

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>Multilevel Modelling</i>
Semester(s) in which the module is taught	2
Person responsible for the module	<i>Kismiantini S.Si., M.Si., Ph.D.</i>
Language	<i>Indonesian.</i>
Relation to curriculum	<i>Elective.</i>
Teaching methods	<i>Lecture, Discussion, and Demonstration.</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	2
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<i>After taking this course the students have ability to:</i> <i>CO1. Demonstrating a responsible attitude in applying multilevel modeling.</i> <i>CO2. Explaining the concept of multilevel modeling to solve problems in multilevel data.</i> <i>CO3. Solving problems in multilevel modeling independently or in groups.</i> <i>CO4. Conducting processing, analysis, and interpretation of multilevel models based on data in the fields of education and social sciences.</i>
Content	<i>This course covers linear regression models, multilevel data structures, fitting two-level models, fitting three-level models, longitudinal data analysis using multilevel models, data visualization in multilevel models, generalized linear models (GLM), and multilevel generalized linear models.</i>
Examination forms	<i>Assignments, projects and written examinations.</i>

Study and examination requirements	<i>The course assessment is divided into two main components:</i> Cognitive Assessment (50%) <i>This includes the following elements:</i> - Attendance: 0% - Quiz: 5% - Assignment: 10% - Midterm Exam (UTS): 15% - Final Exam (UAS): 20% Participatory Assessment (50%) <i>This includes:</i> - Case Study: 0% - Team-Based Project: 50% Total: 100%
Reading list	- Finch WH, Bolin JE, & Kelly K. (2019). <i>Multilevel modeling using R 2nd edition</i>. New York: CRC Press. - Hox, JJ, Moerbeek M, van de Schoot R. (2018). <i>Multilevel analysis techniques and applications 3rd edition</i>. New York: Routledge. - Goldstein H. (2011). <i>Multilevel statistical modeling 4th edition</i>. West Sussex: John Wiley & Sons. - Snijders TA, & Bosker RJ. (2004). <i>Multilevel analysis: An introduction to basic and advanced multilevel modeling 2nd edition</i>. London: Sage. - Kismiantini., Setiawan, EP. (2023). <i>Analisis Multilevel dalam Hubungan Pola Pikir Berkembang dan Capaian Matematika Siswa Indonesia yang Dimoderasi oleh Status Sosial Ekonomi</i>