



MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES
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Master Program of Mathematics Education

Module Handbook

Module Name:	Research Methodology in Mathematics Education
Module Level:	Master (S-2)
Abbreviation, if applicable:	
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	1 / First year
Module Coordinator(s):	Prof. Dr. Tatag Yuli Eko Siswono, M.Pd.
Lecturer(s):	1. Prof. Dr. Tatag Yuli Eko Siswono, M.Pd. 2. Prof. Dr. Mega Teguh Budiarto, M.Pd.
Language:	Indonesian
Classification within the curriculum:	Compulsory course/elective studies
Teaching format/class hours per week during the semester	Teaching format: lectures, tutorial assignment, and individual study. 3×240 minutes = 720 minutes = 12 hours lectures
Workload:	15 weeks per semester consisting of: <ul style="list-style-type: none"> • 1 hour lecture (1×50 minutes) per week, • 2 hours assignments (2×45 minutes) per week, • 2 hours individual study (2×50 minutes) per week, Total workload: $14 \times 3 \times 240$ minutes = 10,080 minutes \approx 6.72 ECTS*
Credit Point:	3
Requirements:	N/A
Learning Goals :	<p>Knowledge (KNO-3)</p> <p>CLO-1: able to evaluate research paradigms and basic concepts of mathematics education research.</p> <p>CLO-2: able to compare the experimental and non-experimental quantitative research paradigms in mathematics education</p> <p>CLO-3: able to analyze various methods of qualitative research in mathematics education</p> <p>CLO-4: able to evaluate school action research methods, classroom action research, and mathematics education development research</p> <p>CLO-5: able to compare methods of various mixed-methods research</p>



	<p>Skill (SKI-3) CLO-6: able to develop research designs, implement research results, and evaluate contemporary research results critically and develop them in a research plan</p> <p>Competency (COM-2) CLO-7: able to develop research proposals for mathematics education and present them independently</p> <p>Social (SOC-1) CLO-8: able to collaborate and be responsible professionally and ethically in completing the task of a research case and preparing a research proposal</p>
Content:	<p>Studying the philosophy of various research approaches, quantitative and qualitative research methods, and experimental and non-experimental research with research fields in mathematics education at the school and the mathematics teacher education levels. This course focuses on developing skills and knowledge in formulating research ideas based on articles in reputable international journals, including quantitative and qualitative analysis, and making research proposals that can be addressed as final assignments.</p>



Study/exam achievements	<ul style="list-style-type: none"> Students are considered competent and pass if the final score calculated from the score of midterm exam, assignments, participation, and final exam is at least 55 or C. Final score is calculated as follows: 20% midterm exam + 30% assignments + 20% participation + 30% final exam Final index is defined as follows: <table border="1" data-bbox="620 696 1273 1140"> <thead> <tr> <th>Index</th> <th>Converted Score</th> <th>Score Range</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>4.00</td> <td>85 ≤ A ≤ 100</td> </tr> <tr> <td>A-</td> <td>3.75</td> <td>80 ≤ A- < 85</td> </tr> <tr> <td>B+</td> <td>3.50</td> <td>75 ≤ B+ < 80</td> </tr> <tr> <td>B</td> <td>3.00</td> <td>70 ≤ B < 75</td> </tr> <tr> <td>B-</td> <td>2.75</td> <td>65 ≤ B- < 70</td> </tr> <tr> <td>C+</td> <td>2.50</td> <td>60 ≤ C+ < 65</td> </tr> <tr> <td>C</td> <td>2.00</td> <td>55 ≤ C < 60</td> </tr> <tr> <td>D</td> <td>1.00</td> <td>40 ≤ D < 55</td> </tr> <tr> <td>E</td> <td>0.00</td> <td>0 ≤ E < 40</td> </tr> </tbody> </table> 	Index	Converted Score	Score Range	A	4.00	85 ≤ A ≤ 100	A-	3.75	80 ≤ A- < 85	B+	3.50	75 ≤ B+ < 80	B	3.00	70 ≤ B < 75	B-	2.75	65 ≤ B- < 70	C+	2.50	60 ≤ C+ < 65	C	2.00	55 ≤ C < 60	D	1.00	40 ≤ D < 55	E	0.00	0 ≤ E < 40
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Media employed	Slides and LCD projectors, white board																														
Reading list	<p>[1] Siswono, T. Y. E. 2019. <i>Paradigma Penelitian Pendidikan Matematika: Pengembangan Teori dan Aplikasi Pendidikan Matematika</i>. Remaja Rosdakarya</p> <p>[2] Cohen, L., Manion, L., & Morrison, K. 2007. <i>Research Methods in Education</i>. Routledge.</p> <p>[3] Van den Akker, J., Gravemeijer, K., McKenney, N., & Nieveen, N. 2007. <i>Educational Design Research</i>. Routledge.</p>																														
Note	<p>*Total hours per 1 credit in 1 semester = {(1 credit × 240 minutes × 14 weeks)/60 minutes} = 56 hours.</p> <p>Each ECTS equals 25 hours, so 1 credit in 1 semester is equivalent to 2.24 ECTS.</p>																														
Last amendment	January 2023																														

