UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF MATHEMATICS EDUCATION
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Bachelor of Education in Mathematics **MODULE HANDBOOK**

Module name:	Design of Mathematics Instruction
Module level, if applicable:	Undergraduate
Code:	PMA6309
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	5th
Module coordinator:	Rosnawati, Dr.
Lecturer(s):	Ali Mahmudi, Dr; Rosnawati, Dr.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course
Teaching format / class hours per week during the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.
Credit points:	3
Prerequisites course(s):	Mathematics Curriculum and Learning (PMA6204)
Course Outcomes	After taking this course the students have ability to CO1. Demonstrate adaptation and independence in carrying out individual tasks and group assignments CO2. Utilize ICT in develop the design of school mathematics learning CO3. Explain the concept of mathematics learning design

<table>
<tr><td></td><td>CO4. Solve mathematical learning problems, especially the effectiveness of mathematics learning designs
CO5. Design learning according to topics in middle school mathematics
CO6. Develope students'mathematics learning instruments according to topics in secondary school mathematics that can be used as assessment of learning, and assessment as learning
CO7. Conduct validation related to the design of secondary school mathematics learning</td></tr>
<tr><td>Content:</td><td>This course contains the concept of instructional design and its application which includes its basic concepts, approach to learning, learning models according to Dick and Carrey, learning objectives, evaluation design of learning outcomes, learning activities design according to a model / strategy / approach to learning.</td></tr>
<tr><td>Study/exam achievements:</td><td>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 attitudeif 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 therequirements to pass the course. Students will pass from this course if at least have a good attitude.

The final mark will be weight as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO2</td><td>Presentation</td><td>Observation</td><td>5%</td></tr>
<tr><td>2</td><td>CO3
CO4
CO5
CO6</td><td>a. Individual assignment
b. Group assignment
c. Quiz
d. Mid exam
e. Post exam</td><td>Written test</td><td>10%
10%
5%
20%
25%</td></tr>
<tr><td>3</td><td>CO7</td><td>Product</td><td>Observation</td><td>25%</td></tr>
<tr><td colspan="3"></td><td>Total</td><td>100%</td></tr>
</table>
</td></tr>
</table>

Formsof media:	Board, LCD Projector, Laptop/Computer
Literature:	1. Romiszowski, A.J, 1981, *Designing Instructional Systems*. London : Kogan Page Ltd, Pentonville Road 2. Gentry, Castelle. 1994. *Introduction to Instructional Development*. Belmont: Wadswort Publishing Company 3. Anderson & Krathwohl. 2001. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Addison Wesley Longman, Inc 4. Peraturan Menteri Pendidikan dan Kebudayaan No. 34 tahun 2018 5. Peraturan Menteri Pendidikan dan Kebudayaan No. 35 tahun 2018 6. Peraturan Menteri Pendidikan dan Kebudayaan No. 36 tahun 2018 7. Peraturan Menteri Pendidikan dan Kebudayaan No. 37 tahun 2018

PLO and CO mapping

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