MATA KULIAH ***COURSE***	**Nama Mata Kuliah** ***Course Name***	**:**	**Kimia I** ***Chemistry I***
	Kode MK ***Course Code***	**:**	**SK184101**
	Kredit / *Credits*	**:**	**3 sks**
	Semester	**:**	**I**

DESKRIPSI MATA KULIAH
Description of Course

Matakuliah ini mempelajari prinsip prinsip dasar ilmu kimia meliputi teori atom, konfigurasi elektron, ikatan kimia, wujud zat dan perubahan fasa, reaksi kimia dan stoikhiomeri, Teori Asam Basa, Kesetimbangan Ionik dalam Larutan (Asam Basa, Kelarutan, Kompleks dan Pengendapan), Termodinamika Kimia, Kinetika Kimia dan Elektrokimia.

This course 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 and Electrochemical Kinetics.

CAPAIAN PEMBELAJARAN LULUSAN YANG DIBEBANKAN MATA KULIAH
Learning Outcome

A.1. (CPL 1)	Memiliki kepribadian yang baik dan disiplin tinggi di dalam menyelesaikan tugasnya *Have a good personality and high discipline in completing tasks*
B.3. (CPL 5)	Bertanggungjawab pada pekerjaan sendiri dan dapat diberi tanggung jawab atas pencapaian hasil kerja organisasi *Responsible for his own work and can be given responsibility for the achievement of the work of the organization*
D.1. (CPL 8)	Mampu mengaplikasikan pola pikir kimia dan memanfaatkan IPTEK pada bidangnya dalam menyelesaikan masalah yang dihadapi *Able to apply chemical mindset and take advantage of science and technology in their fields to solve existing problems*

CAPAIAN PEMBELAJARAN MATA KULIAH
Course Learning Outcome

1. Mahasiswa mampu menggunakan prinsip-prinsip dasar ilmu kimia sebagai dasar dalam mempelajari ilmu yang berkaitan dengan kimia.
2. Mahasiswa dapat melakukan perhitungan-perhitungan dasar kimia.

1. *Students are able to use the basic principles of chemistry as a basis for studying science related to chemistry.*
2. *Students can perform basic chemical calculations.*

POKOK BAHASAN
Main Subject

1. Konsep Dasar Kimia
2. Model dan Struktur Atom
3. Konfigurasi Elektron dan Ikatan Kimia
4. Wujud Zat dan Perubahan Fase
5. Stoikhiometri dan Reaksi Kimia
6. Larutan, Konsentrasi, Sifat Koligatif
7. Kesetimbangan Kimia
8. Teori Asam Basa

9. Kesetimbangan Ionik dalam Larutan (Asam Basa, Kelarutan, Kompleks dan Pengendapan)
10. Termodinamika Kimia
11. Kinetika Kimia
12. Elektrokimia

1. Basic Concepts of Chemistry
2. Model and Atomic 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

PRASYARAT
Prerequisites

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PUSTAKA
References

1. Tim Dosen Departemen Kimia, “Kimia 1”, edisi kedua, Media Bersaudara, 2019.
2. Oxtoby, D.W., Gillis, H.P. and Campion, A., ”Principles of Modern Chemistry”, 7th Edition, Brooks/Cole, 2012.
3. Chang, R. and Goldsby, K., “Chemistry”, 11th Edition, McGraw-Hill, USA, 2012.
4. Goldberg, D. E., “Fundamental of Chemistry”, 4th Edition, McGraw-Hill Companies, 2007.