MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
UNDERGRADUATE PROGRAM OF MATHEMATICS
Ketintang Campus, C8-C9 Buildings of FMIPA, Surabaya
Email: s1-mat@unesa.ac.id

Module Handbook

Module Name :	*Teori Graf Aljabar* Algebraic Graph Theory
Module level :	Bachelor degree/Undergraduate Program
Course Code :	4420103139
Abbreviation, if applicable:	-
Courses included in the module, if applicable:	Not Applicable
Semester/Term	7th/ fourth year
Module coordinator(s)	Dr. Agung Lukito, M.S.
Lecturer(s):	Dr. Agung Lukito, M.S. Dwi Nur Yunianti, M.Si.
Language:	Bahasa Indonesia (Indonesian Language)
Classification within the curriculum:	~~Compulsory~~/ Elective
Teaching format/class hours per week during the semester:	3 contact hours of lectures (*sks* or credit unit*)
Workload :	3 x 50 minutes lectures, 3 x 60 minutes structured activity, and 3 x 60 minutes individual activity per week, 14 weeks per semester 119 total hours per semester ~ 4.77 ECTS**
Credit Unit:	3 credit unit (4.77 ECTS)
Requirements:	Graph Theory and Abstract Algebra I

MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
UNDERGRADUATE PROGRAM OF MATHEMATICS
Ketintang Campus, C8-C9 Buildings of FMIPA, Surabaya
Email: s1-mat@unesa.ac.id

Learning goals/competencies:	**Knowledge (KNO-1):** Demonstrating mathematical knowledge and mathematical insight CLO-1: Able to explain about graph invariant related to linear algebra and group theory **Skill (SKI-2):** Applying the basic principles of mathematics to solve simple* mathematical problems. CLO-2: Able to solve mathematical problems on graph using algebra **Competence (COM-1):** Proving mathematical statements by various methods. CLO-3: Able to prove mathematical statement of graph theory using various method
Content	This course is study about theorems on graphs using algebraic properties through a formal proof process. Learning with the lecture method, question and answer with a deductive approach. Lecture activities are carried out in a student center with discussions, observations, project assignments, and presentations.

Attribute Soft skill:	Active communication; Discipline; Collaboration; Responsibility; and Argumentation in class.
Study/exam achievements:	The final grade (*NA*) is calculated based on the following ratio: | Assessment Components	Percentage of contribution
Participation	20%
Assignment	30%
Mid-semester test	20%
Final semester test	30%	

MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
UNDERGRADUATE PROGRAM OF MATHEMATICS
Ketintang Campus, C8-C9 Buildings of FMIPA, Surabaya
Email: s1-mat@unesa.ac.id

	Grade conversion of 0-100 scale into 0-4 scale is set as below:		
	Letter	Number	Grade Interval
	A	4,00	$85 \leq A \leq 100$
	A-	3,75	$80 \leq A\text{-} < 85$
	B+	3,50	$75 \leq B+ < 80$
	B	3,00	$70 \leq B < 75$
	B-	2,75	$65 \leq B\text{-} < 70$
	C+	2,50	$60 \leq C+ < 65$
	C	2,00	$55 \leq C < 60$
	D	1,00	$40 \leq D < 55$
	E	0,00	$0 \leq E < 40$

Learning Methods :	Student-centered approach; project-based learning; lecturer and discussion; and presentations (structured activities)
Form of Media:	Power point slides; video; worksheets, and textbooks
Literature (primary references):	1. Biggs, Norman. 2012. Algebraic Graph Theory. London. Cambridge university Press. 2. Godsil, Chris; Royle, Gordon (2001), Algebraic Graph Theory, Graduate Texts in Mathematics, 207, New York: Springer-Verlag.
Notes:	*1 credit unit or *sks* in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.

MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
UNDERGRADUATE PROGRAM OF MATHEMATICS
Ketintang Campus, C8-C9 Buildings of FMIPA, Surabaya
Email: s1-mat@unesa.ac.id

	**1 credit unit or *sks* = 1.59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/UN38/HK/AK/2019