



MINISTRY OF HIGHER EDUCATION, SCIENCE, AND
TECHNOLOGY

UNIVERSITAS NEGERI SURABAYA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES

UNDERGRADUATE PROGRAM OF MATHEMATICS EDUCATION

Ketintang Campus, Jalan Ketintang, C8 C9 Building, Surabaya 60231

Phone: +62 895335466373, email: s1-pmat@unesa.ac.id

Website: <https://pendidikan-matematika.fmipa.unesa.ac.id/>

Undergraduate Program of Mathematics

Module Handbook

| | |
|---|---|
| Module Name: | Research Methodology (Metodologi Penelitian) |
| Module Level: | Sarjana (S-1) / Undergraduate |
| Abbreviation, if applicable: | 8420203128 |
| Sub-heading, if applicable: | - |
| Course included in the module, if applicable: | - |
| Semester/term: | 5 / Third year |
| Module Coordinator(s): | Prof. Dr. Tatag Yuli Eko Siswono, M.Pd |
| Lecturer(s): | Dr. Siti Khabibah, M.Pd. Dr. Abdul Haris Rosyidi, S.Pd., M.Pd. Prof. Rooselyna Ekawati, Ph.D. Dr. Sri Suryanti, S.Pd., M.Si. Dr. Nia Wahyu Damayanti, S.Pd., M.Pd. Dr. Sugi Hartono, M.Pd. Nina Rinda Prihartiwi, S.Pd., M.Pd. Dr. Yurizka Melia Sari, M.Pd. Novita Vindri Harini, M.Pd. |
| Language: | Indonesia |
| 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 x 170 minutes = 510 minutes = 8.5 hours lectures |
| Workload: | 16 weeks per semester consisting of: <ul style="list-style-type: none">• 1-hour lectures (1 x 50 minutes) per week,• 1 hour's assignments (1 x 60 minutes) per week,➤ 1 hour's individual study (1 x 60 minutes) per week, Total workload : 16x3x170 minutes = 8,160 minutes = 136 hours=4.77 ECTS* |



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| Credit Point: | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|-----------------------------------|--------------------------------|-----------------------------------|------------|---|-------|-------|----|---|-------|-------|----|---|-------|-------|----|---|-------|-------|----|---|-------|-------|----|
| Requirements: | Statistics | | | | | | | | | | | | | | | | | | | | | | | | |
| Learning Goals : | <p>PLO-8: Demonstrate skills in designing, implementing, and evaluating adaptive and innovative technology-based, realistic mathematics learning.</p> <p>PLO-9: Demonstrate knowledge and skills in conducting mathematics education research.</p> <p>PLO-10: Make data-based decisions in completing student assignments and evaluating work done.</p> <p>PLO-11: Communicate research ideas and results rationally, effectively, and innovatively.</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| Content: | This course discusses the fundamental concepts and ethics of educational research, aiming to equip students with the methodology to conduct research in mathematics education focusing on quantitative (experimental, survey), qualitative, Classroom Action Research (PTK), and Research & Development (R&D) methodologies, along with instrument development and data analysis techniques. The learning process is conducted through Project Based Learning where students are required to produce a comprehensive research proposal by the end of the semester. | | | | | | | | | | | | | | | | | | | | | | | | |
| 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: <table border="1"><thead><tr><th>Week</th><th>Course Learning Outcomes (CLO)</th><th>Programme Learning Outcomes (PLO)</th><th>Evaluation</th></tr></thead><tbody><tr><td>1</td><td>CLO-1</td><td>PLO-9</td><td>2%</td></tr><tr><td>2</td><td>CLO-1</td><td>PLO-9</td><td>2%</td></tr><tr><td>3</td><td>CLO-1</td><td>PLO-9</td><td>2%</td></tr><tr><td>4</td><td>CLO-2</td><td>PLO-9</td><td>2%</td></tr><tr><td>5</td><td>CLO-2</td><td>PLO-9</td><td>2%</td></tr></tbody></table> | Week | Course Learning Outcomes (CLO) | Programme Learning Outcomes (PLO) | Evaluation | 1 | CLO-1 | PLO-9 | 2% | 2 | CLO-1 | PLO-9 | 2% | 3 | CLO-1 | PLO-9 | 2% | 4 | CLO-2 | PLO-9 | 2% | 5 | CLO-2 | PLO-9 | 2% |
| Week | Course Learning Outcomes (CLO) | Programme Learning Outcomes (PLO) | Evaluation | | | | | | | | | | | | | | | | | | | | | | |
| 1 | CLO-1 | PLO-9 | 2% | | | | | | | | | | | | | | | | | | | | | | |
| 2 | CLO-1 | PLO-9 | 2% | | | | | | | | | | | | | | | | | | | | | | |
| 3 | CLO-1 | PLO-9 | 2% | | | | | | | | | | | | | | | | | | | | | | |
| 4 | CLO-2 | PLO-9 | 2% | | | | | | | | | | | | | | | | | | | | | | |
| 5 | CLO-2 | PLO-9 | 2% | | | | | | | | | | | | | | | | | | | | | | |



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| | | | |
|----|-------|--------|-----|
| 6 | CLO-2 | PLO-9 | 2% |
| 7 | CLO-2 | PLO-9 | 5% |
| 8 | CLO-1 | PLO-9 | 15% |
| 9 | CLO-2 | PLO-10 | 5% |
| 10 | CLO-3 | PLO-8 | 5% |
| 11 | CLO-3 | PLO-8 | 5% |
| 12 | CLO-3 | PLO-10 | 5% |
| 13 | CLO-3 | PLO-10 | 5% |
| 14 | CLO-3 | PLO-11 | 5% |
| 15 | CLO-3 | PLO-11 | 5% |
| 16 | CLO-3 | PLO-11 | 33% |

- Final index is defined as follow:

| Index | Converted Score | Score Range |
|-------|-----------------|----------------------|
| A | 4.00 | $85 \leq A \leq 100$ |
| A- | 3.75 | $80 \leq A- < 85$ |
| B+ | 3.50 | $75 \leq B+ < 80$ |
| B | 3.00 | $70 \leq B < 75$ |
| B- | 2.75 | $65 \leq B- < 70$ |
| C+ | 2.50 | $60 \leq C+ < 65$ |
| C | 2.00 | $55 \leq C < 60$ |
| D | 1.00 | $40 \leq D < 55$ |
| E | 0.00 | $0 \leq E < 40$ |

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|-----------------------|---|
| Forms of Media | LCD Projector, Whiteboard, E-Learning (SiDia), Research Articles (Journals). |
| Literature | <ol style="list-style-type: none">1. Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). Sage Publications.2. Miles, Matthew B., Huberman, A. Michael, Saldana, Johnny. (2020). Qualitative data analysis : a methods sourcebook (ed. 4). : Sage. Chicago3. Siswono, T. Y. E. (2019). Paradigma Penelitian Pendidikan (Pengembangan Aplikasi Pendidikan Matematika). PT. Remaja Rosdakarya. |



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Note

based on the regulation of the minister of education and culture of Indonesia number 3 of 2020 concerning national higher education standards, it is state 1 CU equals to 170 minutes per week. Therefore, in one semester (16 weeks, including midterm a final exam) $1 \text{ CU} = 170 \times 16 = 2.720$ minutes or 45.3 hours. Therefore, workhours in $144 \text{ CU} \times 45.3 \text{ hours} = 6.523,2$ hours. Unesa decided that 1 ECTS with 144 CU , $6.523,2/229 \text{ ECTS} = 28.48$ hours, so that $1 \text{ CU} = 1.59 \text{ ECTS}$