



UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF MATHEMATICS EDUCATION

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Bachelor of Education in Mathematics

MODULE HANDBOOK

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| Module name: | Psychology for Learning Mathematics |
| Module level,if applicable: | Undergraduate |
| Code: | PMA6202 |
| Sub-heading,if applicable: | - |
| Classes,if applicable: | - |
| Semester: | 3 rd |
| Module coordinator: | Dr. Djamilah Bondan Widjajanti, M.Si. |
| Lecturer(s): | Dr. Djamilah Bondan Widjajanti, M.Si. |
| Language: | Bahasa Indonesia |
| Classification within the curriculum: | Compulsory course |
| Teaching format / class hoursperweekduring the semester: | 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, 120 minutes structured activities, and 120 minutes self study per week for 16 weeks. |
| Creditpoints: | 2 |
| Prerequisites course(s): | - |
| Course outcomes: | After taking this course the students have ability to: CO1. Responsible for carrying out individual tasks and group assignments. CO2. Write scientific articles and presentations well. CO3. Understand the usefulness of Psychology for Learning Mathematics CO4. Understand how students learn mathematical concepts. |

| | <p>CO5. Explain the function of symbols (symbols) in mathematics.</p> <p>CO6. Differentiate types of imagery.</p> <p>CO7. Explain the factors that influence the process and results of learning mathematics.</p> <p>CO8. Explain various Theories of Learning Mathematics.</p> <p>CO9. Diagnose difficulty learning mathematics.</p> <p>CO10. Designing ways to reduce the difficulty of learning mathematics</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|--|---|-----------------------------|-------------------|----------------------|--------|---|------|---|-----------------------------|------------|---|------------------|--|--------------|-------------------|---|------|----------------------|-------------|-----|---|----------------------|------------|--------------|-----|-------|--|--|--|------|
| <p>Content:</p> | <p>This course discusses about intelligence, the formation of mathematical concepts, ideas from schemes, types of intelligence, types of imagery, factors that influence the learning process of mathematics, various theories of learning mathematics, how to diagnose difficulties in learning mathematics, and how relieve the difficulty of learning mathematics.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Study/exam achievements:</p> | <p>Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table border="1" data-bbox="673 1272 1425 1774"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO 2</td> <td>a. Article b. Presentation technique</td> <td>Written test Observation</td> <td>15% 10%</td> </tr> <tr> <td>2</td> <td>CO 3 s.d CO 7</td> <td>a. Quiz b. Midterm c. Final exam</td> <td>Written test</td> <td>10% 20% 20%</td> </tr> <tr> <td>3</td> <td>CO 8</td> <td>Presentation content</td> <td>Observation</td> <td>15%</td> </tr> <tr> <td>4</td> <td>CO 9 dan CO 10</td> <td>Final Exam</td> <td>Written test</td> <td>10%</td> </tr> <tr> <td colspan="4" style="text-align: right;">Total</td> <td>100%</td> </tr> </tbody> </table> | No | CO | Assessment Object | Assessment Technique | Weight | 1 | CO 2 | a. Article b. Presentation technique | Written test Observation | 15% 10% | 2 | CO 3 s.d CO 7 | a. Quiz b. Midterm c. Final exam | Written test | 10% 20% 20% | 3 | CO 8 | Presentation content | Observation | 15% | 4 | CO 9 dan CO 10 | Final Exam | Written test | 10% | Total | | | | 100% |
| No | CO | Assessment Object | Assessment Technique | Weight | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | CO 2 | a. Article b. Presentation technique | Written test Observation | 15% 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | CO 3 s.d CO 7 | a. Quiz b. Midterm c. Final exam | Written test | 10% 20% 20% | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | CO 8 | Presentation content | Observation | 15% | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | CO 9 dan CO 10 | Final Exam | Written test | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Forms of media:</p> | <p>Board, LCD Projector, Laptop/Computer</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Literature: | <ol style="list-style-type: none"> 1. Skemp, R. R.(1971). <i>The Psychology of Learning Mathematics</i>. England: Penguin Books. 2. Bell, F. H. (1978). <i>Teaching and Learning Mathematics in Secondary School</i>. USA: Wm.C.Brown Company Publishers. 3. Kilpatrick, J., Swafford, J & Findell, B. (Eds.). (2001). <i>Adding It Up: Helping Children Learn Mathematics</i>. Washington, DC: National Academy Press. 4. Liebeck, P (1984). <i>How Children Learn Mathematics</i>. England: Penguin Books. |
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PLO and CO mapping

| | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 | PLO6 | PLO7 | PLO8 | PLO9 | PLO10 | PLO11 | PLO12 |
|-------------|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| CO1 | | ✓ | | | | | | | | | | |
| CO2 | | | ✓ | | | | | | | | | |
| CO3 | | | | | ✓ | | | | | | | |
| CO4 | | | | | ✓ | | | | | | | |
| CO5 | | | | | ✓ | | | | | | | |
| CO6 | | | | | ✓ | | | | | | | |
| CO7 | | | | | ✓ | | | | | | | |
| CO8 | | | | | ✓ | | | | | | | |
| CO9 | | | | | | | ✓ | | | | | |
| CO10 | | | | | | | ✓ | | | | | |