

Module Descriptions

Module designation	Basic Chemistry
Semester(s) in which the module is taught	1 st semester/First Year
Person responsible for the module	Prof. Dr. Utiya Azizah, M.Pd.
Language	Indonesian (Regular Class) English (International Class)
Relation to curriculum	Compulsory course
Teaching methods	Case method with practicum laboratory 3 workhours per week (3 x 170 minutes per week)
Workload (incl. contact hours, self-study hours)	1 CU for a bachelor's degree equals 170 minutes (50 minutes face-to-face, 60 minutes structured, 60 minutes independent learning) per week × 14 weeks, excluding mid and end-term exams. = 39.67 work hours per semester = 1.587 ECTS.
Credit points	3 Credit Units (CU) = 4.77 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. Utilize learning resources and ICT to support mastery of Basic Chemistry concepts and theories. 2. Make decisions about the relationship between basic chemical concepts and laboratory activities and the existence of chemistry in everyday life 3. Know the basics of chemistry, including Stoichiometry, Atomic Structure & Periodic System of Elements, Chemical Bonding, Solutions, Colloidal Systems, Energetics, Reaction Rates, Chemical Equilibrium, Redox & Electrochemistry, Organic Chemistry, and Green Chemistry 4. Have an honest and responsible attitude in carrying out lectures and practicums.
Content	Study of basic concepts: Stoichiometry, Atomic Structure & Periodic System of Elements, Chemical Bonding, Solutions, Colloidal Systems, Energetics, Reaction Rates, Chemical Equilibrium, Redox & Electrochemistry, Organic Chemistry, and Green Chemistry, as well as appropriate laboratory activities through discussions, assignments, and practicums
Examination forms	Essay and Oral Presentation
Study and examination requirements	Student assessments include: Participatory Activities 60% Product assessment 2,5% Practical assessment 7,5% Tests 30%

Reading list	<ol style="list-style-type: none">1. Tim Kimia Dasar. 2017. Kimia Dasar . Surabaya: Unesa University Press.2. Tim Kimia Umum. 2017. Kimia Umum. Surabaya: Unesa University Press.3. Chang, Raymond. 2008. General Chemistry: The Essential Concepts, Fifth Edition. USA: McGraw Hill.4. Tim Kimia Dasar. 2014. Kimia Umum . Surabaya: Unesa University Press.5. Brady and Humiston. 2018. Chemistry: The Molecular Nature of Matter. New York: John Willey and Sons.6. Achmad, Hiskia, dan Tupamahu. 1990. Penuntun Belajar Struktur Atom, Struktur Molekul, Sistem Periodik. Bandung: ITB.7. Achmad, Hiskia, dan Tupamahu. 1991. Stoikiometri dan Energetika Kimia, Bandung, PT Citra Aditya Bakti.8. Ahmad, Hiskia. 1990. Kimia Larutan. Bandung: Jurusan Kimia FMIPA ITB
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