UIN SUNAN KALIJAGA YOGYAKARTA
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Undergraduate Programme in Physics

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MODULE HANDBOOK

Module Name	Advance Material Energy
Module level, if applicable	Bachelor
Code, if applicable	FIS425036
Subtitle, if applicable	-
Courses, if applicable	Advance Material Energy (Energi material maju)
Semester(s) in which the module is taught	5th (fifth)
Person responsible for the module	Dr. Asih Melati, M.Sc
Lecturer(s)	Dr. Asih Melati, M.Sc
Language	Indonesia
Relation to curriculum	Elective course in the third year (5th semester) Bachelor Degree
Type of teaching, contact hours	100 minutes lectures and 120 minutes structured activities per week.
Workload	Total workload is 90.7 hours per semester, which consists of 100 minutes lectures per week for 14 weeks, 120 minutes structured activities per week, 120 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam
Credit points	2
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 CO 4. Master the basic principles of experimentation and physics measurement methods to formulate physical phenomena based on observation and data analysis
Content	a. The important role of renewable energy toward global zero waste b. Renewable energy (hydropower, solar panel, wind turbin,hygrogen source) c. The development of renewable energy in the world d. The advanced energy
Study and examination requirements and forms of examination	The final mark will be weighted as follows:

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NO	Assessment methods (components, activities)	Weight (percentage)
1	Final Examination	40%
2	Mid-Term Examination	30%
3	Class Activities : Quiz, Homework, etc.	30%

The final assessment is expressed in the form of a letter value converted from a number value with the following categories:

NO	Number Value	Letter Value	NO	Number Value	Letter Value
1	≥ 95	A	7	65-69.99	B/C
2	90-94.99	A-	8	60-64.99	C+
3	85-89.99	A/B	9	55-59.99	C
4	80-84.99	B+	10	50-54.99	C-
5	75-79.99	B	11	55-34.99	D
6	70-74.99	B-	12	<35	E

Media employed	White-board, Lcd Projector, e-learning (https://daring.uin-suka.ac.id/)
Reading list	

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		√		√					√	
			√	√						