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

MODULE HANDBOOK

Module Name:	Integral Calculus
Module Level:	Sarjana (S-1) / Bachelor
Abbreviation, if applicable:	8420204083
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	2/ First year
Module Coordinator(s):	Abdul Haris Rosyidi, M.Pd
Lecturer(s):	Dr. Abadi, M.Si. Abdul Haris Rosyidi, M.Pd. Dayat Hidayat, M.Pd., M.Si. Ahmad Wachidul Kohar, M.Pd.
Language:	Indonesia
Classification within the curriculum:	Compulsory course/ elective studies
Teaching format/class hours per week during the semester	Teaching format: lectures, tutorial assignment, and individual study. 4 x 170 minutes = 680 minutes = 11.3 hours lectures
Workload:	14 weeks per semester consisting of: • 3.3 hours lectures (4 x 50 minutes) per week, • 4 hours tutorial assignments (4 x 60 minutes) per week, • 4 hours individual study (4 x 60 minutes) per week, Total workload : 14x4x170 minutes = 9,520 minutes = 6.35 ECTS*
Credit Point:	4
Requirements:	-

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Learning Goals:	**Knowledge**
	CLO-1: Demonstrate knowledge and insight about indefinite integrals (antiderivatives), real functions with one variable (antiderivative definition, integration techniques), certain integrals of real functions with one variable (concepts, properties, Fundamental Calculus Theorem, and irregular integrals), the use of certain integrals of real functions with one variable (parametric equations, polar coordinates, area of plane, arc length, volume of solids of revolution, volume of objects with known cross-section, surface area, and center of mass)

	Skill
	CLO-2: Implement integral basic principles and their application in problem-solving activities using ICT
Content:	Indefinite integral (antiderivative) of real function with one variable (definition of antiderivative, integration techniques), certain integral real function with one variable (concepts, properties, Fundamental Calculus Theorem, and improper integral), use of certain integral functions real with one variable (parametric equation, polar coordinates, area of plane, arc length, volume of solid of revolution, volume of with known cross section, surface area, and center of mass)
Study/exam achievements	➢ Students are considered competent and pass if the final score calculated from the score of midterm exam, assignments, participation, and final exam is at least 55 or C. ➢ Final score is calculated as follows: ➢ 20% midterm exam + 30% assignments + 20% participation + 30% final exam ➢ Final index is defined as follow:

Index	Converted Score	Score Range
A	4.00	$85 \leq A \leq 100$
A-	3.75	$80 \leq A\text{-} < 85$

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B+	3.50	$75 \leq B+ < 80$
B	3.00	$70 \leq B < 75$
B-	2.75	$65 \leq B- < 70$
C+	2.50	$60 \leq C+ < 65$
C	2.00	$55 \leq C < 60$
D	1.00	$40 \leq D < 55$
E	0.00	$0 \leq E < 40$

Forms of Media	Slides and LCD projectors, whiteboard
Literature	[1] Sulaiman, R. 2015. *Integral dan Aplikasinya*. Surabaya: Zifatama [2] Stewart, J. 2012. *Calculus 7th Edition*. Belmont: Brooks/Cole [3] Thomas Jr., G., et. al. 2012. *Thomas' Calculus 12th Edition*. Boston: Addison-Wesley [4] Purcell, E. J. et al. 2010. *Kalkulus Jilid 1 Edisi Kedelapan (Terjemahan)*. Jakarta: Erlangga
	[5] Moesono, D. 1993. *Kalkulus II (Edisi Revisi)*. Surabaya: University Press Surabaya
Note	*Total hours per 1 credit in 1 semester={(1 credit x 170 minutes x 14 weeks)/60 minutes}=39.67 hours. Each ECTS equals with 25 hours therefore 1 credit in 1 semester equals 1.59 ECTS.