

KI1101 General Chemistry

Module designation	General Chemistry B
Semester(s) in which the module is taught	1 st Semester (first year of undergraduate program)
Person responsible for the module	Prof. Dra. Fida Masayanti Warganegara, M.S., Ph.D.
Language	Indonesian
Relation to curriculum	Compulsory
Teaching methods	Lecture and Tutorial
Workload (incl. contact hours, self-study hours)	Total workload: around 12 hours per week x 16 weeks = 192 hours • Contact hours: 4 hours x 16 weeks = 64 hours • Tutorial: 4 hours x 16 weeks = 64 hours • Self-study hours: 4 hours x 16 weeks = 64 hours
Credit points	4 CU/6.67 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	1. Students are able to think logically, rationally and critically in solving chemical problems. 2. Students are able to design and/or carry out chemical experiments, as well as analyze and interpret data
Content	This course activities consists of lectures and practice with scope: 1. Atoms and molecules, 2. Molecules, moles and chemical equations 3. Stoichiometry 4. Gas properties 5. Periodic table and atomic structure 6. Chemical bonding and molecular structure 7. Molecules and materials 8. Energy and chemistry 9. Entropy and the second law of thermodynamics 10. Chemical kinetics 11. Chemical equilibrium 12. Electrochemistry 13. Nuclear chemistry
Examination forms	Midterm exam and Final Exam
Study and examination requirements	Midterm exam: 50% Final Exam: 50%
Reading list	1. Lawrence S. Brown and Thomas A. Holme, Chemistry for Engineering Students, 2, Brooks/Cole, 2011 2. Achmad, H., "Seri Penuntun Belajar Kimia Dasar", Citra Aditya Bakti, Bandung, 1992. 3. Chang, R., "Chemistry", 5th Edition, WCB/McGraw-Hill, New York, 1998. 4. Brady J.E. and Holum J.R., "Chemistry, the Study of Matter and Its Changes", 2nd Edition, John Wiley, New York, 1996. 5. Mahan B.M. and Myers R.J., "University Chemistry", Benjamin/Cummings, Singapore, 1987. 6. Chang, R., "Essential Chemistry", 2nd Edition, McGraw Hill, New York, 2000