Module designation	**Research Methodology** **Course code:** 8420203128
Semester(s) in which the module is taught	Semester 5 (Third year)
Person responsible for the module	**Coordinator:** Prof. Dr. Tatag Yuli Eko Siswono, M.Pd **Teaching staff:** 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	Indonesian
Relation to curriculum	Compulsory
Teaching methods	Lectures, tutorial assignments, and individual study **Media and tools:** LCD Projector, Whiteboard, E-Learning (SiDia), Research Articles (Journals).
Workload (incl. contact hours, self-study hours)	**(Estimated) total workload:** 3 CU × 170 minutes × 16 weeks = 8,160 minutes = 136.00 hours (≈ 4.77 ECTS) **Contact hours:** lectures, 3 × 50 minutes per week × 16 weeks = 40.00 hours (class hours per week: 510 minutes = 8.50 hours, including structured activities) **Private study including examination preparation:** structured assignments, 3 × 60 minutes per week × 16 weeks = 48.00 hours; independent study, 3 × 60 minutes per week × 16 weeks = 48.00 hours (total 96.00 hours)
Credit points	3 CU (4.77 ECTS) *1 CU = 170 minutes per week × 16 weeks = 45.3 hours; 1 ECTS = 28.48 hours (144 CU = 229 ECTS), so 1 CU = 1.59 ECTS (UNESA Rector's Decree No. 736/HK/KM/2023).*
Required and recommended prerequisites for joining the module	Statistics
Module objectives/intended learning outcomes	**Programme learning outcomes (PLO) addressed:** • PLO-8: Design, implement and evaluate mathematics learning using IT. • PLO-9: Demonstrate knowledge related to mathematics education research. • PLO-10: Make decisions based on data/information in completing tasks that are the student's responsibility and evaluating the work that has been done. • PLO-11: Communicate ideas and research results effectively, orally, and in writing.
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

<table>
<tr><td></td><td>of the semester.</td></tr>
<tr><td>Examination forms</td><td>Final score is calculated from the weekly assessment scheme below (CLO/PLO addressed and weight of each assessment):
<table>
<tr><th>Week</th><th>CLO</th><th>PLO</th><th>Weight (%)</th></tr>
<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>
<tr><td>6</td><td>CLO-2</td><td>PLO-9</td><td>2</td></tr>
<tr><td>7</td><td>CLO-2</td><td>PLO-9</td><td>5</td></tr>
<tr><td>8</td><td>CLO-1</td><td>PLO-9</td><td>15</td></tr>
<tr><td>9</td><td>CLO-2</td><td>PLO-10</td><td>5</td></tr>
<tr><td>10</td><td>CLO-3</td><td>PLO-8</td><td>5</td></tr>
<tr><td>11</td><td>CLO-3</td><td>PLO-8</td><td>5</td></tr>
<tr><td>12</td><td>CLO-3</td><td>PLO-10</td><td>5</td></tr>
<tr><td>13</td><td>CLO-3</td><td>PLO-10</td><td>5</td></tr>
<tr><td>14</td><td>CLO-3</td><td>PLO-11</td><td>5</td></tr>
<tr><td>15</td><td>CLO-3</td><td>PLO-11</td><td>5</td></tr>
<tr><td>16</td><td>CLO-3</td><td>PLO-11</td><td>33</td></tr>
</table></td></tr>
<tr><td>Study and examination requirements</td><td>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 index (grade conversion):
<table>
<tr><th>Index</th><th>Converted score</th><th>Score range (A = final score)</th></tr>
<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 ≤ A < 80</td></tr>
<tr><td>B</td><td>3.00</td><td>70 ≤ A < 75</td></tr>
<tr><td>B-</td><td>2.75</td><td>65 ≤ A < 70</td></tr>
<tr><td>C+</td><td>2.50</td><td>60 ≤ A < 65</td></tr>
<tr><td>C</td><td>2.00</td><td>55 ≤ A < 60</td></tr>
<tr><td>D</td><td>1.00</td><td>40 ≤ A < 55</td></tr>
<tr><td>E</td><td>0.00</td><td>0 ≤ A < 40</td></tr>
</table></td></tr>
<tr><td>Reading list</td><td>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. Chicago
3. Siswono, T. Y. E. (2019). Paradigma Penelitian Pendidikan (Pengembangan Aplikasi Pendidikan Matematika). PT. Remaja Rosdakarya.</td></tr>
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