

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>Digital Technology in Mathematics Learning</i>
Semester(s) in which the module is taught	<i>1</i>
Person responsible for the module	<i>Dr. Kuswari Hernawati S.Si., M.Kom. Wahyu Setyaningrum S.Pd., M.Ed., Ph.D. Dr. Sri Andayani S.Si., M.Kom.</i>
Language	<i>Indonesian.</i>
Relation to curriculum	<i>Compulsory.</i>
Teaching methods	<i>Lecture, discussion, hands-on practice, and assignment.</i>
Workload (incl. contact hours, self-study hours)	<i>Total workload is 90.67 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes self-study per week for 16 weeks.</i>
Credit points	<i>2</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. Identifying and examining issues related to the integration of information technology in mathematics instruction.</i> <i>CO2. Mastering software and IT applications for mathematics instruction.</i> <i>CO3. Explaining issues related to the performance of school and university students, classroom management, and evaluation in mathematics education.</i> <i>CO4. Reviewing IT-based applications and instructional media for mathematics learning.</i> <i>CO5. Developing IT-based applications to support mathematics learning and designing lesson plans that incorporate the developed applications.</i>

Content	<i>This course aims to provide insights into the use of ICT in mathematics instruction at schools. The topics covered include: (1) issues related to the integration of IT in mathematics learning; (2) software and IT applications for mathematics instruction; and (3) reviews of articles related to IT-based applications and instructional media. The final requirement of this course is for students to develop an IT-based application to support mathematics learning and to design a lesson plan utilizing the application they have created.</i>
Examination forms	<i>Assignments, presentations and written tests.</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: 5% ○ Assignment: 5% ○ Midterm Exam (UTS): 15% ○ Final Exam (UAS): 20% 2. Participatory Assessment (50%) <i>This includes:</i> ○ Case Study: 15% ○ Team-Based Project: 35% Total: 100%
Reading list	1. Herman Dwi Surjono, 2013. <i>Membangun Course e-learning berbasis moodle- edisi kedua</i>. UNY Press, Yogyakarta 2. https://www.desmos.com/ 3. https://www.geogebra.org/ 4. https://www.edmodo.com/