

Title of Module:

Basic Biostatistics

Coordinator(s) / organiser(s):

Dr. Rachmah Indawati, S.KM., M.KM. (Module Leader)

Teaching Faculty

Title	Name	Qualifications*	Hours contributed
Dr.	Rachmah Indawati	S.KM., M.KM., Dr.	11.2
Dr.	Soenarnatalina Melaniani	Ir., M.Kes., Dr.	14.4
Dr.	Windhu Purnomo	dr., M.S., Dr.	8
Dr.	Arief Wibowo	dr., M.S., Dr.	8
Dr.	Hari Basuki Notobroto	dr., M.Kes., Dr.	8
Dr.	Mahmudah	Ir., M.Kes., Dr.	10.4
Dr.	Diah Indriani	S.Si., M.Si., Dr.	12
Mr.	Sigit Ari Saputro	S.KM., M.Kes.	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:

Elementary Biostatistics (MAS111)

Inferential Biostatistics (MAS233)

Basic Statistics Application (Integrating Experience see section 7)

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 module students will be able to:

1. Explain the definition, scope, and role of biostatistics, data collection, and data
2. Describe descriptive statistics and calculate the central size
3. Calculate the size of the diversity and position
4. Use the appropriate for data presentation
5. Calculate the probability distribution
6. Describe the procedure, execution, presentation, interpretation of data
7. Define inferential biostatistics
8. Concluding the result of t test calculation; t test 2 samples
9. Concluding the results of one-way Anova calculations and multiple comparison tests
10. Summing up the result of linear correlation calculation and calculation result of simple linear regression

11. Summing up the calculation of Chi square

Syllabus content. Brief overview of syllabus using bullet points.

- Understanding, scope, role of statistics, data and data scale
- The concept and function of descriptive statistics
- Population and sample, and function
- Presentation of data
- The concept of inferential statistics,
- The concept of descriptive and inferential statistics and descriptive statistics
- The concept of probability and the principle of calculating probabilities (discrete and continue)
- Distribution of samples
- Step in test hypothesis
- Estimates
- Data management, data analysis and explaining results
- Principles and applications one sample and two samples T-test
- Principles and applications of one way Anova
- Simple linear correlation concepts and applications
- Simple linear regression and application concepts
- The category data test includes independent chi square test and fisher

Module level timetable - indicate the timing of the teaching sessions from the previous, current, and upcoming teaching year:

Elementary Biostatistics: 09.00 – 11.00 a.m., Monday, 2nd semester

Inferential Biostatistics: 09.00 – 11.00 a.m., Tuesday, 3rd semester

Pedagogic/teaching methodology:

Scheduled learning includes lectures and discussions about the actual real life cases which are given by lecturer.

The lecture method used is by delivering the material from the lecturer to the student simultaneously with the example of case simulation at each meeting. It makes the students practicing biostatistic skills repeatedly on his own.

Students in the class are divided into small groups. Each group will get a different topic to discuss related the topic and will present it.

The exercise method is done by giving quiz to the students at several meetings as well as measuring the ability of the students before the middle and semester exams.

Assessments used:

There are three types of assessment:

1. Middle examination (40%)
2. Final examination (40%)

3. Structured assignment (20%)

Each examination takes 100 minutes including essays and short answer questions. The examination assesses the students' knowledge and understanding and all learning outcomes of the module. Structured assignment is given by making a portfolio then the students present it.

Weeks required and place in academic calendar:	Number of weeks	Week number
Elementary Biostatistics Monday, 09.00-11.00 a.m. Weeks beginning 12/02/2018-28/05/2018	16	01-16
Inferential Biostatistics Tuesday, 09.00 – 11.00 a.m. Weeks beginning 14/08/2018-27/11/2018	16	17-32