

Title of Module:  
**Health Information System**

Coordinator(s) / organiser(s):  
 Dr. Hari Basuki Notobroto, dr., M.Kes. (Module Leader)

Teaching Faculty

Title	Name	Qualifications*	Hours contributed
Dr.	Hari Basuki Notobroto	dr., M.Kes., Dr.	11.2
Dr.	Soenarnatalina Melaniani	Ir., M.Kes., Dr.	14.4
Dr.	Arief Wibowo	dr., M.S., Dr.	14.4
Dr.	Mahmudah	Ir., M.Kes., Dr.	11.2
Dr.	Diah Indriani	S.Si., M.Si., Dr.	11.2
Mr.	Tito Yustiawan	drg., M.Kes	8.8
Mrs.	Ratna Dwi Wulandari	S.KM., M.Kes	8.8

\* PhD, Master, 20 years service(in practice) etc. Only provide details for faculty responsible for 25% or more of course load.

Core /elective or optional:	Core: Health Information System (SII310)  Elective: Geographic Information System and Spatial Analysis (SII314) Health Management Information System (SID301)
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Number of SKS credits allocated	Student's workload in hours	Contact work hours*	Self-study work hours
6 SKS	272	80	192

\* includes lectures, seminars, face-to-face, assessments

Learning competences / objectives

On successful completion of this modules students will be able to:

Health Information System:

1. Explain definition, basic concepts and benefits of Health Information Systems
2. Manage and apply various forms of data collection in Health Institutions
3. Manage and analyze health data for health decision maker

Geographic Information System and Spatial Analysis:

1. Explain the basic concepts in geographic information systems and spatial analysis
2. Integrate spatial data and attribute data to present geographic map
3. Analyze spatial data using geographic application
4. Arrange geographic map for visualizing the health problems
5. Arrange geographic map for health surveillance

Health Management Information System:

1. Determine the usefulness and limitation of data

2. Evaluate the integrity and comparability data
3. Use ethical principles for collecting data and information
4. Make a relevant inference from qualitative and quantitative data
5. Take and interpret data and information related to the risks and benefits
6. Implement data collection and information technology application
7. Use media, technology, and network to disseminate the information

Syllabus content. Brief overview of syllabus using bullet points.

Health Information System:

- Understanding and concept of Health Information System (HIS)
- Health Information Systems and Data Management in Indonesia
- Utilization of Health Information System in surveillance
- Health indicators
- Medical Health Record
- Disease Classification System
- Development of Database
- Health Information Network System

Geographic Information System and Spatial Analysis:

- Introduction to Geographic Information Systems
- Develop geographic map (thematic map, data spasial dot/ line/ poligon, overlay, buffer)
- Dependency spasial
- Spasial correlation (I'Morant statistics)
- Spatial regression (Spatial Error, Spatial Lag)

Health Management Information System:

- Basics of the concepts of health and hospital Management Information System (MIS):
- Planning of the health and hospital MIS
- Organizing of the MIS
- Implementation of the MIS
- Controlling of the MIS
- Monitoring and evaluation of MIS

Module level timetable - indicate the timing of the teaching sessions from the upcoming teaching year:

Health Information System: 4<sup>th</sup> semester

Geographic Information System and Spatial Analysis: 7<sup>th</sup> semester

Health Management Information System: 7<sup>th</sup> semester

Pedagogic/teaching methodology:

Scheduled learning includes lectures which delivering the content to the students with presenting technical assistance and ask student to discuss about the actual real life cases which are given by lecturer.

During lecture in the classroom, the lecturer gives the didactic question to the students. It can make a chance for the student to ask the topic related questions immediately and then they can get answers from the lecturer and the peer group. The lecturer uses a geographic information system software for demonstrating data spatial analysis.

The exercise method is done by giving quiz to the students at every meeting as well as measuring the ability of the students.

Assessments used:

There are three types of examination:

1. Middle examination (30%)
2. Final examination (30%)
3. Soft skills (40%)

Each examination takes 100 minutes including multiple choice questions, essays and short answer questions to assess the students' analyzing skills, knowledge and all learning outcomes of the module.

Soft skills are assessed by lecturer and peer group in each meeting, such as:

- a. Basic interpersonal skill
- b. Communication skill
- c. Group skill
- d. Social skill
- e. Problem solving skill

Weeks required and place in academic calendar:	Number of weeks	Week number
Health Information System Weeks beginning, 02/2019-05/2019	16	17-32
Geographic Information System and Spatial Analysis Weeks beginning, 08/2020-11/2020	16	01-16
Health Management Information System Weeks beginning, 08/2020-11/2020	16	01-16