

TKB211101

Basic Chemistry

Kimia Dasar

BASIC INFORMATION

Course Credit 2 / 100 minutes per Week

Course Type Required

Course Classification Basic Science

Prerequisites -

STUDENT AND LEARNING OUTCOMES

Covered Student Outcomes

Fundamental and Engineering Knowledge (a) -

- Choose Student Outcome

Learning Outcomes

LO1 Students are able to understand the basic principles of chemistry.

LO2 Students are able to explain the state of matter, solution, and chemical reaction.

LO3 Students are able to perform basic chemical calculations and analyses.

COURSE DESCRIPTION

This course does not have any prerequisites. It provides basic concept of matter, stoichiometry, chemical reactions, solutions, kinetic gases, chemical bonds, and colligative properties and explains the relationship between chemistry and mathematics, biology and physics in everyday life.

TOPICS

1. Basic of chemistry and its application

2. Atom's model and structure, electron configuration

3. Chemical bond

4. Stoichiometry and chemical reaction

5. State of matter and phase changes

6. Solution, concentration, and colligative characteristic

7. Chemical equilibrium, acid-base theorem, ionic equilibrium in solution

8. Chemical thermodynamics

9. Chemical kinetics

10. Electrochemical

10B

REFERENCES

1. McMurry, J., Fay, R. C., & Robinson, J. K. (2021). Chemistry. Pearson.
2. McMurry, J., & Fay, R. C. (2007). Chemistry. Upper Saddle River, NJ: Prentice Hall..