| | **INSTITUT TEKNOLOGI SEPULUH NOPEMBER**<br>**FACULTY OF SCIENCE AND DATA ANALYTICS**<br>**DEPARTMENT OF STATISTICS**<br>**STATISTICS UNDERGRADUATE PROGRAM** |
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| | Course Name | : | **Biology** |
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| Course | Course Code | : | SB234101 |
| | Credit | : | 2 SKS |
| | Semester | : | I |

## COURSE DESCRIPTION

Biology studies life as a science, is the concept of life from cells to individuals; and the diversity of living things and their interactions with the environment. The learning process through teaching and learning activities in class, case studies, assignments, discussions, and evaluations

## PROGRAM LEARNING OUTCOME

| PLO-2 | Able to utilize science and technology to apply it in the field of biology, and able to make appropriate decisions based on individual or group work in the form of a final project report through logical, critical, systematic and innovative thinking |
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| PLO-4 | Able to interpret the theoretical concepts of cellular and molecular biology, organisms, ecology and evolution |

## COURSE LEARNING OUTCOME

| CLO.1 | Having a good attitude, morality, honest, ethical,  and appreciative to others professional scientist |
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| CLO.2 | Able to implement science and technology with logical, critical, systematic, and innovative thinking according to their field of expertise |
| CLO.3 | Able to interpret life theory concepts from cells to individuals and implement them in the environment |
| CLO.4 | Able to apply the substance of biological sciences in social life. |

## MAIN SUBJECT

1.   Scientist ethics, The concept of life
2.   Cell structure and dynamics
3.   Synthesis and energy; Reproduction
4.   Evolution
5.   Systematics and diversity
6.   Structure and development of plants and animals
7.   Introduction to Biotechnology
8.   Introduction to Ecology
9.   Case studies

## PREREQUISITE

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**REFERENCES**

1. Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, Lisa A. Urry, and Jane B. Reece, 2017, Campbell Biology, 11th Edition. Published by Pearson.