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Undergraduate Programme in Mathematics

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## MODULE HANDBOOK

| Module name | Geometry |
| :---: | :---: |
| Module level, if applicable | Bachelor |
| Code, if applicable | MMM-2113 |
| Subtitle, if applicable |  |
| Courses, if applicable | Geometry |
| Semester(s) in which the module is taught | $3{ }^{\text {rd }}$ (third) |
| Person responsible for the module | Chair of the Lab. of Analysis |
| Lecturer(s) | Moh. Tari, M.Si |
| Language | Bahasa Indonesia |
| Relation to curriculum | Bachelor Degree, Elective Course, $3^{\text {rd }}$ semester |
| Type of teaching, contact hours | 150 minutes lectures and 180 minutes structured activities per week. |
| 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 lerder |
| Requirements according to the examination regulations | Students have taken Geometry course (MMM-2113) and have an examination card where the course is stated on. |
| Recommended prerequisites | Students have taken Analytic Geometry course (MMM-1106), Intorduction to Mathematical Logic course (MMM-1208), and have participated in the final examination of the courses. <br> Before taking this course, students must have a good understanding in mathematical logic and some concepts of analytic geometry. |
| Module objectives/intended learning outcomes | After completing this course the students will be able : <br> CO1. to comprehend the concept of abstract geometry, incidence geometry, metric geometry, Pasch geometry, Poincare plane, Taxicab plane, and Euclid plane. <br> CO2. to apply some of concepts in analytic geometry into the planes above. |
| Content | Topics : <br> a. Introduction: <br> i. Explanation of the contents of the course. <br> ii. References, scoring and grading. <br> b. Abstract geometry, incidence geometry, metric geometry, and Pasch geometry. <br> c. Poincare plane, Taxicab plane, and Euclid plane. <br> d. Missing strip plane, angle, Moulton plane, perpendicular and congruence, neutral geometry, and congruence of triangle. |
| Study and examination requirements and forms of examination | The final mark will be weighted as follows: <br> The initial cut-off points for grades $\mathrm{A}, \mathrm{B}, \mathrm{C}$, and D should not be less than $80 \%, 70 \%$, $50 \%$, and $40 \%$, respectively. |
| Media employed | White/Black Board, LCD Projector, Laptop/Computer |


| Reading List | 1. Edward C. Wallace and Stephen F. West, 2003, Roads to Geometry, 3rd Edition, Pearson. <br> 2. Richard S. Millman and George D. Parker, 1991, Geometry: A Metric Approach with Models, <br> Springer. |
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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 |  | v | v |  |  |  |  |  |  |
| CO 2 |  | v | v |  |  |  |  |  |  |

