Module Description of Basic Mathematics I

Module Name	:	Basic Mathematics I
Module Level	:	Bachelor
Code, if applicable	:	23H01110103
Subtitle, if applicable	:	-
Courses, if applicable	:	Basic Mathematics I
Semester(s) in which the module is taught	:	1 (First Semester)
Module coordinator(s)	:	Jusmawati Masalesse, S.Si, M.Math
Lecturer(s)	:	Naimah Aris, S.Si, M.Math & Dr. Andi Muh Anwar, S.Si,
Language	:	Bahasa (Indonesian language)
Relation to curriculum	:	Compulsory course in first year for Bachelor degree in Mathematics
Type of teaching		Lecture, collaborative learning, group discussion
Contact hours	:	150 minutes lectures per week, 180 minutes structured activities per week, and 180 minutes independent study per week
Workload	:	Total workload is 135 hours per semester which consists of 40 hours for Learning and Teaching, 47.5 hours for Self Study, and 47.5 hours for Structured Works.
Credit points	:	3 (4.8 ECTS)
Requirements according to the examination regulations	:	Students are required to attend at least 80% of the total meetings which is recorded via the attendance menu at https://sikola-v2.unhas.ac.id/, complete all mandatory assignments, and obtain permission from the lecturer to participate in the examination.
Recommended prerequisites	:	None
Module objectives/intended learning outcomes	:	After the completion of this module, the student will be able to: CLO 1. Students are able to determine solutions to problems related to the concepts of single-variable calculus. CLO 2. Students are able to apply the concepts of calculus and matrices appropriately, effectively, and systematically in various contextual problems relevant to their field of study. The following is the mapping of the ILO and the CLO of this course: ILO 2 / ILO 3 CLO 1: X CLO 2: X
Content	:	This course equips students with the fundamentals of single-variable calculus and systems of linear equations through both

<table>
<tr><td></td><td></td><td>analytical and visual approaches. The material covers the real number system, functions and graphs, limits and continuity, derivatives and their applications, indefinite and definite integrals, as well as systems of linear equations based on matrices. The learning process emphasizes logical, deductive, and systematic reasoning, while strengthening conceptual understanding through interactive lectures, group discussions, and case studies. Several enrichment topics, such as graph transformations, advanced integration techniques, and solving systems of linear equations using determinants and inverses, may be adjusted according to the needs and depth of the learning outcomes.</td></tr>
<tr><td>Study and examination requirements</td><td>:</td><td>Study and examination requirements:
● Students must attend 15 minutes before the class starts.
● Students must switch off all electronic devices.
● Students must inform the lecturer if they will not attend the class due to sickness, etc.
● Students must submit all class assignments before the deadline.
● Students must attend the exam to get final grade.</td></tr>
<tr><td>Exams and assessment formats</td><td>:</td><td>Participants are assessed based on the following components: Written Exam (40%) and Assignment and quizzes (60%).

Assignments assess students' ability to apply concepts independently. Quizzes are used to test continuous understanding of weekly content. The Written Exam assesses comprehension and synthesis of all materials discussed during the semester. Altogether, these components account for 100% of the final grade.

Students are marked based on their percentage of points obtained and based on the following grade scale:
<table>
<tr><th>Percentage of Achievement</th><th>Grade</th><th>Conversion Value</th></tr>
<tr><td>85 – 100</td><td>A</td><td>4.00</td></tr>
<tr><td>80 - <85</td><td>A-</td><td>3.75</td></tr>
<tr><td>75 - < 80</td><td>B+</td><td>3.5</td></tr>
<tr><td>70 - < 75</td><td>B</td><td>3.0</td></tr>
<tr><td>65 - < 70</td><td>B-</td><td>2.75</td></tr>
<tr><td>60 - < 65</td><td>C+</td><td>2.5</td></tr>
<tr><td>50 - < 60</td><td>C</td><td>2.00</td></tr>
<tr><td>40 - < 50</td><td>D</td><td>1.00</td></tr>
<tr><td>< 40</td><td>E</td><td>0.00</td></tr>
</table></td></tr>
<tr><td>Reading list</td><td>:</td><td>1. Thomas G.B., Weir, M. D. , Hass, J.R.2013. "Thomas Calculus early transcendentals", 13th edition, Pearson.</td></tr>
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		2. James Stewart. 2015. “Single Variable Calculus: Early Transcendentals”, Thomson Brooks/Cole. 3. Howard Anton, “ Elementary Linear Algebra, Aplications Version,” 11th edition, Wiley.
Last Updated	:	August 10th, 2023