

Module Handbook

Module Name	General Chemistry				
Module Level	Higher Diploma				
Code, if applicable	VKD110				
The subtitle, if applicable	-				
Courses, if applicable	-				
Semester(s) in which the module is taught	1 st semester				
Person responsible for the module	Yuli Rohyami, M.Sc.				
Lecturer	Yuli Rohyami, M.Sc. Bayu Wiyantoko, M.Sc.				
Language	Bahasa Indonesia				
Relation to curriculum	Compulsory				
Type of teaching, contact hours	Flipped classroom-cooperative learning: (1) independent study: flipped classroom: google classroom; (2) face to face: cooperative learning; (3) structure activities: cooperative learning; (4) exam: 9.71 hours x 16 weeks per semester				
Workload	Total Workload	136 hours; 3 CU			
		Independent study: flipped classroom	Face to face: cooperative learning	Structure activities: cooperative learning	Exam
	Hours	42	35	42	17
Credit Points	3 CU/5.03 ECTS				
Requirements according to the examination regulations	75% minimum requirements of attendance				
Recommended prerequisites	-				
Module objectives/intended learning outcomes	<p>PLO 3: Able to express basic concepts of chemistry, chemical analysis, operation and maintenance of chemical instruments that can be applied in their work</p> <p>Subject LO:</p> <ol style="list-style-type: none"> 1. Able to classify the types of material 2. Able to write electronic configuration 3. Able to determine bonds in a molecule 4. Able to calculate the number of substances from a chemical reaction 5. Able to calculate equilibrium constant and substance concentration in the equilibrium system 6. Able to calculate the enthalpy of reaction 7. Able to determine the pH of acidic, alkaline, salt, and buffer solutions 8. Able to balance redox reactions 				
Content	<ol style="list-style-type: none"> 1. Material 2. Development of atomic theory 				

	3. Chemical bonds 4. Chemical stoichiometry 5. Chemical equilibrium 6. Thermochemistry 7. Acid-base theory 8. Redox reaction		
Study and examination requirements and forms of examination	Subject LO	Examination requirements and forms of examination	Percent
	1	Quizzes, collaborative assignment, midterm exam	10
	2	Quizzes, collaborative assignment, midterm exam	10
	3	Quizzes, collaborative assignment, midterm exam	10
	4	Quizzes, collaborative assignment, midterm exam	30
	5	Quizzes, collaborative assignment, final exam	10
	6	Quizzes, collaborative assignment, final exam	10
	7	Quizzes, collaborative assignment, final exam	10
	8	Quizzes, collaborative assignment, final exam	10
Media employed	Google classroom, youtube, zoom meeting, google form, google doc		
Reading list	1. Brady, J.E., 1990, <i>General Chemistry, Principle & Structure</i> , 5 th ed., John Willey Sons, New York 2. Golberg, D.E., 2008, <i>Schaum's Outlines : Kimia untuk Pemula Edisi 3</i> , Erlangga Jakarta 3. Keenan, C.W. Kleinfelter, D.C., Wood, J.H., 1986, <i>Kimia untuk Universitas Jilid 1</i> , Penerjemah Aloysius Hadyana Pudjaatmaka, Ph.D., Erlangga, Jakarta 4. Keenan, C.W. Kleinfelter, D.C., Wood, J.H., 1986, <i>Kimia untuk Universitas Jilid 2</i> , Penerjemah Aloysius Hadyana Pudjaatmaka, Ph.D., Erlangga, Jakarta 5. Petrucci R.H, 2013, <i>Kimia Dasar : Prinsip dan Terapan Modern Jilid 1 Edisi 9</i> , Penerjemah Suminar Achmadi, Erlangga Jakarta 6. Petrucci R.H, 2013, <i>Kimia Dasar : Prinsip dan Terapan Modern Jilid 2 Edisi 9</i> , Penerjemah Suminar Achmadi, Erlangga Jakarta 7. Petrucci R.H, 2013, <i>Kimia Dasar : Prinsip dan Terapan Modern Jilid 3 Edisi 9</i> , Penerjemah Suminar Achmadi, Erlangga Jakarta 8. Syukri S., 1999, <i>Kimia Dasar 1</i> , Penerbit ITB Bandung 9. Syukri S., 1999, <i>Kimia Dasar 2</i> , Penerbit ITB Bandung 10. Syukri S., 1999, <i>Kimia Dasar 3</i> , Penerbit ITB Bandung 11. Rohyami, Y., 2017, <i>Pengetahuan Dasar bagi Analisis Kimia</i> , Universitas Islam Indonesia, Yogyakarta		