



UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF PHYSICS EDUCATION
PHYSICS STUDY PROGRAM

Colombo St. Number 1 Yogyakarta 55281
Telephone (0274)565411 Ext. 217, fax (0274) 548203
Web: <http://fisika.fmipa.uny.ac.id/>, E-mail: fisika@uny.ac.id

Bachelor of Physics

MODULE HANDBOOK

Module name:	Chemical Physics
Module level, if applicable:	Undergraduate
Code:	FSK6254
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	5 th
Module coordinator:	Drs. Yusman Wiyatmo, M.Si..
Lecturer(s):	-.
Language:	Bahasa Indonesia
Classification within the curriculum:	Tentative Course
Teaching format / class hours per week during the semester:	100 minutes lectures and 120 minutes structured activities per week.
Workload:	Total workload is 91 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points:	2 SKS (3.25 ECTS)
Prerequisites course(s):	-
Course Outcomes	After taking this course the students have ability to: CO1. Analyze the properties of gases CO2. Analyze the thermochemistry CO3. Analyze the state functions CO4. Analyze the properties of solution CO5. Analyze the electrochemistry cell

Content:	This course discusses the basic concepts of Chemical Physics which consist of properties of gases, thermochemistry, state function and exact differentials, the properties of solution, equilibrium of electrochemistry, molecular interactions, molecule in motion.																																					
Study / exam achievements:	<p>Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table><tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr><tr><td rowspan="5">1</td><td>CO2,</td><td>a. Individual Assignment</td><td rowspan="5">Presentation / written test</td><td>15%</td></tr><tr><td>CO3</td><td></td><td>15%</td></tr><tr><td>CO4</td><td>b. Group Assignment</td><td>15%</td></tr><tr><td>CO4</td><td></td><td>25%</td></tr><tr><td>CO5</td><td>c. Quiz</td><td>30%</td></tr><tr><td></td><td></td><td>d. Mid</td><td></td><td></td></tr><tr><td></td><td></td><td>e. Final Exam</td><td></td><td></td></tr><tr><td colspan="4">Total</td><td>100%</td></tr></table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO2,	a. Individual Assignment	Presentation / written test	15%	CO3		15%	CO4	b. Group Assignment	15%	CO4		25%	CO5	c. Quiz	30%			d. Mid					e. Final Exam			Total				100%
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	CO5	c. Quiz		30%																																		
		d. Mid																																				
		e. Final Exam																																				
Total				100%																																		
Forms of media:	Board, LCD Projector, Laptop/Computer																																					
Literature:	<p>A. Atkins, P & Paula, J.D., 2010. Atkin's Physical Chemistry. Oxford University Press.</p> <p>B. Adrea's Note Beook and Journal. Electrochemical Cells. https://adreasnow.com/Undergrad/Notes/Sem%206.%20Advanced%20Analytical/Electrochemistry/01b/</p> <p>C. Lima, J.A.S. & Platino, A.R. 2000. On the Classical Equipartition Energy. Brazilian Journal of Physics. https://www.scielo.br/j/bjp/a/VkxF5CrJpqbVqfmFNkXcGJp/?lang=en</p>																																					

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
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CO1	✓	✓			✓			
CO2	✓	✓			✓			
CO3	✓	✓			✓			
CO4	✓	✓			✓			
CO5	✓	✓			✓			