



UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF MATHEMATICS EDUCATION

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Bachelor of Science in Mathematics

MODULE HANDBOOK

Module name:	Advanced Abstract Algebra
Module level,if applicable:	Undergraduate
Code:	MAT6318
Sub-heading,if applicable:	-
Classes,if applicable:	-
Semester:	4 th
Module coordinator:	Musthofa, M.Sc.
Lecturer(s):	1. Dr. Agus Maman Abadi 2. Dr. Karyati, Musthofa, M.Sc.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course
Teaching format / class hours perweek during the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.
Creditpoints:	3
Prerequisites course(s):	Abstract Algebra (MAT6311)
Course Outcomes	After taking this course the students have ability to: CO1. Demonstrate collaborative attitude and independence in carrying out individual tasks and group assignments CO2. Show the truth of a problem related to the ring and its properties through mathematical verification

	CO3. Mastering the concept of ring and field, its properties and homomorphism on ring and field CO4. Solve mathematical problems related to ring and field																							
Content:	This course discusses the basic concepts of the ring, subring, integral domain, field, ideal, ring factor, homomorphism, polynomial ring and factorization of integral domain and finite field.																							
Study/exam achievements:	<p>CO1: Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td rowspan="5">1</td> <td rowspan="5">CO2, CO3 and CO4</td> <td>a. Individual Assignment</td> <td rowspan="5">Presentation / written test</td> <td>15%</td> </tr> <tr> <td>b. Group Assignment</td> <td>15%</td> </tr> <tr> <td>c. Quiz</td> <td>25%</td> </tr> <tr> <td>d. Mid</td> <td>30%</td> </tr> <tr> <td>e. Final Exam</td> <td></td> </tr> <tr> <td colspan="4">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO2, CO3 and CO4	a. Individual Assignment	Presentation / written test	15%	b. Group Assignment	15%	c. Quiz	25%	d. Mid	30%	e. Final Exam		Total				100%
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		e. Final Exam																						
Total				100%																				
Forms of media:	Board, LCD Projector, Laptop/Computer																							
Literature:	<ol style="list-style-type: none"> Gallian, J.A.. 2010. Contemporary Abstract Algebra. Seventh Edition. Eddison Wesley Publishing Company. Malik, D.S., Mordeson, J.M., Sen, M.K.. 1997. Fundamentals of Abstract Algebra. Singapore: McGraw-Hill Companies, Inc. Fraleigh, J.B.. 2006. A First Course in Abstract Algebra. Seventh Edition. New York: Addison-Wesley Publishing Company. Herstein, I.N..1996. Abstract Algebra. Third Edition. Upper Saddle River: Prentice-Hall Int. Inc. 																							

	5. Stinson, D.R. 2006. Crptography, Theory And Practice. Third Edition. New York: Chapman and Hall/CRC.
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PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1		✓								
CO2			✓							
CO3						✓				
CO4							✓			