Module Handbook

Module Name	Dhysical	Dhysical Characture					
	· ·	Physical Chemistry					
Module Level		Higher Diploma					
Code, if applicable	VKD320						
Subtitle, if applicable	-						
Courses, if applicable	-						
Semester(s) in which	3 rd seme	3 rd semester					
the module is taught							
Person responsible for	Yuli Roh	yami, S.Si., M.S	Sc.				
the module	Tri Esti Purbaningtias, S.Si., M.Si.						
	Ganjar Fadhillah, S.Si., M.Si.						
Lecturer	Yuli Rohyami, S.Si., M.Sc.						
	Tri Esti P	Tri Esti Purbaningtias, S.Si., M.Si.					
	Ganjar F	Ganjar Fadhillah, S.Si., M.Si.					
Language	Bahasa Indonesia						
Relation to curriculum	Compuls	ory					
Type of teaching,	Flipped	classroom-coo	perative learnin	g: (1) independe	ent study:		
contact hours	flipped c	lassroom: goo	gle classroom; (2) face to face: o	cooperative		
	learning	; (3) structure	activities: coope	erative learning;	(4) exam:		
	6.47 hou	ırs x 16 weeks	per semester				
Workload	Total Wo	orkload	91 hours; 2 CU				
		Independe	Face to face:	Structure	Exam		
		nt study:	cooperative	activities:			
		flipped	learning	cooperative			
		classroom	, and the second	learning			
	Hours	24	28	28	11		
Credit Points	2 CU/3.3	7 ECTS					
Requirements			ments of attend	ance			
according to the		· ·					
examination							
regulations Recommended	General	Chemistry					
regulations Recommended	General	Chemistry					
regulations Recommended prerequisites			ess basic concer	ots of chemistr	, chemical		
regulations Recommended prerequisites Module	PLO 3: /	Able to expre	•	ots of chemistry			
regulations Recommended prerequisites Module objectives/intended	PLO 3: A	Able to expre	d maintenance o	ots of chemistry f chemical instru			
regulations Recommended prerequisites Module	PLO 3: A analysis, can be a	Able to expre operation and policed in their	d maintenance o				
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I	Able to expre operation and pplied in their O:	d maintenance o work	f chemical instru	iments that		
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I	Able to expre operation and pplied in their O: ents are able to	d maintenance o work o determine vol	f chemical instru ume and pressu	iments that		
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I 1. Stude 2. Stude	Able to expreoperation and pplied in their LO: ents are able to	d maintenance o work o determine vol determine phys	f chemical instruume and pressusicochemical pro	iments that		
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I 1. Stude 2. Stude 3. Stude	Able to expreoperation and pplied in their O: ents are able to ent are able to ent are able to	d maintenance of work o determine vol determine physicapply thermody	f chemical instru ume and pressu sicochemical pro ynamic law	re of gas		
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I 1. Stude 2. Stude 3. Stude 4. Stude	Able to expreoperation and pplied in their LO: ents are able to ent are able to ent are able to ent are able	d maintenance of work o determine vol determine physicapply thermody to determine	f chemical instru ume and pressu sicochemical pro ynamic law partial molar	re of gas		
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regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I 1. Stude 2. Stude 3. Stude 4. Stude mixtu 5. Stude	Able to expreoperation and pplied in their LO: ents are able to ent are able to ent are able to ent are able to ent are able ures and physicant are able to ent are able to	d maintenance of work o determine vol determine physical apply thermody to determine cochemical proper determine the	f chemical instru ume and pressu sicochemical pro ynamic law partial molar perties analysis spontaneous rea	re of gas operties volume of action		
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I 1. Stude 2. Stude 3. Stude 4. Stude mixtu 5. Stude 6. Stude 6. Stude 5.	Able to expreoperation and pplied in their LO: ents are able to ent are able to ent are able to ent are able ures and physicant are able to ent are able	d maintenance of work o determine volution determine physical properties of the content of the	f chemical instru ume and pressu sicochemical pro ynamic law partial molar perties analysis	re of gas operties volume of action		
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I 1. Stude 3. Stude 4. Stude mixtu 5. Stude 6. Stude deter	Able to expreoperation and pplied in their LO: ents are able to ent are able emine the order	d maintenance of work o determine volution determine to determine cochemical properties apply the report of reaction	f chemical instru ume and pressu sicochemical pro ynamic law partial molar perties analysis spontaneous rea eaction rate eq	re of gas operties volume of action uation and		
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I 1. Stude 2. Stude 3. Stude 4. Stude mixtu 5. Stude 6. Stude deter 7. Stude	Able to expreoperation and pplied in their LO: ents are able to ent are able to ent are able ures and physicant are able to ent are able ent are	d maintenance of work o determine physical apply thermody to determine cochemical properties of the apply the repertion of the apply the apply the apply the apply the repertion of the apply the	f chemical instru ume and pressu sicochemical pro ynamic law partial molar perties analysis spontaneous rea eaction rate eq	re of gas operties volume of action uation and of solid and		
regulations Recommended prerequisites Module objectives/intended learning outcomes	PLO 3: A analysis, can be a Subject I 1. Stude 2. Stude 3. Stude 4. Stude mixtu 5. Stude 6. Stude deter 7. Stude expla	Able to expreoperation and pplied in their LO: ents are able to ent are able to ent are able ures and physicant are able to ent are able ent are	d maintenance of work o determine physical apply thermody to determine cochemical properties of the apply the repertion of the apply the apply the apply the apply the repertion of the apply the	f chemical instru ume and pressu sicochemical pro ynamic law partial molar perties analysis spontaneous rea eaction rate eq	re of gas operties volume of action uation and of solid and		
regulations Recommended prerequisites Module objectives/intended	PLO 3: A analysis, can be a Subject I 1. Stude 3. Stude 4. Stude 6. Stude 6. Stude deter 7. Stude expla 1. Gas	Able to expreoperation and pplied in their LO: ents are able to ent are able ent are able to ent are able ent are	d maintenance of work o determine physical apply thermody to determine cochemical properties of the apply the repertion of the apply the apply the apply the apply the repertion of the apply the	f chemical instru ume and pressu sicochemical pro ynamic law partial molar perties analysis spontaneous rea eaction rate eq	re of gas operties volume of action uation and of solid and		
regulations Recommended prerequisites Module objectives/intended learning outcomes	PLO 3: A analysis, can be a Subject I 1. Stude 2. Stude 3. Stude 4. Stude 6. Stude 6. Stude 6. Stude 6. Stude 6. Stude 7. Stude expla 1. Gas 2. Liqui	Able to expreoperation and pplied in their LO: ents are able to ent are able ent are able to ent are able ent are	d maintenance of work o determine volution determine physical properties of the model of the substance of work determine the stance of work determine the substance of work determine the stance of work de	f chemical instru ume and pressu sicochemical pro ynamic law partial molar perties analysis spontaneous rea eaction rate eq	re of gas operties volume of action uation and of solid and		

	4. Chemical kinetics					
	5. Solid					
Study and examination	Subject LO	Examination requirements and Perce				
requirements and		forms of examination				
forms of	1	Quizzes, collaborative assignment,	10			
examination		midterm exam				
	2	Quizzes, collaborative assignment,	15			
		midterm exam				
	3	Quizzes, collaborative assignment,	20			
		midterm exam				
	4	Quizzes, collaborative assignment,	15			
		final exam				
	5	Quizzes, collaborative assignment,	10			
		final exam				
	6	Quizzes, collaborative assignment,	20			
		final exam				
	7	Quizzes, collaborative assignment,	10			
		final exam				
Media employed	Google classroom, youtube, zoom meeting, google form, google					
	doc					
Reading list	1. Addison NJH, 1989, <i>Physical Chemistry</i> , 3 rd ed, Harper Collin					
		Florida 2. Atkin PW, 1999, <i>Physical Chemistry</i> Volume 1, Translated by Dra. Irma I. Kartohadiprojo, Erlangga, Jakarta 3. Atkin PW, 1999, <i>Physical Chemistry</i> Volume 2, Translated by Dra. Irma I. Kartohadiprojo, Erlangga, Jakarta 4. Castelan, GW, 1983, <i>Physical Chemistry</i> , 3 rd ed Addission Wesley Publishing Company, Massachuset				
	•	K., Dogra, K., 1990, Physical Chemistry	and Ouestions			
			una Questions,			
		UI Press JakartaRohyami, Y., 2014, Physical Chemistry, Deepublish, Yogyakarta				
	o. Konyami, t., 2014, Physical Chemistry, Deepublish, Yogya					