



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

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Bachelor of Physics

MODULE HANDBOOK

Module name:	Basic Colloidal Physics
Module level, if applicable:	Undergraduate
Code:	FSK6228
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	4 th
Module coordinator:	Suparno, Ph.D.
Lecturer(s):	Suparno, Ph.D.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course
Teaching format / class hours per week during the semester:	100 minutes lectures ,120 minutes structured activities, and 120 minutes individual study per week
Workload:	Total workload is 90,67 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	A. mastering colloids as particles B. mastering various properties of solutes, solvents, and additives C. analyze electrokinetic phenomena and utilize them for particle characterization processes D. able to use various modern techniques for the characterization of colloidal particles

Content:	This course discusses colloids as particles and as solutions, the properties of solvents, solutes, additives, and the relationship between these three materials, electrokinetic phenomena, characteristics of colloidal particles, and various characterization techniques, functions, benefits, and applications.				
Study / exam achievements:	The final mark will be weight as follow:				
	No	CO	Assessment Object	Assessment Technique	Weight
	1	CO1, CO2, CO3, and CO4	a. Assignment (Individual, Case Study) b. Mid c. Final Exam	Written Test	50%
					25%
			25%		
Total				100%	
Forms of media:	Board, LCD Projector, Laptop/Computer				
Literature:	<p>A. Principles of Colloid Science and Surface Chemistry, 3rd ed., Paul C Heimenz and Raj Rajagopalan, Macel Dekker Inc., Newe York, 1997.</p> <p>B. Dinamika Partikel Koloid, Suparno, UNY press, Yogyakarta, 2012.</p>				

PLO and CO mapping

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