Department of Mathematics
Institut Teknologi Sepuluh Nopember
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Course	**Course Name**	**: Chemistry**
	Course Code	**: SF184101**
	Credit	**: 4**
	Semester	**: 1**

Description of Course	
This subject studies the basic principles of chemistry including atomic theory, electron configuration, chemical bonds, the form of substances and phase changes, chemical reactions and stoichiomeri, Acid-Base Theory, Ionic Equilibrium in Solutions (Acid-Base, Solubility, Complexes and Precipitation), Chemical Thermodynamics, Chemical Kinetics and Electrochemistry.	
Learning Outcome	
A.1 PLO-01	*Have good morals, ethics, responsibility and personality in completing their duties*
B.3 PLO-05	*Responsible for his own task and can be given responsibility for the achievement of the organization*
D.1 PLO-08	*Able to apply chemical mindset and take advantage of science and technology in their fields for solving problems*
Course Learning Outcome	
CLO 1	*Students are able to use the basic principles of chemistry as a basis for studying subject related to chemistry.*
CLO 2	*Students can perform basic chemical calculations*

Main Subject
1. Basic Concepts of Chemistry 2. Atomic Model and Structure 3. Electron Configuration and Chemical Bonds 4. Form of Substance and Phase Change 5. Stoichiometry and Chemical Reactions 6. Solution, Concentration, Colligative Properties 7. Chemical Equilibrium 8. Acid-base theory 9. Ionic Equilibrium in Solutions (Acid-Base, Solubility, Complexes and Precipitation) 10. Chemical Thermodynamics 11. Chemical Kinetics 12. Electrochemistry
Prerequisites
Reference
1. D. W. Oxtoby, H.P. Gillis and A. Champion,"Principles of Modern Chemistry", 7th edition, Mary Finc.,USA, 2012
Supporting Reference
1. R. Chang, "Chemistry", 7th edition, McGraw Hill, USA, 2009. 2. D. E. Goldberg, "Fundamental of Chemistry", Mc Graw Hill Companies, 2007. 3. I. Ulfin, I. K. Murwani, H. Juwono, A. Wahyudi dan F. Kurniawan, "Kimia Dasar", ITS Press, Surabaya, 2010.