MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY

UNIVERSITAS NEGERI SURABAYA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES

Ketintang Campus, D-1 Building, Surabaya 60231 +6231-8296427
Website: www.fmipa.unesa.ac.id, email: info_fmipa@unesa.ac.id

Master Program of Mathematics Education   **Module Handbook**

Module Name:	Realistic Mathematics Education
Module Level:	Master (S-2)
Abbreviation, if applicable:	
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	3/Second year
Module Coordinator(s):	Rooselyna Ekawati, M.Sc., Ph.D.
Lecturer(s):	1. Rooselyna Ekawati, Ph.D. 2. Dr. Rini Setyaningsih, M. Kes.
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: • 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: $14 \times 2 \times 240$ minutes $= 6,720$ minutes ≈ 4.48 ECTS*
Credit Point:	2
Requirements:	N/A

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Learning Outcomes:	**Knowledge (KNO-2)** CLO-1: able to explain the principles and characteristics of Realistic Mathematics Education (RME) **Skill (SKI-2)** CLO-2: able to apply some RME principles on designing a mathematics teaching in primary and secondary school levels. **Compentency (COM-2)** CLO-3: able to work on mathematics teaching problems using RME approach and present it both written and orally. **Social (SOC-1)** CLO-4: able to collaborate and be responsible professionally and ethically in completing tasks
Content	Studying the philosophies, concepts, and principles of Realistic Mathematics Education (RME) and their applications on designing mathematics instruction in primary and secondary school levels.
Study/exam achievements	• 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:

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

Media employed	Slides and LCD projectors, whiteboard
Reading list	[1] RME learning module authored by PMRI team [2] Clements, D. H., & Sarama, J. (2004). Learning trajectories in

	mathematics education. *Mathematical thinking and learning*, 6(2), 81-89.
	[3] Freudenthal, H. (2006). *Revisiting mathematics education: China lectures* (Vol. 9). Springer Science & Business Media.
	[4] Holt, Rinehart, Winston. (2006). *Mathematics in Context*. Encyclopædia Britannica, Inc.
	[5] Johnson, E. B. (2002). *Contextual Teaching and Learning*. Corwin Press, Inc.
	[6] Van den Heuvel, M. & Wijers, M. (2005). Mathematics Standards and Curricula in the Netherlands. *ZDM* 37(4).
	[7] Hadi, S. (2017). *Pendidikan Matematika Realistik*. PT RajaGrafindo Persada.
	[8] Plomp, T., & Nieveen, N. (2013). *Educational design research*. Netherlands Institute for Curriculum Development (SLO).
	[9] Van Den Heuvel-Panhuizen, M. (2005). The role of contexts in assessment problems in mathematics. *For the learning of mathematics*, 25(2), 2-23.
	[10] Wijaya, A. (2012). *Pendidikan matematika realistik: Suatu alternatif pendekatan pembelajaran matematika*. Graha Ilmu.
Note	*Total hours per 1 credit in 1 semester = {(1 credit × 240 minutes × 14 weeks)/60 minutes} = 56 hours. Each ECTS equals 25 hours, so 1 credit in 1 semester is equivalent to 2.24 ECTS.
Last amendment	January 2023