

Title of Module:

**Toxicology**

Coordinator(s) / organiser(s):

Prof. Soedjajadi Keman, dr., M.S., M.PH. (Module Leader)

Teaching Faculty

Title	Name	Qualifications*	Hours contributed
Professor	Soedjajadi Keman	dr., M.S., Ph.D.	8
Professor	J. Mukono	dr., M.S., M.PH., Dr.	7.2
Dr.	Abdul Rohim Tualeka	Drs., M.Kes., Dr.	9.6
Dr.	Noeroel Widajati	S.KM., M.Sc., Dr.	7.2
drh.	Meirina Ernawati	drh., M.Kes.	7.2
dr.	Kusuma Scorpia Lestari	dr., M.KM.	7.2
dr.	Sho'im Hidayat	dr., MS.	11.2
Mr.	Dani Nasirul Haqi	S.KM., M.KKK.	6.4
Ms.	Putri Ayuni Alayyannur	S.KM., M.KKK.	8
Ms.	Corie Indria Prasasti	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:

Elective:

Occupational Toxicology I (FAT304)

Occupational Toxicology II (FAT305)

Environmental Toxicology (FAT206)

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:

Occupational Toxicology I and II:

1. Define problems about occupational toxicology
2. Evaluate integrity and comparability of data about occupational toxicology
3. Express the policy options and formulate them clearly and densely
4. Decide on the appropriate action to be taken to solve the problem related to occupational toxicology
5. Understand the impact of the occupational exposure on the worker's health status

Environmental Toxicology:

1. Explain environmental toxicology
2. Explain the kinds and sources of toxic materials in environment

3. Explain the process and negative effects of pollutant materials on the human body
4. Explain the analysis and prevention efforts of environmental pollutants

Syllabus content. Brief overview of syllabus using bullet points.

Occupational Toxicology I:

- Chemical and physical properties of toxic materials
- Toxicokinetics
- Toxicodynamics
- Principles of chemical toxicology

Occupational Toxicology II:

- Toxic effects of metals and solutions
- Toxic effects of insecticides, herbicides and fungicides,
- Toxic effects of fibrogenic dusts,
- Toxic effects of gases

Environmental Toxicology:

- Meaning and scope of environmental toxicology
- Kinds and sources of toxic materials in the environment
- The process and negative effects of pollutants in the human body
- Analysis and prevention efforts of pollutants

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

Occupational Toxicology I: 6<sup>th</sup> semester

Occupational Toxicology II: 7<sup>th</sup> semester

Environmental Toxicology: 7<sup>th</sup> semester

Pedagogic/teaching methodology:

Scheduled learning includes lectures, discussions about the actual real life cases, and seminars in groups for applying problem solving techniques to solve real life issues which are given by lecturer. During lecture in the classroom, the lecturer gives the didactic question and creates a chance for students to deliver their thought about specific case. Students are asked to adapt the critical thinking for solving health problem.

In many meetings, the lecturer tends to ask the students making simulation for improving their capability understanding those topics.

Lecturer presents the teaching materials with LCD and whiteboard. In one class, all the students are divided into small groups. Each group has to discuss the topic determined by the lecturer and present the results to the class.

Independent learning includes hours engaged with essential reading, assignment preparation and completion and self-directed study. Students are provided with access to essential and supplementary learning via email or e-learning (AULA) and whiteboard.

Assessments used:

There are three types of examination:

1. Middle examination (40%)
2. Final examination (40%)
3. Group examination (20%)

Each examination takes 100 minutes includes multiple choice questions, essays, short answer questions, and case studies. The examination assesses the students' knowledge and understanding and all learning outcomes of the module. For the examination, students are allowed to use text books. For the group examination, students have to work out a problem and its solution in a written report then present it.

Weeks required and place in academic calendar:	Number of weeks	Week number
Occupational Toxicology I Weeks beginning 02/2020-05/2020	16	17-32
Occupational Toxicology II Weeks beginning 08/2020-11/2020	16	01-16
Environmental Toxicology Weeks beginning 08/2020-11/2020	16	01-16