UNIVERSITAS GADJAH MADA
Faculty of Mathematics and Natural Sciences
Mathematics Department
Sekip Utara Bulaksumur Yogyakarta 55281 Telp: +62 274 552243 Fax: +62 274 555131 Email: math@ugm.ac.id Website: http://math.fmipa.ugm.ac.id

Undergraduate Programme in Mathematics
Telp : +62 274 552243
Email : maths1@ugm.ac.id; kaprodi-s1-matematika.mipa@ugm.ac.id
sekprodi-s1-matematika.mipa@ugm.ac.id
Website : http://s1math.fmipa.ugm.ac.id/

MODULE HANDBOOK

Module name	Finite Group Theory
Module level, if applicable	Bachelor
Code, if applicable	MMM-3203
Subtitle, if applicable	-
Courses, if applicable	Finite Group Theory
Semester(s) in which the module is taught	3rd (third)
Person responsible for the module	Chair of the Lab. of Algebra
Lecturer(s)	Dr. Budi Surodjo, M.Si. and Dr. Diah Junia Eksi Palupi, MS
Language	Bahasa Indonesia
Relation to curriculum	Elective course in the second year (third semester)
Type of teaching, contact hours	100 minutes hours lectures per week, 120 minutes structured activities per week
Workload	Total workload is 90.67 hours per semester, which consist of 100 minutes lectures per week for 14 weeks, 120 minutes structured activities per week, and 120 minutes individual study per week, in total 16 weeks per semester, including mid exam and final exam.
Credit points	2
Requirements according to the examination regulations	Students have taken Finite Group Theory course (MMM-3203) and have an examination card where the course is stated on.
Recommended prerequisites	Students have taken Intoduction to Algebraic Structures I course (MMM-1203) and have participated in the final examination of the course.
Module objectives/intended learning outcomes	After completing this course the students should have: CO.1. ability to identify the structure of finite groups in many areas of algebra CO.2. ability to determine the Jordan Holder Decomposition of a semigroup CO.3. ability to prove the properties of group actions CO.4. ability to prove the Sylow Theorems CO.5. ability to solve problems in group theory and other fields using the properties of finite groups
Content	Group of permutation, group of simetri, cycle, class of permutation, alternating group, Normalisator, sentralisator, center, commutator group, Lagrange's Theorem, Theorem of Jordan Holder decomposition, group action on set, Sylow theorems
Study and examination requirements and forms of examination	The final mark will be weighted as follows: No — Assessment methods (components, activities) — Weight (percentage) 1. Final Examination — 40 2. Mid-Term Examination — 30 3. Quiz/Presentation — 20 4. Homework — 10 The initial cut-off points for grades A, B, C, and D should not be less than 80%, 70%, 50%, and 40%, respectively.
Media employed	Projector, board, laptop, e-learning via http://elisa.ugm.ac.id

Reading List	1. Jean Pierre Serre, 2016, Finite Groups, International Press USA and Higher Education Press China 2. M. Aschbacher, 2012, *Finite Group Theory, 2nd Ed.,* Cambridge University Press, UK. 3. Cameron, P.J., 2013, *Notes on Finite Group Theory,* Queen Mary University of London, London: http://www.maths.qmul.ac.uk/~pjc/notes/gt.pdf 4. I. Martin Isaacs, 2008, Finite Group Theory, American Mathematical Society 5. Hans Kurzweil, and Bernd Stellmacher, 2004, *The Theory of Finite Groups: An Introduction*, Springer, http://www.math.ku.dk/~olsson/manus/GruFus/Kurzweil-Stellmacher_Theory%20of%20finite%20groups.pdf 6. David S. Dummit, and Richard M. Foote, 1999, *Abstract Algebra*, 3rd Ed., John Wiley and Sons, Inc., New York 7. John B. Fraleigh, 1989, *A First Course in Abstract Algebra*; Fourth Edition; Addison-Wesley Publishing Company, Inc. 8. Ledermann, W; 1984; *Introduction to the Theory of Finite Groups*; Interscience Publisher, Inc.

PLO and CO Mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9
CO 1						v			
CO 2			v						
CO 3						v			
CO 4			v						
CO 5						v			