

Organic Chemistry

Module name		Organic Chemistry				
Module level		2 nd year of Bachelor program				
Abbreviation, if applicable						
Sub-heading, if applicable						
Courses included in the module, if applicable		KI2051 Organic Chemistry				
Semester/term		3 rd Semester				
Module coordinator(s)						
Lecturer(s)		Dr. Aminudin Sulaeman				
Language		Indonesian				
Classification within the Curriculum		Compulsory courses for Bachelor Program in Biology Provided by Chemistry Study Program				
Teaching format/ class hours per week during the semester		<p><i>Lecture (Face to face lecture): 70%</i></p> <ul style="list-style-type: none"> Lecture : 2 x 14 weeks <p><i>Practical: 30%</i></p> <ul style="list-style-type: none"> Practical class : 3 x 14 weeks 				
Workload	Total Workload	160 hours; 3(1) CU				
		Face to face teaching	Structured Activities	Independent study	Exam	Total
	Lecture	28	28	28	4	88
	Practical class	42	12	14	4	72
	Total					160
Credit points		<i>Organic Chemistry 3(1) CU</i>				
Requirements		General Chemistry IA and General Chemistry IIA				
Content	<p>This course activities consist of lectures and practice with scope:</p> <ul style="list-style-type: none"> Organic nomenclature Chemical bonding, including resonance concept and acid-base concept Covalent bond properties related to the static aspect of molecules (including stereochemistry) as well as its dynamic aspect (conformation) Organic functional groups The relationship between structures of molecules, physical properties (the state of materials, solubility, melting point and boiling points), and chemical properties of organic compounds Acid-base properties Oxidation and reduction reaction Electrophilic and nucleophilic addition reaction Electrophilic and nucleophilic substitution reaction Elimination and free-radical reaction, especially halogenation reaction The application of organic compounds and reactions in living organism as well as in industrial applications 					
Learning goals/ competencies	<p><i>After completing this course students are expected to understand the relationship between the structure and the reactivity of monofunctional organic compounds and able to recognize some basic reactions on monofunctional organic compounds as well as identifying the structure in spectroscopy (IR, UV-Vis, NMR, and MS) in the context of its application in daily life.</i></p>					

Study/exam achievements	<ul style="list-style-type: none"> • Midterm exam: 42,5% • Final exam: 42,5% • Assignment + Quizzes: 15% • Practical Class: 30%
Literature	<ol style="list-style-type: none"> 1. T.W.G. Solomon dan C.B. Fryhle, 2011, Organic Chemistry, 10th edition, John Wiley and Sons (Asia), Wiley International Student version 2. H. Hart, L.E. Craune dan D.J. Hart, 2003, : Suatu Kuliah Singkat, Edisi ke-11, penterjemah: SS Achmad, Penerbit Erlangga, Jakarta. 3. J Clayden, N Greeves, S Warren dan P Wothers, 2001. Organic Chemistry, Oxford University Press.