

Module Handbook

Module Name:	Contextual Mathematics
Module Level:	Sarjana (S-1) / Bachelor
Abbreviation, if applicable:	3014112048
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	3/ Second year
Module Coordinator(s):	Rooselyna Ekawati, Ph.D.
Lecturer(s):	Rooselyna Ekawati, Ph.D. Prof. Dr. Siti M. Amin, M.Pd. Evangelista LWP, M.Sc. Ahmad Wachidul Kohar, M.Pd.
Language:	Indonesia
Relation to Curriculum:	For all level students, Compulsory course / elective studies
Teaching format/class hours per week during the semester	Teaching format: lectures, tutorial assignment, and individual study. 2 x 170 minutes = 340 minutes = 5.67 hours lectures
Workload:	15 weeks per semester consisting of: <ul style="list-style-type: none"> ➤ 2 hours lectures (2 x 50 minutes) per week, ➤ 2 hours tutorial assignments (2 x 60 minutes) per week, ➤ 2 hours individual study (2 x 60 minutes) per week, Total workload : 14x2x170 minutes = 4,760 minutes = 3.17 ECTS*
Credit Point:	2
Requirements:	-
Learning Goals :	<p>KNO-2 CLO-1: Explain the principle and characteristics of Realistic Mathematics with the types of context and its application within learning process CLO-2: Explain the hypothetical learning trajectory with Realistic Mathematics Education approach</p> <p>SKI-1 CLO-3: Design hypothetical learning trajectory and evaluate mathematics learning with Realistic Mathematics Education approach in primary and secondary level through presentation with IT</p> <p>COM-1 CLO-4: Communicate ideas and research result about Realistic</p>

	<p>Mathematics from scientific resources by written and oral effectively</p> <p>COM-2</p> <p>CLO-5: Determine types of context related to real life related to number, algebra, measurement and geometry, probability and statistics, calculus and combinatoric with its application in mathematics learning at primary and secondary school.</p> <p>SOC-1</p> <p>CLO-6: Critisize the developed mathematics learning with realistics mathematics approach based on its principle and characteristics</p>																														
Content	<p>This course discuss the principle, characteristics, kind of context related to daily life and the content of numbers, algebra, measurement and geometry, probability and statistics, calculus and combinatorics and its application in mathematics learning in primary and secondary school through active learning and task based as well as presentation with IT</p>																														
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: ➤ 20% midterm exam + 30% assignments + 20% participation + 30% final exam ➤ Final index is defined as follow: <table border="1" data-bbox="667 1262 1312 1787" style="margin-left: auto; margin-right: auto;"> <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>$85 \leq A \leq 100$</td> </tr> <tr> <td>A-</td> <td>3.75</td> <td>$80 \leq A- < 85$</td> </tr> <tr> <td>B+</td> <td>3.50</td> <td>$75 \leq B+ < 80$</td> </tr> <tr> <td>B</td> <td>3.00</td> <td>$70 \leq B < 75$</td> </tr> <tr> <td>B-</td> <td>2.75</td> <td>$65 \leq B- < 70$</td> </tr> <tr> <td>C+</td> <td>2.50</td> <td>$60 \leq C+ < 65$</td> </tr> <tr> <td>C</td> <td>2.00</td> <td>$55 \leq C < 60$</td> </tr> <tr> <td>D</td> <td>1.00</td> <td>$40 \leq D < 55$</td> </tr> <tr> <td>E</td> <td>0.00</td> <td>$0 \leq E < 40$</td> </tr> </tbody> </table>	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	<p>Slides and LCD projectors, whiteboard</p>																														

<p>Literature</p>	<p>[1] RME learning module authored by PMRI team</p> <p>[2] Clements, D. H., & Sarama, J. (2004). Learning trajectories in mathematics education. <i>Mathematical thinking and learning</i>, 6(2), 81-89.</p> <p>[3] Freudenthal, H. (2006). <i>Revisiting mathematics education: China lectures</i> (Vol. 9). Springer Science & Business Media.</p> <p>[4] Holt, Rinehart, Winston. (2006). <i>Mathematics in Context</i>. Chicago: Encyclopædia Britannica, Inc.</p> <p>[5] Johnson, Elanie B. (2002). <i>Contextual Teaching and Learning</i>. California: Corwin Press, Inc.</p> <p>[6] Van den Heuvel, M. & Wijers, M. (2005). Mathematics Standards and Curricula in the Netherlands. <i>ZDM</i> vol 37 (4).</p> <p>[7] Hadi, S. (2017). <i>Pendidikan Matematika Realistik</i>. PT RajaGrafindo Persada.</p> <p>[8] Plomp, T., & Nieveen, N. (2013). Educational design research. <i>Enschede: Netherlands Institute for Curriculum Development (SLO)</i>.</p> <p>[9] Van Den Heuvel-Panhuizen, M. (2005). The role of contexts in assessment problems in mathematics. <i>For the learning of mathematics</i>, 25(2), 2-23.</p> <p>[10] Wijaya, A. (2012). Pendidikan matematika realistik: Suatu alternatif pendekatan pembelajaran matematika. <i>Yogyakarta: Graha Ilmu</i>.</p>
<p>Note</p>	<p>*Total hours per 1 credit in 1 semester={ (1 credit x 170 minutes x 14 weeks)/60 minutes }=39,67 hours. each ECTS equals with 25 hours therefore 1 credit in 1 semester equals 1,59 ECTS.</p>