

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>Fuzzy Set Theory</i>
Semester(s) in which the module is taught	2
Person responsible for the module	<i>Prof. Dr. Agus Maman Abadi, M.Si.</i>
Language	<i>Indonesian.</i>
Relation to curriculum	<i>Elective.</i>
Teaching methods	<i>Lecture and discussion.</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. Explaining the basic concepts of fuzzy sets.</i> <i>CO2. Explaining the concepts of fuzzy operations and solving related problems.</i> <i>CO3. Explaining the concepts of fuzzy relations and solving related problems.</i> <i>CO4. Explaining the concepts of fuzzy logic and solving related problems.</i>
Content	<i>This course covers the fundamental concepts of fuzzy sets, fuzzy operations, fuzzy relations, and fuzzy logic, along with their applications in various fields. The learning process of Fuzzy Set Theory is conducted in a scientific, contextual, integrative, and interactive manner, with a student-centered approach.</i>
Examination forms	<i>Assignments and presentations.</i>

Study and examination requirements	<i>The course assessment is divided into two main components:</i> Cognitive Assessment (20%) <i>This includes the following elements:</i> - Attendance: 0% - Quiz: 0% - Assignment: 20% - Midterm Exam (UTS): 0% - Final Exam (UAS): 0% Participatory Assessment (80%) <i>This includes:</i> - Case Study: 40% - Team-Based Project: 40% Total: 100%
Reading list	A. Klir, G.J. Clair, U.S. Yuan B. 1997. <i>Fuzzy Set Theory : Foundations and Applications</i>. New Jersey : Prentice-Hall, Inc. - Wang, L.X..1997. <i>A Course in Fuzzy Systems and Control</i>. New Jersey : Prentice-Hall International, Inc. - A M Abadi, T A S Yusri, L Harini. 2023. <i>Prediksi Indeks Harga Saham Gabungan dengan Algoritma LSTM Berbasis Data Historis dan Analisis Teknikal</i>, Laporan Penelitian.