

### Realistic Mathematics Teaching and Learning

Module designation	Realistic Mathematics Teaching and Learning
Semester(s) in which the module is taught	1 <sup>st</sup> Semester
Person responsible for the module	Dr. Pinta Deniyanti M.Si Dr. Meiliasari, S.Pd., M.Sc
Language	Indonesian
Relation to curriculum	<i>Elective</i>
Teaching methods	<i>Lecture, structured project, seminar</i>
Workload (incl. contact hours, self-study hours)	16 × 100 minutes of lectures (27 hours/semester) 16 × 200 minutes of independent study (53 hours/semester) 15 × 200 minutes of structured project (50 hours/semester)
Credit points	2 SKS = 5,2 ECTS
Required and recommended prerequisites for joining the module	NA
Module objectives/intended learning outcomes	<ul style="list-style-type: none"> <li>• Students understand the principles and characteristics of RME</li> <li>• Students develop an instructional design underpinning realistic mathematics education (RME)</li> <li>• Students conduct and evaluate RME-based lessons</li> </ul>
Content	<p><b>Students will learn about:</b></p> <ol style="list-style-type: none"> <li>1. the principles and characteristics of realistic mathematics education</li> <li>2. designing, implementing, and evaluating realistic mathematics instructional activities</li> </ol>
Examination forms	<ul style="list-style-type: none"> <li>• Written test</li> <li>• Project</li> </ul>
Study and examination requirements	<p><b>Study and examination requirements:</b></p> <ul style="list-style-type: none"> <li>- Students have at least 80% of attendance</li> <li>- Students complete all assignments with satisfactory result</li> </ul>

Reading list	<ol style="list-style-type: none"><li>1. Gravemeijer, <i>Developing Realistic Mathematics Education</i></li><li>2. R. Sembiring dkk., A Decade of PMRI in Indonesia</li><li>3. Gravemeijer, K. (1999), How Emergent Models May Foster the Constitution of Formal Mathematics, <i>Mathematical Thinking and Learning</i> 1(2), pp. 155 – 177</li><li>4. Mousley, J., Sullivan, P., &amp; Zevenbergen, R. (....). Alternative Learning Trajectory</li><li>5. Sembiring, R. K., (2008), Apa dan Mengapa PMRI, <i>Majalah PMRI Vol. VI No. 4</i></li><li>6. Uzel, D. (2006), Attitudes of 7<sup>th</sup> Class Students Toward Mathematics in Realistic Mathematics Education, <i>International Mathematical Forum</i>, 1, No. 39, pp 1951 – 1959</li><li>7. Van den Heuvel-Panhuizen, M. (1996), <i>Assessment and Realistic Mathematics Education</i>, CD-β Press, Center for Science and Mathematics Education, Utrecht</li></ol>
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