



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**

<b>Module Name:</b>	Instructional Design
<b>Module Level:</b>	Master (S-2)
<b>Abbreviation, if applicable:</b>	
<b>Sub-heading, if applicable:</b>	-
<b>Course included in the module, if applicable:</b>	-
<b>Semester/term:</b>	2 <sup>nd</sup> / First year
<b>Module Coordinator(s):</b>	Dr. Agung Lukito, M.S.
<b>Lecturer(s):</b>	1. Dr. Agung Lukito, M.S. 2. Dr. Masriyah, M.Pd. 3. Dr. Endah Budi Rahaju, M.Pd. 4. Dr. Pradnyo Wijayanti, 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. $3 \times 240$ minutes = 720 minutes = 12 hours lectures
<b>Workload:</b>	15 weeks per semester consisting of: <ul style="list-style-type: none"> <li>• 1 hour lecture (1 × 50 minutes) per week,</li> <li>• 2 hours assignments (2 × 45 minutes) per week,</li> <li>• 2 hours individual study (2 × 50 minutes) per week,</li> </ul> Total workload: $14 \times 3 \times 240$ minutes = 10,080 minutes = 6.72 ECTS*
<b>Credit Point:</b>	3
<b>Requirements:</b>	N/A
<b>Learning Goals :</b>	<b>Knowledge (KNO-2)</b> CLO-1: able to understand the pedagogical knowledge about the design of learning and evaluation of mathematics.  <b>Skill (SKI-2)</b> CLO-2: able to design effective and innovative mathematics learning



	<p>based on the theory that has been studied.</p> <p><b>Competency (COM-1)</b> CLO-3: able to work on and present the mathematics learning design effectively.</p> <p><b>Competency (COM-2)</b> CLO-4: able to work independently on an instructional design of a mathematics topic and present it orally and in writing.</p> <p><b>Social (SOC-1)</b> CLO-4: able to collaborate and be responsible professionally and ethically in completing coursework design and evaluation courses.</p>																														
<b>Content:</b>	Studying how to identify instructional needs, analyze student characteristics and contexts, analyze tasks, formulate learning objectives, design learning sequences, establish learning strategies, design learning messages, develop teaching materials, and develop evaluation instruments.																														
<b>Study/exam achievements</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Final score is calculated as follows: 20% midterm exam + 30% assignments + 20% participation + 30% final exam</li> <li>Final index is defined as follow: <table border="1" data-bbox="619 1458 1270 1901"> <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><math>85 \leq A \leq 100</math></td> </tr> <tr> <td>A-</td> <td>3.75</td> <td><math>80 \leq A- &lt; 85</math></td> </tr> <tr> <td>B+</td> <td>3.50</td> <td><math>75 \leq B+ &lt; 80</math></td> </tr> <tr> <td>B</td> <td>3.00</td> <td><math>70 \leq B &lt; 75</math></td> </tr> <tr> <td>B-</td> <td>2.75</td> <td><math>65 \leq B- &lt; 70</math></td> </tr> <tr> <td>C+</td> <td>2.50</td> <td><math>60 \leq C+ &lt; 65</math></td> </tr> <tr> <td>C</td> <td>2.00</td> <td><math>55 \leq C &lt; 60</math></td> </tr> <tr> <td>D</td> <td>1.00</td> <td><math>40 \leq D &lt; 55</math></td> </tr> <tr> <td>E</td> <td>0.00</td> <td><math>0 \leq E &lt; 40</math></td> </tr> </tbody> </table> </li> </ul>	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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<b>Media employed</b>	Slides and LCD projectors, white board																														
<b>Reading list</b>	[1] Morison, G. R. et al. 2011. Designing Effective Instruction, US: John Wiley & Sons, Inc.																														



	<p>[2] Anderson, L. W. et al. 2000. A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. US: Pearson</p> <p>[3] Anderson, L W. 2008. Classroom Assessment: Enhancing The Quality of Teacher Decision Making. US: Lawrence Erlbaum Associates, Inc.</p> <p>[4] Middleton, J. A. and Polly Goepfert. 1996. Inventive strategies for teaching mathematics: Implementing standards for reform. US: APA book.</p>
<b>Note</b>	<p>*Total hours per 1 credit in 1 semester = <math>\{(1 \text{ credit} \times 240 \text{ minutes} \times 14 \text{ weeks})/60 \text{ minutes}\} = 56 \text{ hours}</math>.</p> <p>Each ECTS equals 25 hours, so 1 credit in 1 semester is equivalent to 2.24 ECTS.</p>
<b>Last amendment</b>	January 2023