

MODULE HANDBOOK

Module Name	Main Elements of Chemistry
Module Level	Bachelor
Abbreviation, if applicable	3074212042
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	5 th / third year
Module coordinator(s)	Dina Kartika Maharani, S.Si., M.Sc
Lecturer(s)	Dr. Muchlis, M.Pd. Prof. Dr. Achmad Lutfi, M.Pd Dina Kartika M., S.Si., M.Sc. Kusumawati D., S.Pd.,M.Pd. Rusly Hidayah, S.Si., M.Pd.
Language	Bahasa Indonesia
Classification within the curriculum	Compulsory course
Teaching format/class hours per week during the semester	2 hours lectures (50 min / hour)
Workload	2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester, 79.33 total hours per semester ~ 3.18 ECTS**
Credit point	2 CU x 1.59 = 3.18 ECTS
Prerequisite Course(s)	Basic Chemistry 2
Learning Outcomes	<p>General Competence (knowledge): Students can mastering theoretical concepts on the structure, dynamics and energy of chemicals, as well as the basic principles of separation, analysis, synthesis and characterization of main group elements</p> <p>Specific Competence: At the end of the lecture, students can understand the position, physico-chemical properties, laboratory manufacture, types of compounds and their uses of Alkali Metals, Alkaline Earth metals, Boron, Carbon, Nitrogen, Oxygen, Halogens, Noble Gases.</p>
Content	Course materials discuss the understanding of Role and status of theory in Inorganic chemistry, Origin of elements, Classification of elements in the periodic system; Hydrogen and its compounds: Position in the periodic table, Physical and chemical properties, Isotopes of hydrogen, Hybrids of elements, Water and related matters; Source and extraction, physico-chemical properties and uses, manufacture, properties and uses: Alkali Metals, Alkaline Earth metals, Boron, Carbon, Nitrogen, Oxygen, Halogens, Noble Gases

Study/exam achievements	Students are considered to complete the course and pass if they obtain at least 40% of maximum final grade. The final grade (NA) is calculated based on the following ratio:	
	Assessment Components	Percentage of contribution
	Participation	20%
	Assignment	30%
	Mid-semester test	20%
	Final semester test	30%
Forms of media	Computer, LCD, White board	
Learning Methods	Lectures, discussion, assignment	
Literature	<ol style="list-style-type: none"> 1. Lee, J.D. 1991. <i>Concise Inorganic Chemistry</i>. Four Edition. London: Chapman & Hall. 2. Madan, R.D. 1997. <i>Modern Inorganic Chemistry</i>. New Delhi: S. Chand and Company LDT. 3. Sugiarto, B. dkk. 1997. <i>Kimia Anorganik</i>. Surabaya: Unipress IKIP Surabaya. 4. Perry, Dale L. 2011. <i>Handbook of Inorganic Compounds, Second Edition</i> (Hardcover) – May 18, 2011. ISBN-13: 000-1439814619 ISBN-10: 14398146 	
Notes:	<p>*1 CU in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.</p> <p>**1 CU = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/UN38/Hk/Ak/2019</p>	