studies and research related to physics or broader fields. CO 4. Able to disseminate the results of problem studies in the form of reports or scientific works according to standard scientific principles
Content	a. Science application on electronic device (instrumentation physics) b. Science application on absorbent materials (materials physics) c. Science application on studies tectonic and propagation (geophysics) d. Science application on biosensor (instrumentation and material physics) Matrix Orthogonal and its properties, Diagonalization.

Study and examination requirements and forms of examination	The final mark will be weighted as follows:																																														
	<table border="1"> <thead> <tr> <th>NO</th> <th colspan="3">Assessment methods (components, activities)</th> <th colspan="2">Weight (percentage)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td colspan="3">Final Examination</td> <td colspan="2">40%</td> </tr> <tr> <td>2</td> <td colspan="3">Mid-Term Examination</td> <td colspan="2">30%</td> </tr> <tr> <td>3</td> <td colspan="3">Class Activities : Quiz, Homework, etc.</td> <td colspan="2">30%</td> </tr> </tbody> </table>						NO	Assessment methods (components, activities)			Weight (percentage)		1	Final Examination			40%		2	Mid-Term Examination			30%		3	Class Activities : Quiz, Homework, etc.			30%																		
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	The final assessment is expressed in the form of a letter value converted from a number value with the following categories:																																														
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Media employed	White-board, Lcd Projector, e-learning ( <a href="https://daring.uin-suka.ac.id/">https://daring.uin-suka.ac.id/</a> )																																														
Reading list	<ol style="list-style-type: none"> <li>Murray, G.T, Handbook of Materials Selection for Engineering Applications Mechanical Engineering (Marcel Dekker, Inc.) ; 113</li> <li></li> </ol>																																														

### PLO and CO Mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10
CO 1		√		√						
CO 2		√		√						
CO 3		√		√						
			√	√						