

TKB211201

Biology

Biologi

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 fundamental of biological system, i.e., molecular cell biology, genetic engineering, etc..

LO2 Students are able to implement the knowlegde of biological system to biomedical engineering case.

COURSE DESCRIPTION

This course does not have any prerequisites. It provides basic concept biological system, molecular cell biology, genetic engineering, etc.

TOPICS

1. The Dynamic Cell
2. Chemical Foundations
3. Protein Structure and Function
4. Nucleic Acids, the Genetic Code, and the Synthesis of Macromolecules

5. Recombinant DNA and Genomics

6. Molecular Structure of Genes and Chromosomes

REFERENCES

1. Lodish H, Berk A, Zipursky SL, et al. (2000). *Molecular Cell Biology*. 4th edition. New York: W. H. Freeman.