



UNIVERSITAS GADJAH MADA
Faculty of Mathematics and Natural Sciences
Department of Mathematics

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Doctor in Mathematics

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MODULE HANDBOOK

Module designation	Abstract Algebra
Code, if applicable	MMM 7201
Subtitle, if applicable	-
Courses, if applicable	Abstract Algebra
Semester(s) in which the module is taught	1 st or 2 nd Semester
Person responsible for the module	Head of Algebra Research Group
Language	Bahasa Indonesia
Relation to curriculum	Elective course
Teaching methods	Lecture, project.
Workload (incl. contact hours, self-study hours)	The total workload is 232 hours per semester, which consists of 50 minutes lectures per week, 120 minutes of structured activities per week, and 120 minutes of individual study per week, in total is 16 weeks per semester, including mid and final exams.
Credit points	3
Required and recommended prerequisites for joining the module	Students should have prior knowledge such as group theory, ring theory and linear algebra.
Module objectives/intended learning outcomes	Upon successful completion, students are able to CO1 : analyze concepts, philosophy, definitions and important properties of abstract algebra related to his/her research; CO2 : prove important properties of abstract algebra related to his/her research; CO3 : make conjectures to further subjects related to his/her research; CO4 : expand or improve special prior knowledge related to his/her research.

Content	This course gives material about advanced abstract algebra, such as tensor product, comodules, semigroups etc. which support his/her research. Topics and syllabus depend on the research.												
Examination forms	Oral presentation, essay.												
Study and examination requirements	<p>The final mark will be computed from a proportional weight of assignments, mid examination and final examination. The final mark will be weighted as follows:</p> <table border="1"> <thead> <tr> <th>No</th> <th>Assessment methods (components, activities) (percentage)</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Final Examination</td> <td>20 - 30%</td> </tr> <tr> <td>2</td> <td>Mid-Term Examination</td> <td>20 - 30%</td> </tr> <tr> <td>3</td> <td>Class Activities: Quiz, Homework, etc.</td> <td>50 - 55%</td> </tr> </tbody> </table> <p>Minimum final mark to pass : B</p>	No	Assessment methods (components, activities) (percentage)	Weight	1	Final Examination	20 - 30%	2	Mid-Term Examination	20 - 30%	3	Class Activities: Quiz, Homework, etc.	50 - 55%
No	Assessment methods (components, activities) (percentage)	Weight											
1	Final Examination	20 - 30%											
2	Mid-Term Examination	20 - 30%											
3	Class Activities: Quiz, Homework, etc.	50 - 55%											
Media employed	Whiteboard, screen, laptop.												
Reading list	<ol style="list-style-type: none"> 1. Wisbauer, R., Foundations of Module and Ring Theory, Gordon and Breach Science Publisher, Philadelphia, 1991. 2. Wisbauer, R., Modules and Algebras : Bimodule Structure on Group Actions and Algebras, Addison Wesley Longman, Essex, 1996. 3. Karpilovsky, G., Induced Modules over Group Algebras, North Holland, Amsterdam, 2012. 4. Brezinski, T., Wisbauer, R., Corings and Comodules, Cambridge University Press, 2003. 												

CO-PLO Mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6
CO 1	v	v	v			v
CO 2	v	v	v			v
CO 3	v	v	v			v
CO 4	v	v	v			v

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