



UNIVERSITAS PENDIDIKAN INDONESIA
 FACULTY OF MATHEMATICS AND NATURAL SCIENCES EDUCATION
 DEPARTMENT OF PHYSICS EDUCATION
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Bachelor of Physics

MODULE HANDBOOK

Module name:	Basic Mathematic	
Module level, if applicable:	Undergraduate	
Code:	FI120	
Sub-heading, if applicable:	-	
Classes, if applicable:	-	
Semester:	1 st	
Module coordinator:	Andi Suhandi	
Lecturer(s):	Andi Suhandi and Mimin Iryanti	
Language:	Bahasa Indonesia	
Classification within the curriculum:	Compulsory course	
Type of Teaching	Contact hours per week during the semester	Class Size
1. Lecture (conceptual, contextual and problem-solving approaches through expository, discussions and practical methods). 2. Structured activities (assignments based on conceptual, contextual and problem-solving approaches) 3. Self-study (reading literature)	2 hour 30 minutes	45
Workload:	The total workload is 136 hours (4.8 ECTS / 8160 minutes) per semester, consisting of 1800 minutes (1.05 ECTS) lectures, 2160 minutes (1.27 ECTS) structured activities, 2160 minutes (1.27 ECTS) self-study per week for 12 weeks, 600 minutes (0.35 ECTS) for four exams, and 1440 minutes (0.86 ECTS) for four exam preparations.	
Credit points:	4.8 ECTS	
Pre-requisites course(s):	-	

Course learning outcomes:	<p>After taking this course the students have ability to:</p> <p>CLO1. Describe the definition of variable and graph of equation CLO2. Describe of the definition of Limits CLO3. Apply the limit in solving physics problems CLO4. Describe of the derivatives CLO5. Apply the derivatives in solving physics problem CLO6. Describe of the integral CLO7. Apply the integral in solving physics problem CLO8. Describe of the transcendence CLO9. Apply the transcendence in solving physics problem CLO10. Describe of the Probability CLO11. Apply the probability in solving physics problem</p>																														
Content:	Variable and graph of equation, Limits, Derivatives, Integral, Transcendence, and Probability.																														
Study/exam achievements:	<p>The final mark will be weight as follow:</p> <table border="1" data-bbox="678 831 1476 1442"> <thead> <tr> <th>No</th> <th>CLO</th> <th>Assessment Object</th> <th>Assessment Techniques</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1 - 3</td> <td>a. Individual assignments b. Unit test 1</td> <td>Written Written test</td> <td>5% 20%</td> </tr> <tr> <td>2</td> <td>4 – 5</td> <td>a. Individual assignments b. Unit test 2</td> <td>Written Written test</td> <td>5% 20%</td> </tr> <tr> <td>3</td> <td>6 – 7</td> <td>a. Individual assignments b. Unit test 3</td> <td>Written Written test</td> <td>5% 20%</td> </tr> <tr> <td>4</td> <td>8 - 11</td> <td>a. Individual assignments b. Unit test 4</td> <td>Written Written test</td> <td>5% 20%</td> </tr> <tr> <td colspan="4">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CLO	Assessment Object	Assessment Techniques	Weight	1	1 - 3	a. Individual assignments b. Unit test 1	Written Written test	5% 20%	2	4 – 5	a. Individual assignments b. Unit test 2	Written Written test	5% 20%	3	6 – 7	a. Individual assignments b. Unit test 3	Written Written test	5% 20%	4	8 - 11	a. Individual assignments b. Unit test 4	Written Written test	5% 20%	Total				100%
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Forms of media:	Board, LCD Projector, Laptop/Computer, LMS																														
Literature:	<ol style="list-style-type: none"> 1. Frank Ayres Jr. 1996. <i>Kalkulus : Diferensial dan Integral</i>, Jakarta : Erlangga. 2. Purcell. 2010., Jilid 1. <i>Kalkulus</i>, edisi kesembilan, Jakarta: Erlangga. 3. Sudjana. (1992). <i>Metoda Statistika Edisi ke-5</i>, Tarsito Bandung 																														

