

Department of Mathematics
 Institut Teknologi Sepuluh Nopember
 email : matematika@its.ac.id – web : <https://www.its.ac.id/matematika>

Course	Course Name : Introduction to Graph Theory
	Course Code : KM184713
	Credit : 2
	Semester : 7

Description of Course	
Graph Theory studied the set of vertices and edges connecting a pair of vertices. At a practical level, nodes can represent real entities and edges can represent relationships between entities. In the course, students will study the use of principles in graph theory as a tool to model a problem, solve the model and export the solution to the problem modeled.	
Learning Outcome	
PLO 1	[C2] Students are able to identify and explain foundations of mathematics that include pure, applied, and the basic of computing
PLO 2	[C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations
Course Learning Outcome	
Students able to understand concepts in graph theory and use it to solve problems in engineering and social, construct model and simulate it, individually or in group.	
Main Subject	
In this course, students will study the following subjects: basic graph theory, graph coloring, graph labeling, distance in graph, tree and its properties.	
Prerequisites	

Discrete Mathematics

Reference

1. Nora Hartsfield, Gerhard Ringel, "Pearls in Graph Theory", Dover Publications, Inc., 2003.
2. I Ketut Budayasa, "Teori Graf dan Aplikasinya", Unesa University Press, 2007.

Supporting Reference

1. Garry Chartrand, Ping Zhang, "A First Course in Graph Theory", Dover Publications, Inc., 2012.