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:	Strategies for Mathematics Learning
Module level, if applicable:	Undergraduate
Code:	PMA6305
Sub-heading,if applicable:	-
Classes,if applicable:	-
Semester:	4th
Module coordinator:	Wahyu Setyaningrum, Ph.D.
Lecturer(s):	Wahyu Setyaningrum, Ph.D; Dr. Djamilah Bondan W, M.Si; Nila Mareta M, M.Sc
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 individual study per week for 16 weeks.
Credit points:	3
Prerequisites course(s):	-
Course Outcomes	After taking this course the students have ability to CO1. Demonstrate collaborative attitude and independence in carrying out individual tasks and group assignments

	CO2. Communicate ideas and thoughts in solving mathematics education problems in writing or verbally CO3. Understanding the nature and philosophy of mathematics and school mathematics CO4. Understanding mathematics learning theories and paradigms CO5. Understanding the domain of mathematics learning CO6. Understanding strategy, models, methods and approaches of mathematics learning CO7. Arranging mathematics learning plans in SMP / MTs, SMA / MA, and Vocational Schools using diverse strategies, approaches, methods, and learning models CO8. Develop learning resources in the form of Student Activity Sheets
Content:	This course discusses the philosophy of mathematics education, current mathematics curriculum, mathematics learning theories and paradigms, the nature of mathematics and school mathematics, the domains of mathematics learning, mathematical thinking and high-order thinking skills, mathematics learning in the 21st century, student characteristics and multiple intelligences, mathematics teacher competence, mathematics learning approaches and models, Lesson Plan and Student Worksheet, and simulation of various mathematics learning strategies
Study/exam achievements:	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 significantlycompared 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.

<table>
<tr><td></td><td>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>10%</td></tr>
<tr><td>2</td><td>CO3
CO4
CO5
CO6
CO7</td><td>a. Individual assignment
b. Group assignment
c. Quiz
d. Mid exam
e. Post exam</td><td>Written test</td><td>10%
10%
15%
20%
25%</td></tr>
<tr><td>3</td><td>CO8</td><td>Lesson Plan and Student Activity Sheets</td><td>Observation</td><td>10%</td></tr>
<tr><td colspan="3"></td><td>Total</td><td>100%</td></tr>
</table></td></tr>
<tr><td>Forms of media:</td><td>Board, LCD Projector, Laptop/Computer</td></tr>
<tr><td>Literature:</td><td>1. Arends, R.T. & Kilcher, Ann. 2010. Teaching for Student Learning. Becoming an Accomplished Teacher. New York: Routldge.
2. Becker, J.P & Shimada, S. (Eds.). Open-Ended Approach: A New Proposal for Teaching Mathematics. NCTM.
3. Cohen & Brody (Ed.). 2004. Teaching Cooperative Learning: The Challenge for Teacher Education. New York: Suny.
4. Delisle, R. (1997). How to Use Problem-Based Learning in the Classroom. Virginia: ASCD.
5. Jacobsen, D. A., Eggen, P., & Kauchak, D. 2006. Methods for teaching: promoting student learning in K-12 classrooms. Upper Saddle River, NJ: Pearson.
6. Joyce, Bruce & Weil, Marsha (1996). Models of Teaching. Boston: Allyn and Bacon.
7. Muschla, J.A. & Muschla, G.R. (2006). Hand-On Math projects with Real-Life Applications. Sanfransisco, USA: Jossey-Bass.</td></tr>
</table>

	8. Nucci, L.P. & Narvaez, D. 2008. Handbook of Moral and Character Education. New York: Routledge. 9. Polya, G. (1989). How to Solve It. NJ: Prentice-Hall. 10. Suherman, Erman dkk. 2001. Common Text Book; Strategi Pembelajaran Matematika Kontemporer. Bandung: JICA-UPI. 11. Westwood, Peter. 2008. What Teacher Need to Know about Teaching Method. Victoria, Australia: Camberwell, Vic.

PLO and CO Mapping

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