



MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
SRIWIJAYA UNIVERSITY

FACULTY OF TEACHER TRAINING AND EDUCATION
BACHELOR PROGRAM IN MATHEMATICS EDUCATION

Jl. Raya Palembang – Prabumulih Km.32, Indralaya Ogan Ilir 30662 Website: <https://fkip.unsri.ac.id/mathedu/>

Bachelor Program in Mathematics Education

MODULE HANDBOOK

Module designation	:	Differential Equation/GMA3216
Semester	:	6 th (Sixth) / Odd Semester
Person responsible for the module	:	Dr. Darmawijoyo, M.Si. Elika Kurniadi, S.Pd., M.Sc.
Language	:	Indonesian
Relation to the curriculum	:	Study Program Compulsory Course
Teaching methods	:	<ul style="list-style-type: none">• Direct instruction, Lecture and discussion method (1st meeting to 7th meeting)• Problem based learning (9th meeting and 15th meeting)
Workload	:	14 weeks per semester including mid-term exam and final exam. 1 sks per week = 170 minutes, consisting of 50 minutes synchronous learning + 60 minutes asynchronous learning + 60 minutes structured assignments. 170 minutes x 3 sks = 510 minutes = 8.5 hours per week 16 weeks x 8.5 hours = 119 hours 119 hours : 25 hours (1 ECTS) = 4.8 ECTS
Credit points	:	3 SKS = 4.8 ECTS
Prerequisite's course(s)	:	-
Module objectives	:	After taking this course, students have the ability to: CO 1: Showing responsibility in doing the assignments CO 2: Understand the concepts, principles and procedures of first-order differential equations and methods of solving them. CO 3: Apply and analyze the problem related to the concepts, principles and procedures of first-order differential equations and methods of solving them. CO 4: Understand the concepts, principles and procedures of second-order differential equations and methods of solving them. CO 5: Apply and analyze the problem related to the concepts, principles and procedures of second-order differential equations and methods of solving them. CO 6: Understand the concepts, principles and procedures of the system of differential equations and methods of solving them.



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		CO 7: Apply and analyze the problem related to the concepts, principles and procedures of the system of differential equations and methods of solving them.																		
Content	:	This course discusses first and second order differential equations along with methods for finding solutions, modeling with first and second order ordinary differential equations, and systems of differential equations																		
Examination forms	:	Examination in this course includes: <ol style="list-style-type: none"> 1. Affective (actively participating during classroom processes) 2. Mid-term test in the 8th meeting 3. Final project (collaborative tasks to make a resume of the course), in the 16th meeting 																		
Study and examination requirements	:	<p>It is expected that students attend 80% of the total meetings in the modules.</p> <p>Total Score = 25% × (affective + quizzes) + 35% × (mid-test) + 40% × (final project)</p> <p>The total score is converted into a qualitative score,</p> <table border="1" data-bbox="587 1241 1203 1493"> <thead> <tr> <th>Total Score</th> <th>Grade</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>86 – 100</td> <td>A</td> <td>Excellent</td> </tr> <tr> <td>71 – 85.99</td> <td>B</td> <td>Good</td> </tr> <tr> <td>56 – 70.99</td> <td>C</td> <td>Fair</td> </tr> <tr> <td>41 – 55.99</td> <td>D</td> <td>Bad</td> </tr> <tr> <td>0 – 40.99</td> <td>E</td> <td>Worse</td> </tr> </tbody> </table> <p>To be successfully passing the module, the minimum grade required is C.</p>	Total Score	Grade	Description	86 – 100	A	Excellent	71 – 85.99	B	Good	56 – 70.99	C	Fair	41 – 55.99	D	Bad	0 – 40.99	E	Worse
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0 – 40.99	E	Worse																		
Reading lists	:	<ol style="list-style-type: none"> 1. Darmawijoyo (2014). Persamaan Diferensial Biasa: Suatu Pengantar. Jakarta: Erlangga 2. Boyce W.E. & DiPrima R.C. (2012). Elementary Ordinary Differential Equations and Boundary Value Problems 10th Edition, New York: John Willey and Sons. 3. Coddington, E. A. (2012). An Introduction to Ordinary Differential Equations. Britania Raya: Dover Publications. 4. Tenenbaum, M., Pollard, H. (2012). Ordinary Differential 																		



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	<p>Equations. Dover Publications, Incorporated.</p> <p>5. Darmawijoyo. (2011). <i>Persamaan Diferensial Biasa Suatu Pengantar</i>. Jakarta: Erlangga.</p> <p>6. Kreyszig, Erwin. (2011). "Advanced Engineering Mathematics, 10th Edition", John Wiley & Sons, Inc,</p> <p>7. Robinson, J. C. (2004). <i>An Introduction to Ordinary Differential Equations</i>. Singapura: Cambridge University Press.</p>
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