

Environmental Geographic Information System (GIS)



**MASTER PROGRAM OF ENVIRONMENTAL SCIENCE
SCHOOL OF POSTGRADUATE STUDIES
DIPONEGORO UNIVERSITY**



A Module Handbook or collection of module descriptions that is also available for students to consult should contain the following information about the individual modules:

Module design	Envionmental Geografic Information System (GIS)
Module level, if applicable	
Code, if applicable	CIL-2-2-701
Subtitles, if applicable	
Courses, if applicable	
Semester(s) in which the module is taught	2 nd Semester
Person responsible for the module	Dr. Eng. Maryono, S.T., M.T.
Lecturer	1. Prof. Dr. Denny Nugroho Sugianto, S.T., M.Si 2. Dr. Muhammad Helmi, S.Si., M.Si
Language	<i>Indonesian and English</i>
Relations to curriculum	
Type of teaching, contact hours	<i>Lecture: 60 minutes Q&A: 10 minutes Discussion: 10 minutes Presentation: 10 minutes</i>
Workload	<i>(Estimated) workload, divided into contact hours (lecture, exercise, laboratory session, etc.) and private study, including examination preparation, specified in hours,¹ and in total.</i>
Credit points	<i>2 credits</i>
Requirements according to the examination regulations	<i>Minimum attendance of lectures 75%</i>
Recommended prerequisites	<i>eg existing competences in...</i>

¹ When calculating contact time, each contact hour is counted as a full hour because of the organization of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Module objectives/intended learning outcomes	• Able to recognize the benefits of GIS-based software in responding to environmental problems. • Able to operate GIS-based software to answer environmental problems.
Content	In this course, students will learn one of the main objectives of geographic information systems, namely the use of computer-based systems to manage geographic data. The theoretical basis of geographic information systems, components, data formats, and methods of processing spatial data will be provided so that students will know how to compile, process, analyze, and interpret spatial data in geographic information systems. To understand and gain experience in compiling spatial data, students will be given the task of compiling simple spatial data compiled as attribute data in spatial data. The process of converting spatial data used in geographic information systems will also be given in this course.
Study and examination requirements and forms of examination	• <i>Open book and close book</i> • <i>Multiple choice, case study, interview, practice</i>
Media employed	<i>Powerpoint, youtube, website</i>
Reading list	1. Charter, Denny, dan Irma Agtrisari. 2003. <i>Desain dan Aplikasi Geographics Information System</i>. Jakarta : PT. Elex Media Komputindo. 2. Prahasta, E. 2007. <i>Sistem Informasi Geografis: Tutorial ArcView</i>, Bandung: Informatika.