

MODULE HANDBOOK

Module Name:	Differential Calculus
Module Level:	Sarjana (S-1) / Bachelor
Abbreviation, if applicable:	8420204079
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	1/ First year
Module Coordinator(s):	Abdul Haris Rosyidi, M.Pd.
Lecturer(s):	Abdul Haris Rosyidi, M.Pd Prof. Dr. Mega T Budiarto, M.Pd Ahmad Wachidul Kohar, M.Pd Dr. Atik Wintarti, M.Kom Dini Kinati Fardah, M.Pd Nina Rinda Prihastiwi, M.Pd Ika Kurniasari, 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:	15 weeks per semester consisting of: <ul style="list-style-type: none"> • 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:	None
Learning Goals:	<p>Knowledge</p> <p>CLO-1: Able to demonstrate knowledge and insight into real number systems, real functions, limits and continuities, derivatives of real functions and their use, transcendent functions and their derivatives, indefinite form limits, Taylor and Mac Laurin series.</p> <p>Skill</p>

	CLO-2: Able to implement the basic principles of the function concept and its derivation in problem solving activities using ICT																														
Content:	Real number systems, real functions, limits and continuities, derivatives of real functions, transcendent functions and their derivatives, limits of indefinite form, Taylor and MacLaurin series, minimum-maximum problem																														
Study/exam achievements	<ul style="list-style-type: none"> ➤ 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: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Index</th> <th>Converted Score</th> <th>Score Range</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>4.00</td> <td>$85 \leq A \leq 100$</td> </tr> <tr> <td>A-</td> <td>3.75</td> <td>$80 \leq A- < 85$</td> </tr> <tr> <td>B+</td> <td>3.50</td> <td>$75 \leq B+ < 80$</td> </tr> <tr> <td>B</td> <td>3.00</td> <td>$70 \leq B < 75$</td> </tr> <tr> <td>B-</td> <td>2.75</td> <td>$65 \leq B- < 70$</td> </tr> <tr> <td>C+</td> <td>2.50</td> <td>$60 \leq C+ < 65$</td> </tr> <tr> <td>C</td> <td>2.00</td> <td>$55 \leq C < 60$</td> </tr> <tr> <td>D</td> <td>1.00</td> <td>$40 \leq D < 55$</td> </tr> <tr> <td>E</td> <td>0.00</td> <td>$0 \leq E < 40$</td> </tr> </tbody> </table> 	Index	Converted Score	Score Range	A	4.00	$85 \leq A \leq 100$	A-	3.75	$80 \leq A- < 85$	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	$0 \leq E < 40$
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Forms of Media	Slides and LCD projectors, whiteboard																														
Literature	<p>[1] Thomas Jr., G., et. al. 2010. Thomas' Calculus 12th Edition. Boston: Addison-Wesley</p> <p>[2] Stewart, J. 2016. Calculus: Early Transcendental 8th Edition. Belmont: Brooks/Cole</p> <p>[3] Purcell, E. J. et al. 2010. Kalkulus Jilid 1 Edisi Kedelapan (Terjemahan). Jakarta: Erlangga</p> <p>[4] Abadi, & Wintarti, A. 2014 (in press). Kalkulus, Buku 1. Surabaya</p> <p>[5] Moesono, D. 1994. Kalkulus I (Edisi Revisi). Surabaya: University Press Surabaya.</p> <p>[6] Tim Dosen Kalkulus Diferensial. 2015. Modul Praktikum Kalkulus Diferensial (in press). Surabaya</p>																														

Note

*Total hours per 1 credit in 1 semester= $\{(1 \text{ credit} \times 170 \text{ minutes} \times 14 \text{ weeks}) / 60 \text{ minutes}\} = 39,67 \text{ hours}$.
Each ECTS equals with 25 hours therefore 1 credit in 1 semester equals 1,59 ECTS.