

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:	Research Methodology for Mathematics Education					
Module level, if applicable:	Undergraduate					
Code:	PMA6311					
Sub-heading,if applicable:	-					
Classes,if applicable:	-					
Semester:	6 th					
Module coordinator:	Heri Retnawati, Dr.					
Lecturer(s):	Heri Retnawati, Dr.					
Lecturer(s).	Rosnawati, Dr.					
Language:	Bahasa Indonesia					
Classification within the	Compulsory Course					
curriculum:	Compaisory Course					
Teaching format / class	150 minutes lectures and 180 minutes structured activities per					
hours per week during the	week.					
semester:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
	Total workload is 136 hours per semester which consists of					
Workload:	150 minutes lectures, 180 minutes structured activities, and					
	180 minutes self study per week for 16 weeks.					
Credit points:	3					
Prerequisites course(s):	-					
	After taking this course the students have ability to					
	CO1. Demonstrate obedience and discipline on academic					
Course Outcomes	values, norms and ethics					
	CO2. Communicate ideas and thoughts in the learning					
	process in writing or verbally					

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	CO3. Demonstrate collaborative attitudes in the learning							
	process, discuss or complete assignments							
	CO4. Explain the latest ideas or ideas related mathematics education research							
	COF				research			
	CO5. Explain concepts related to educational research methodology CO6. Develop a mathematics education research proposal							
Content:	This course covers the study of mathematical education research methodologies which include (1) identification of educational research domains, (2) types of research, (3) identification of research problems, (3) identification of research variables, (4) preparation of theoretical studies, frameworks thinking, and research hypotheses, (5) sampling techniques, (6) development of indicators and research instruments, (7) evidence of validity and reliability estimation, (8) data analysis techniques, and (9) preparation of research proposals.							
	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 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. The final mark will be weight as follow:							
Study/examachievements:	Ū				ast have a			
Study/examachievements:	Ū			w: Assessment	Weight			
Study/examachievements:	The fi	nal maı	k will be weight as follo	w:				
Study/examachievements:	The fi	CO2 CO3 CO3	Assessment Object Presentation a. Individual	w: Assessment Technique	Weight 10% 10%			
Study/examachievements:	The fi	CO2 CO3 CO3 CO4	Assessment Object Presentation a. Individual assignment	w: Assessment Technique Observation	10% 10% 10%			
Study/examachievements:	The fi	CO2 CO3 CO3	Assessment Object Presentation a. Individual assignment b. Group assignment	w: Assessment Technique Observation	Weight 10% 10% 10% 25%			
Study/examachievements:	The fi	CO2 CO3 CO3 CO4	Assessment Object Presentation a. Individual assignment	w: Assessment Technique Observation	10% 10% 10%			

100%

Total

Forms of media:	Board, LCD Projector, Laptop/Computer						
	1. Cohen, L., Manion, L., & Morrison, K. (2011). Research						
	methods in education (7 th ed.). New York, NY: Routledge.						
	2. Creswell, J. W. (2013). Research design: Qualitative,						
	quantitative, and mixed methods approaches. Thousand						
	Oaks, CA: Sage Publications.						
	3. Creswell, J. W. (2012). Educational research: Planning,						
	conducting and evaluating quantitative and qualitative						
	research(4 th ed.).Boston, MA: Pearson Education.						
Literature	4. Ary, D., Jacobs, L. C., & Sorensen, C. (2010).						
Literature:	Introduction to research in education (8th ed.). Belomont,						
	CA: Wadsworth.						
	5. English, L. D (Ed.). (2002). Handbook of international						
	research in mathematics education. Mahwah, NJ:						
	Lawrence Erlbaum Associates.						
	6. Retnawati, H. (2016). Analisis kuantitatif instrumen						
	penelitian. Yogyakarta: Parama Publishing.						
	7. Jurnal-jurnal ilmiah nasional dan internasional bidang						
	pendidikan matematika						

PLO and CO mapping

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