



UNIVERSITAS NEGERI PADANG
 FACULTY OF MATHEMATICS AND NATURAL SCIENCES
 MATHEMATICS DEPARTMENT, MATHEMATICS EDUCATION STUDY PROGRAM
 Main Campus Universitas Negeri Padang.
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Bachelor of Mathematics Education

MODULE HANDBOOK

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| Module name: | Plane and Space Geometry Analytic |
| Module level, if applicable: | Bachelor |
| Code: | MAT1.61.3301 |
| Sub-heading, if applicable: | - |
| Classes, if applicable: | Plane and Space Geometry Analytic |
| Semester: | 3 rd (third) |
| Module coordinator: | Drs. Mukhni, M.Pd. |
| Lecturer(s): | Drs. Mukhni, M.Pd., and Team |
| Language: | Bahasa Indonesia and English |
| Classification within the curriculum: | Study Program Compulsory Course |
| Teaching format / class hours per week during the semester: | <p>Teaching format:</p> <ul style="list-style-type: none"> • Lectures (face to face activities): Problem Based Learning with method such as Explanation, Expository, and Class Discussion. • Structured Assignment, • Independent Activities. <p>4 x 170 minutes = 680 minutes = 11.33 hours lectures</p> |
| Workload: | <p>16 weeks per semester include Midterm Exam and Final Exam which consist of:</p> <ul style="list-style-type: none"> • 3.33 hours lectures (4 x 50 minutes) per week, • 4 hours structured assignments (4x 60 minutes) per week, • 4 hours independent activities (4 x 60 minutes) per week <p>16 x 170 x 4 = 10880 minute = 181.33 hours = 6.04 ECTS</p> |
| Credit points: | 4 SKS (6.04 ECTS) |
| Prerequisite's course(s): | - |
| Course outcomes: | <p>After taking this course the students have ability to:</p> <p>CO1. Express the concept of coordinate system in planes and spaces, circles, spheres, ellipse, and hyperbola.</p> <p>CO2. Interpret the concept of coordinate system in planes and spaces, circles, spheres, ellipse, and hyperbola.</p> <p>CO3. Apply the concept of coordinate system in planes and spaces, circles, spheres, ellipse, and hyperbola.</p> <p>CO4. Analyze the problems that connect to the concept of coordinate system in planes and spaces, circles, spheres, ellipse, and hyperbola.</p> <p>CO5. Show the responsibility attitude in own works</p> <p>CO6. Maintain the responsibility attitude in team works</p> |
| Content: | <p>This course discusses:</p> <ol style="list-style-type: none"> 1. Coordinate system in R1, R2, and R3 2. Circle 3. Sphere 4. Parabolic 5. Ellipse, and 6. Hyperbole. |

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| Study/exam achievements: | <p>Total Score = (35% x Midterm Exam Score) + (35% x Final Exam Score) + (20% x Assignment) (10% x Class Activities: Participation, Attitude, and Presence)</p> <p>The initial cut - off points for grades A, A-, B+, B, B-, C+, C, C-, and D should not be less than 85, 80, 75, 70, 65, 60, 55, 50, and 40 out of 100 respectively.</p> <p>Explanation:</p> <p>1. Midterm Exam</p> <ul style="list-style-type: none"> ✓ Midterm Exam is held at the 9th meeting ✓ Midterm Exam is written exam (essay test) and carried out in the classroom with an implementation time of 120 minutes according to the module schedule <p>2. Final Exam</p> <ul style="list-style-type: none"> ✓ Final Exam is held at the 16th meeting ✓ Final Exam is a written exam (essay test) and carried out in the classroom with an implementation time of 120 minutes which follows the Final Exam implementation schedule of the department. <p>3. Assignment</p> <ul style="list-style-type: none"> ✓ Assignments are given as exercise before Midterm Exam and before Final Exam ✓ Assignments are about analyzing problem in daily life and solve it with the concept of the content. ✓ Assignments are given as structured assignment and it is submitted in limited time <p>4. Class Activities</p> <ul style="list-style-type: none"> ✓ Assessment of student participation/activity during lectures <p>5. Affective Assessment</p> <ul style="list-style-type: none"> ✓ Affective assessment is held in every meeting by observing students' attitude in classroom and daily interaction at campus. ✓ The assessment based on observation sheet and it is given score by affective rubric assessment |
| Forms of media: | Whiteboard and LCD |
| Literature: | <ol style="list-style-type: none"> 1. Whitney, H. (2015). <i>Geometric integration theory</i>. Princeton university press. 2. Bailey, F. H. (2015). <i>Plane and Solid Analytic Geometry</i>. United States: FB&C Limited. 3. Struik, D. J. (2014). <i>Lectures on Analytic and Projective Geometry</i>. United States: Dover Publications. 4. Price, J. J., Flanders, H. (2014). <i>Calculus with Analytic Geometry</i>. United Kingdom: Elsevier Science. 5. Woods, F. S. (2013). <i>Higher geometry: an introduction to advanced methods in analytic geometry</i>. Courier Corporation. 6. Mukhni. (2010). <i>Bidang Rata dan Garis Lurus di Ruang</i>. |

