

Module Descriptions

A **module** is a self-contained **learning unit** within a higher education program that includes thematically related courses and is assigned a **fixed number of credits**. It follows specific **learning objectives**, includes an **assessment component**, and contributes to achieving the qualifications of a degree program. In some countries, “modules” are also named “courses”.

Please provide a module description for each module. In addition to the compulsory and elective modules, this also includes credited internships and the final thesis.

Please summarize all module descriptions in one document (Module Handbook) and create a table of contents so that the modules can be found easily.

Module designation	<i>Study on Issues in Mathematics Education.</i>
Semester(s) in which the module is taught	<i>1</i>
Person responsible for the module	<i>Prof. Dr. Drs. Sugiman M.Si. Prof. Dr. Jailani M.Pd.</i>
Language	<i>Indonesian.</i>
Relation to curriculum	<i>Compulsory.</i>
Teaching methods	<i>Lecture, discussion and assignment.</i>
Workload (incl. contact hours, self-study hours)	<i>Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self study per week for 16 weeks.</i>
Credit points	<i>3</i>
Required and recommended prerequisites for joining the module	<i>-</i>
Module objectives/intended learning outcomes	<i>After taking this course the students have ability to:</i> <i>CO1. Examining issues of student cognition, student differences, and curriculum-related problems in education.</i> <i>CO2. Examining issues related to approaches, strategies, or methods of mathematics instruction.</i> <i>CO3. Explaining issues related to the performance of school students and university students, classroom management, and evaluation in mathematics education.</i> <i>CO4. Describing the principles of reporting research findings and reviewing research results, both in the form of reports and academic journals in mathematics education.</i> <i>CO5. Reviewing research findings in mathematics education.</i> <i>CO6. Identifying problems in mathematics education and determining appropriate strategies for their resolution.</i>

Content	<i>This course discusses various issues in mathematics education. These issues include: (1) student cognition, (2) student differences, (3) curriculum-related problems, (4) issues concerning teaching approaches, strategies, or methods, (5) student and university student performance, (6) classroom management issues, (7) evaluation problems, and (8) research findings. This course equips students with the ability to identify problems in mathematics education and determine appropriate strategies to address them.</i>
Examination forms	<i>Oral presentation, essay, and discussion.</i>
Study and examination requirements	<i>The course assessment is divided into two main components:</i> 1. Cognitive Assessment (50%) <i>This includes the following elements:</i> ○ Attendance: 5% ○ Quiz: 0% ○ Assignment: 15% ○ Midterm Exam (UTS): 0% ○ Final Exam (UAS): 30% 2. Participatory Assessment (50%) <i>This includes:</i> ○ Case Study: 20% ○ Team-Based Project: 30% Total: 100%

Reading list	1. English, Lyn D., Richard J. (2002). <i>Handbook of International Research in Mathematics Education</i>. Mahwah, New Jersey: Lawrence Erlbaum Associates 2. Ernest, P. (2002). What is the philosophy of mathematics education? https://socialsciences.exeter.ac.uk/education/research/centres/stem/publications/pmej/pome18/PhoM_%20for_ICME_04.htm 3. Presiden Republik Indonesia. (2022). Peraturan Pemerintah Republik Indonesia Nomor 57 Tahun 2022 tentang Standar Nasional Pendidikan.10. https://jdih.kemdikbud.go.id/arsip/Salinan%20PP%20Nomor%2057%20Tahun%202022.pdf 4. Kementerian Pendidikan dan Kebudayaan. (2016). Peraturan Menteri Pendidikan dan Kebudayaan Nomor 22 Tahun 2016 tentang Standar Proses11. Pendidikan Dasar dan Menengah. https://bsnp-indonesia.org/wp-content/uploads/2009/06/Permendikbud Tahun2016 Nomor022 Lampiran.pdf 5. Kementerian Pendidikan dan Kebudayaan. (2018). Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 37 Tahun 2018 tentang12. Perubahan Atas Peraturan Menteri Pendidikan dan Kebudayaan Nomor 24 Tahun 2016 tentang Kompetensi Inti dan Kompetensi Dasar Pelajaran pada Kurikulum 2013 pada Pendidikan Dasar dan Pendidikan Menengah. https://jdih.kemdikbud.go.id/arsip/Permendikbud%20Nomor%2037%20Tahun%202018.pdf 6. Kusumaryono, R. S. (2020). Merdeka belajar. https://gtk.kemdikbud.go.id/read-news/merdeka-belajar 7. Asesmen Kompetensi Minimum (Numerasi). https://pusmenjar.kemdikbud.go.id/an/ 8. Programme for International Student Assessment (PISA). https://litbang.kemdikbud.go.id/pisa 9. Zheng Y. Philosophy of Mathematics, Mathematics Education, and Philosophy of Mathematics Education. <i>Humanist Math Netw J</i> [Internet].1994;1(9):32–41. Available from: http://scholarship.claremont.edu/hmnjhttp://scholarship.claremont.edu/hmnj/vol1/iss9/9 10. Tuge C. Mathematics Curriculum, the Philosophy of Mathematics and its Implications on Ethiopian Schools Mathematics Curriculum. <i>Ethiop J Educ Sci</i>.17. 2009;4(1):109–208 11. Bikner-Ahsbabs A, Prediger S. Diversity of theories in mathematics education—How can we deal with it? <i>ZDM</i> [Internet]. 2006 Feb;38(1):52–7. Available18. from: http://link.springer.com/10.1007/BF02655905 12. Assude T, Boero P, Herbst P, Lerman S, Radford L. The Notions and Roles of Theory in Mathematics Education Research. In: 11th International Congress19. on Mathematical Education [Internet]. 2008. p. 338–56. Available from: http://www.lsbu.ac.uk/~lermans/ESRCProjectHOMEPAGE.html 13. Lerman S. Theories in practice: Mathematics teaching and mathematics teacher education. <i>ZDM - Int J Math Educ</i> [Internet]. 2013;45(4):623–31. Available20. from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-
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	84892866305&doi=10.1007%2Fs11858-013-0510-x&partnerID=40&md5=50996453c903f4b38881f98 1777f34dd 14. Radford L. Theories in mathematics education: A brief inquiry into their conceptual differences. ICMI Surv Team 7 notion role theory Math Educ Res [Internet]. 2008;(Juni):1–17. Available from: http://pthurston.laurentian.ca/NR/rdonlyres/77731A60-1A3E-4168-9D3E-F65ADB37BAD/0/radfordicmist7.pdf 15. Applefield JM, Huber R, Moallem M. Constructivism in practice and theory: Toward a better understanding. High Sch J [Internet]. 2001;84(2):35–53.22. Available from: https://www.jstor.org/stable/40364404 16. Shepard LA. The role of assessment in teaching and learning [Internet]. Santa Cruz & Los Angeles, CA: CRESST/CREDE, University of California; 2000.23. Available from: https://www.cse.ucla.edu/products/reports/TECH517.pdf 17. Shepard LA. The Role of Assessment in a Learning Culture. Educ Res [Internet]. 2000;29(7):4–14. Available from: http://edr.sagepub.com/cgi/doi/10.3102/0013189X029007004 18. Journal for Research in Mathematics Education (https://www.nctm.org/Publications/journal-for-research-in-mathematics-education/All-Issues/) 19. Educational Studies in Mathematics (https://www.springer.com/journal/10649) 20. ZDM - International Journal on Mathematics Education (https://www.springer.com/journal/11858) 21. International Journal of Science and Mathematics Education (https://www.springer.com/journal/10763) 22. Journal of Mathematics Teacher Education (https://www.springer.com/journal/10857) 23. Mathematics Education Research Journal (https://www.springer.com/journal/13394) 24. Canadian Journal of Science, Mathematics and Technology Education (https://www.springer.com/journal/42330) 25. Research in Mathematics Education (https://www.tandfonline.com/toc/rrme20/current) 26. Advances in Mathematics Education (https://www.tandfonline.com/toc/rrme19/current) 27. International Journal of Mathematical Education in Science and Technology (https://www.tandfonline.com/toc/tmes20/current) 28. Mathematical Thinking and Learning (https://www.tandfonline.com/toc/hmtl20/current) 29. PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies (https://www.tandfonline.com/toc/upri20/current) 30. Journal of the Southern African Association for Research in Mathematics, Science and Technology Education39. (https://www.tandfonline.com/toc/rmse19/current)
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