Course Code	TKIT165132
Course Name	Decision Support System
Course Instructors	Adhistya Erna Permanasari ; Silmi Fauziati
Course Type	Elective
Course Classification	Engineering Topics
Credit / Contact Hour per Week	3 / 150 minutes per Week
Course Description	This course will overview and implement decision making process and support that can be given by computer, component, and classification of decision support system, quantitative model of sensitivity analysis, decision analysis, multicriteria decision making, decision support system development technique, executive information system, expert system use, user interface aspect, and various other aspects.
Prerequisites Courses	-
Covered Student Outcome	**Development of Engineering Solution (b)** **Modern Tools Utilization (e)** **Knowledge of Contemporary Issues (f)** **Engineering Awareness and Society (j)**

Learning Mapping

Code	Learning Outcome	Student Outcome
LO1	Students are able to identify the basic concepts of DSS.	Development of Engineering Solution
LO2	Students are able to apply DSS models and analyses.	Engineering Awareness and Society
LO3	Students are able to demonstrate the process development of DSS	Modern Tools Utilization
LO4	Students are able to identify the intelligent DSS.	Knowledge of Contemporary Issues
LO5	Students are able to design DSS in a real case	Modern Tools Utilization

Topic	1. The basic concept of Decision Support System (DSS) 2. The component and classification of DSS 3. Modeling and analysis in DSS 4. Mathematical model and programming in DSS 5. Sensitivity analysis 6. Decision analysis 7. Multi criteria decision making 8. User interface and visualization of decision making 9. The development process of DSS 10. Forecasting 11. Knowledge management 12. Support System for group decision 13. Application of DSS
Direct Asessment	

Direct Asessment Plan	**Measured Learning Outcome**
Mid Exam	LO1, LO2
Final Exam	LO3, LO4, LO5

Indirect Assesment	Questionnaire and direct communication
References	1. Bowerman, B.L., O'Connel, R. T., and Koehler, A. B., Forecasting, Time Series, and Regression: An Applied Approach 4th Ed., Belmont, CA: Thomson Brooks, 2005. 2. Haag, S., Cummings, M., Phillips A., Management Information Systems for the Information Age, The McGraw-Hill Companies, Inc, 2008.

	3. Laudon, K.C., Laudon, J.P., Management Information Systems: Managing the Digital Firm 12th Ed., Prentice Hall, 2011. 4. Marakas, M. George, *Decision Support System in the 21st,* Prentice Hall, 2004. 5. Turban, E., Aronson, J. E. and Liang, T.P., *Decision Support System and Intelligent Systems*, 7th ed. New Jersey: Prentice Hall, 2005. 6. Turban, E., Sharda, R., and Delen, D., *Decision Support and Business Intelligence Systems*., Prentice Hall, 2011.