



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: 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	Transformation Geometry												
Module level, if applicable	Bachelor												
Code, if applicable	MMM-2114												
Subtitle, if applicable													
Courses, if applicable	Transformation Geometry												
Semester(s) in which the module is taught	3 rd (third)												
Person responsible for the module	Chair of the Lab. of Analysis												
Lecturer(s)	Imam Solekhudin, Ph.D Moch. Tari, M.Si												
Language	Bahasa Indonesia												
Relation to curriculum	Bachelor Degree, Compulsory, 3 rd semester												
Type of teaching, contact hours	100 minutes lectures and 120 minutes structured activities per week.												
Workload	Total workload is 90.67 hours per semester, which consists of 100 minutes lectures per week for 14 weeks, 120 minutes structured activities per week, 120 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam.												
Credit points	3												
Requirements according to the examination regulations	Students have taken Transformation Geometry course (MMM-2114) and have an examination card where the course is stated on.												
Recommended prerequisites	Students have taken Analytic Geometry course (MMM-1106) and have participated in the final examination of the course. Before taking this course, students must have a good understanding about the concepts of functions, and some concepts of analytic geometry.												
Module objectives/intended learning outcomes	After completing this course the students will have : CO1. ability to understand the concept of transformation. CO2. ability to classify and identify types of transformations. CO3. ability to apply transformations to simple problems.												
Content	Topics : a. Introduction: i. Explanation of the contents of the course. ii. References, scoring and grading. iii. Definition of Transformation. b. Transformations: isometry, product of transformation, translation, reflection, half turn, rotation, similarity, dilatation, affinity.												
Study and examination requirements and forms of examination	The final mark will be weighted as follows: <table border="1"> <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>45</td> </tr> <tr> <td>2</td> <td>Mid-Term Examination</td> <td>35</td> </tr> <tr> <td>4</td> <td>Class Activities: Quiz, Homework, etc.</td> <td>20</td> </tr> </tbody> </table> The initial cut-off points for grades A, B, C, and D should not be less than 80%, 70%, 50%, and 40%, respectively.	No	Assessment methods (components, activities)	Weight (percentage)	1	Final Examination	45	2	Mid-Term Examination	35	4	Class Activities: Quiz, Homework, etc.	20
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1	Final Examination	45											
2	Mid-Term Examination	35											
4	Class Activities: Quiz, Homework, etc.	20											
Media employed	White/Black Board, LCD Projector, Laptop/Computer												

Reading List	<ol style="list-style-type: none"> 1. Eccles, F. M., 1971, <i>An Introduction to Transformation Geometry</i>, Addison-wesley publishing company, Philipines. 2. George, E., Martin, 1982, <i>Transformation Geometry An Introduction to symmetry</i>, Springer-verlag, New York.
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PLO and CO Mapping

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