



Diponegoro University

Faculty of Science and Mathematics

Undergraduate Program Of Chemistry

Module designation	Experimental in General Chemistry 2 (PKD2)
Semester(s) in which the module is taught	2
Person responsible for the module	Yayuk Astuti, S.Si., Ph.D
Language	Indonesian
Relation to curriculum	Compulsory /elective /specialisation
Teaching methods	Labwork
Workload (incl. contact hours, self-study hours)	Face to Face: 1 x (1 x 50 min); Self Study : 1 x (1 x 60 min); Structured tasks : 1 x (1 x 60 min)
Credit points	1
Required and recommended prerequisites for joining the module	No requirement

Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. Demonstrate a responsible attitude towards work in their area of expertise independently (S9) 2. Able to apply logical, critical, systematic, and innovative thinking in the development or implementation of science and technology that pays attention to and uses humanities values by their field of expertise. (KU1) 3. Able to produce appropriate conclusions based on the identification, analysis, isolation, transformation, and synthesis of chemicals that have been carried out. (KK1) 4. Able to solve science and technology problems in general chemistry and uncomplicated scopes such as identification, analysis, isolation, transformation, and synthesis of micromolecules through the application of knowledge of structure, properties, kinetics, and energetics of molecules and chemical systems, with methods analysis and synthesis in specific chemical fields, as well as the application of relevant technologies. (KK2) 5. Able to analyze several alternative solutions in identification, analysis, isolation, transformation, and synthesis of available chemicals and present analysis conclusions for appropriate decision making. (KK3) 6. Able to use software to determine the structure and energy of micromolecules, software to assist analysis and synthesis in general or more specific chemical fields (organic, biochemical, or inorganic), and for data processing (analytical chemistry). (KK4) 7. Mastering the theoretical concepts of structure, properties, changes, kinetics, and energetics of molecules and chemical systems, identification, separation, characterization, transformation, synthesis of micromolecular chemicals, and their application. (PP1)
Content	<ol style="list-style-type: none"> 1. Assistant 2. Introduction of Visible Ultra Violet (UV-Vis) Spectrometer and Solvent Extraction Techniques 3. Introduction of Visible Ultra Violet (UV-Vis) Spectrometer and Solvent Extraction Techniques 4. Chemical Reaction: Chemical Kinetics 5. Chemical Reaction: Chemical Kinetics 6. Solution, Solubility and Solvent Extraction 7. Solution, Solubility and Solvent Extraction 8. Chemical Reaction II: Synthesis and Stoichiometry 9. Chemical Reaction II: Synthesis and Stoichiometry 10. Acid-Base Reaction: Polychromatic Acid 11. Acid-Base Reaction: Polychromatic Acid 12. Chemical Reaction III: Enzymatic Catalyst 13. Chemical Reaction III: Enzymatic Catalyst 14. Oxidation and Reduction Reaction 15. Oxidation and Reduction Reaction

Exams and assessment formats	Response
Study and examination requirements	
Reading list	