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	*Philosophy of Science.*
Semester(s) in which the module is taught	*1*
Person responsible for the module	*Prof. Dr. Marsigit MA.* *Prof. Dr. Ariyadi Wijaya S.Pd.Si., M.Sc.*
Language	*Indonesian*
Relation to curriculum	*Compulsory*
Teaching methods	*Lecture and discussion*
Workload (incl. contact hours, self-study hours)	*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.*
Credit points	*2*
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	*After taking this course the students have ability to:* *CO1. Able to plan and manage resources under their responsibility, and comprehensively evaluate their work by utilizing science and technology to generate steps for the development and application of Philosophy of Science.* *CO2. Able to solve problems in science, technology, and/or the arts within their field of expertise through the approach and application of the Philosophy of Science.* *CO3. Able to conduct research and make strategic decisions with full accountability and responsibility for all aspects of the development of the Philosophy of Science.*

Content	*This course is designed to explore and understand the foundational principles of mathematics education as a scientific discipline. In this course, students study the objects of inquiry and the characteristics of both mathematics and mathematics education. The course covers the following topics:* *(1) absolutist views of mathematics,* *(2) fallibilist views of mathematics,* *(3) mechanistic perspectives on mathematics education,* *(4) empirical perspectives on mathematics education,* *(5) structuralist perspectives on mathematics education, and* *(6) realistic perspectives on mathematics education.*
Examination forms	*oral presentation, essay, and writing test.*
Study and examination requirements	*The course assessment is divided into two main components:* 1. ***Cognitive Assessment (50%)*** *This includes the following elements:* ○ *Attendance: 2%* ○ *Quiz: 3%* ○ *Assignment: 5%* ○ *Midterm Exam (UTS): 15%* ○ *Final Exam (UAS): 25%* 2. ***Participatory Assessment (50%)*** *This includes:* ○ *Case Study: 30%* ○ *Team-Based Project: 20%* ***Total: 100%***
Reading list	*1. Ernest, P. (2010). The Philosophy of Mathematics Education. Washington DC: Routledge Falmer* *2. Leder, G.C., Pehkonnen, E., & Torner G. (2002). Beliefs: A hidden variable in mathematics education? Dordrecht: Kluwer Academic Publishers.* *3. Treffers, A. (1987). Three Dimensions: A Model ofGoal and Theory Description in Mathematics Instruction - The Wiskobas Project. Dordrecht: D. Reidel Publishing Company*