



UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Mathematics Department

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Master in Mathematics

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MODULE HANDBOOK

Module name	Finite Field												
Module level, if applicable	Master Degree												
Code, if applicable	MMM 5212												
Subtitle, if applicable													
Courses, if applicable	Finite Field												
Semester(s) in which the module is taught	1												
Person responsible for the module	Chair of the Lab. Algebra												
Lecturer(s)	Dr. Al. Sutjijana, M.Sc. Dr. Budi Surodjo, M.Si.												
Language	Bahasa Indonesia												
Relation to curriculum	Elective Course												
Teaching methods	Lecture, discussion, presentations, homework etc.												
Workload	Total workload is 136 hours per semester, which consists of 150 minutes lectures per week for 14 weeks, 180 minutes structured activities per week, 180 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam.												
Credit points	3 Credits												
Requirements according to the examination regulations	Students have an examination card where the course is stated on.												
Recommended prerequisites	Students should be proficient in linear algebra, intro. to ring and group theories.												
Module objectives/intended learning outcomes	After completing this course the students should have: CO.1. ability to prove fundamental properties of finite field CO.2. properly ability to construct finite field CO.3. ability to explain the use of finite field on other areas of study.												
Content	Field Extension, Algebraic Extension, Splitting Field, Algebraic Closure, Separable Extension, Inseparable Extension, Galois Group, Galois Fundamental Theorem, Finite Field												
Study and examination requirements and forms of examination	The final mark will be weighted as follows: <table border="0" style="width: 100%;"> <thead> <tr> <th>No</th> <th>Assessment methods (components, activities)</th> <th>Weight (percentage)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Final Examination</td> <td>25-40%</td> </tr> <tr> <td>2.</td> <td>Mid-Term Examination</td> <td>25-40%</td> </tr> <tr> <td>3.</td> <td>Quiz/Presentation, Homework</td> <td>20-30%</td> </tr> </tbody> </table> To pass this course, the minimum grade is C.	No	Assessment methods (components, activities)	Weight (percentage)	1.	Final Examination	25-40%	2.	Mid-Term Examination	25-40%	3.	Quiz/Presentation, Homework	20-30%
No	Assessment methods (components, activities)	Weight (percentage)											
1.	Final Examination	25-40%											
2.	Mid-Term Examination	25-40%											
3.	Quiz/Presentation, Homework	20-30%											
Media employed	White/Black Board, LCD Projector, Laptop/Computer, Zoom, E-Learning, Simaster												
Reading List	<ol style="list-style-type: none"> 1. Fraleigh, J.B., A First Course in Abstract Algebra, 7th Edition, 2003, Pearson New International 2. Dummit, D.S., Foote, R.M., 2002, Abstract Algebra, 2nd Edition, John Wiley and Sons. 3. Lidl, R., Niederreiter, H., 2008, Finite Field, Cambridge University Press 												

PLO and CO mapping

	PLO 1 S2 Math	PLO 2 S2 Math	PLO 3 S2 Math	PLO 4 S2 Math	PLO 5 S2 Math	PLO 6 S2 Math
CO 1		√				
CO 2		√	√			
CO 3					√	√

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