



**INSTITUT TEKNOLOGI SEPULUH NOPEMBER
FACULTY OF SCIENCE AND DATA ANALYTICS
DEPARTMENT OF STATISTICS
STATISTICS UNDERGRADUATE PROGRAM**

Course

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| Course Name | : | Business Decision Analysis |
| Course Code | : | SS234629 |
| Credit | : | 3 SKS |
| Semester | : | VI |

COURSE DESCRIPTION

Business Decision Analysis course is one of the courses that aims to apply the concept of probability and expectations in multi-criteria decision-making problems both in the field of Industry, Business Economics, Social Governance and The Health Environment. Learning Strategy is to provide assignments and evaluations based on presentations/tests.

PROGRAM LEARNING OUTCOME

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| PLO-7 | Able to use modern computing devices to solve statistical problems |
| PLO-9 | Able to apply statistical methods to analyze theoretical and real problems |
| PLO-10 | Able to apply business, industrial, economic, social, environmental or health statistical methods to real problems |

COURSE LEARNING OUTCOME

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| CLO.1 | Able to explain the concepts and principles of business decision analysis |
| CLO.2 | Able to solve decision-making problems using decision diagram |
| CLO.3 | Able to apply the stepwise analysis method for decision making |
| CLO.4 | Able to identify, formulate, and solve multi-criteria decision-making problems |
| CLO.5 | Able to apply the Analytical Hierarchy Process (AHP) method for multi-criteria decision making |
| CLO.6 | Able to use computational techniques and modern computer equipment needed to solve decision-making problems |
| CLO.7 | Able to understand the current and upcoming issues related to business decision analysis |
| CLO.8 | Able to communicate effectively and work together in interdisciplinary and multidisciplinary teams |

MAIN SUBJECT

1. The scope of the decision and the decision analysis cycle.
2. Decision and Choice Making diagrams.
3. Models and Probability Values.
4. Preference for risk and function utility.
5. Multiple criteria in uncertainty.
6. Behavioral assumptions and decision limitations.
7. Analytic Hierarchy Process (AHP).

8. Benefit and cost analysis decisions.

PREREQUISITE

Introduction to Statistical Method

REFERENCES

1. Holloway C. H., 1979. Decision Making Under Uncertainty: Models And Choices. New Jersey: Prentice-Hall.
2. Mangkusburoto, Kuntoro. 1989. Analisis Keputusan: Pendekatan Sistem Dalam Man-jemen Usaha Dan Proyek. Cetakan ke-6. Bandung: Ganeca Exact.
3. Saaty. T. L., 1990. Decision Making for Leaders: The Analytic Hierarchy Process for Decisions in a Complex World. USA: RWS Publications.
4. Sixto, Rios. 1994. Decision Theory and Decision Analysis: Trends and Challenges.
5. Stine, Robert dan Foster, Dean. 2013. Statistics for Business: Decision Making and Analysis. 3rd edition. Kindle Edition.