



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](mailto:s1-pmat@unesa.ac.id)

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

**Undergraduate Program of Mathematics  
Handbook**

**Module**

<b>Module Name:</b>	Innovative Teaching and Learning Pembelajaran Inovatif
<b>Module Level:</b>	Sarjana (S-1) / Undergraduate
<b>Abbreviation, if applicable:</b>	8420200004
<b>Sub-heading, if applicable:</b>	-
<b>Course included in the module, if applicable:</b>	-
<b>Semester/term:</b>	3 <sup>th</sup> / Second year
<b>Module Coordinator(s):</b>	Dr. Susanah, M.Pd.
<b>Lecturer(s):</b>	Dr. Susanah, M.Pd. Dr. Rini Setianingsih, M.Kes. Dr. Janet Trineke Manoy, M.Pd. Dr. Ismail, M.Pd. Dr. Pradnyo Wijayanti, M.Pd. Dr. Siti Khabibah, M.Pd. Nurus Saadah, S.Pd., M.Pd. Dr. Nia Wahyu Damayanti, S.Pd., M.Pd. Dr. Sugi Hartono, M.Pd. Dr. Ali Shodikin, S.Pd., M.Pd. Dr. Nonik Indrawatiningsih, M.Pd. Dr. Yurizka Melia Sari, M.Pd. Yulia Izza El Milla, S.Pd., M.Pd. Novita Vindri Harini, M.Pd.
<b>Language:</b>	Indonesia
<b>Classification within the curriculum:</b>	Compulsory course/ <del>elective studies</del>
<b>Teaching format/class hours per week during the semester</b>	Teaching format: lectures, tutorial assignment, and individual Study/ 3 x 170 minutes = 510 minutes = 8.5 hours lectures
<b>Workload:</b>	16 weeks per semester consisting of: <ul style="list-style-type: none"><li>• 1 hour lectures (1 x 50 minutes) per week,</li></ul>



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	<ul style="list-style-type: none"><li>• 1 hours assignments (1 x 60 minutes) per week,</li><li>• 1 hours individual study (1 x 60 minutes) per week,</li></ul> Total workload : 16x3x170 minutes = 8,160 minutes = 136 hours=4.8 ECTS*												
Credit Point:	3												
Requirements:	Foundation of Education, Learning Theories, School Curriculum												
Learning Goals:	<p><b>PLO-3:</b> Develop logical, critical, systematic, and creative thinking in carrying out specific work in their area of expertise and in accordance with the work competency standards of the relevant field.</p> <p><b>PLO-7:</b> Master pedagogical knowledge in teaching and evaluation in accordance with transformative curriculum developments and technological developments oriented towards realistic mathematics education and edupreneur-leadership.</p> <p><b>PLO-8:</b> Demonstrate skills in designing, implementing, and evaluating adaptive and innovative technology-based, realistic mathematics learning.</p> <p><b>PLO-10:</b> Make data-based decisions in completing student assignments and evaluating work done.</p>												
Content:	Studying the theoretical basis, stages, class management, and evaluation in Differentiated Learning, Deep Learning, Direct Teaching Model, Cooperative Learning Model, Discovery Learning, Problem-based Learning, and Project-based Learning in designing, implementing, and evaluating mathematics learning along with its implementation in learning through individual and group assignments with discussion and reflection activities.												
Study/exam achievements	<ul style="list-style-type: none"><li>• Students are considered competent and pass if the final score is at least 55 or C.</li><li>• Final score is calculated as follows:</li></ul> <table><tr><th>Week</th><th>Course Learning Outcomes (CLO)</th><th>Programme Learning Outcomes (PLO)</th><th>Evaluation (%)</th></tr><tr><td>1</td><td>CLO-1</td><td>PLO-3</td><td>3</td></tr><tr><td>2</td><td>CLO-2</td><td>PLO-7</td><td>3</td></tr></table>	Week	Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)	Evaluation (%)	1	CLO-1	PLO-3	3	2	CLO-2	PLO-7	3
Week	Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)	Evaluation (%)										
1	CLO-1	PLO-3	3										
2	CLO-2	PLO-7	3										



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3	CLO-1	PLO-3	3
4	CLO-2	PLO-7	4
5	CLO-3	PLO-8	4
6	CLO-2	PLO-7	4
7	CLO-3	PLO-8	6
8	CLO-4	PLO-10	15
9	CLO-2	PLO-7	5
10	CLO-3	PLO-8	6
11	CLO-2	PLO-7	5
12	CLO-3	PLO-8	6
13	CLO-2	PLO-7	5
14	CLO-3	PLO-8	6
15	CLO-4	PLO-10	10
16	CLO-4	PLO-10	15

- 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	$0 \leq E < 40$

**Forms of Media**

Slides and LCD projectors, whiteboard

**Literature**

- Wijayanti, P., Budiarto, M.T., Ismail, Kurniasari, I., Prihartiwi, N.R. (2021). Model Pembelajaran Matematika Berpusat pada Peserta Didik. Surabaya: Unesa University Press.
- Arends, R.I. (2012). Learning to Teach. 6th Edition. New York: McGraw-Hill Book Company.
- Arends, R.I. (2004). Guide to Field Experiences and Portofolio Development: to accompany learning to teach. New York: McGraw-Hill Book Company.
- Tomlinson, C. A. (2017). 3rd Edition How to Differentiate



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	<p>Instruction in Academically Diverse Classrooms. Alexandria, VA: ASCD.</p> <ol style="list-style-type: none"><li>5. Hockett, J. A. (2018). Differentiation Strategies and Examples: Grades 6-12. Tennessee Department of Education. Alexandria, VA: ASCD.</li><li>6. Joyce, B., &amp; Calhoun, E. (2024). Models of Teaching (10th ed.). Routledge. <a href="https://doi.org/10.4324/9781003455370">https://doi.org/10.4324/9781003455370</a></li><li>7. Fullan, M., Quinn, J., &amp; McEachen, J. (2017). Deep Learning: Engage the World Change the World. Corwin Press.</li><li>8. McTighe, J., &amp; Silver, H. F. (2020). Teaching for Deeper Learning: Tools to Engage Students in Meaning Making. ASCD.</li><li>9. Johnson, E. B. (2014). Contextual Teaching and Learning: What It Is and Why It's Here to Stay. Corwin Press.</li><li>10. Slavin, R. E. (2015). Cooperative Learning: Theory, Research, and Practice. Allyn &amp; Bacon.</li><li>11. Nur, M. (2000). Pembelajaran Kooperatif. Surabaya: Pusat Sains dan Matematika Sekolah.</li><li>12. Ibrahim, M., Rachmadiarti, F., Ismono. (2005). Pembelajaran Kooperatif. Surabaya: Pusat Sains dan Matematika Sekolah</li><li>13. Hunaepi, Samsuri, T., Afriliyana, M. (2014) Model Pembelajaran Langsung Teori dan Praktik. Mataram: Duta Pustaka Ilmu.</li><li>14. Nur, M., Kardi, S. (2000). Pengajaran Langsung. Surabaya: Pusat Sains dan Matematika Sekolah.</li><li>15. Hunaepi, Samsuri, T., Afriliyana, M. (2014) Model Pembelajaran Langsung Teori dan Praktik.</li><li>16. Hassed Craig &amp; Chamber, Richard (2015). Mindfulness Learning. New York: Amazon Publisher.</li></ol>
<b>Note</b>	<p>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) <math>1 \text{ CU} = 170 \times 16 = 2.720 \text{ minutes}</math> or 45.3 hours. Therefore, workhours in 144 CU <math>\times 45.3 \text{ hours} = 6.523,2 \text{ hours}</math>. Unesa decided that 1 ECTS with 144 CU, <math>6.523,2/229 \text{ ECTS} = 28.48 \text{ hours}</math>, so that <math>1 \text{ CU} = 1.59 \text{ ECTS}</math></p>