

Toxicology

Syllabus Number

5L362

Special Subjects

Elective 2 credit

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1. Course Description

The first part of the course deals with the evaluation of toxicity and biotransformation of chemical substances. The latter part deals with the specialized study of chemical substances.

2. Course Objectives

After completing this course, students will have acquired the following knowledge and understanding.

1. Basic concepts of toxicology and typical toxic incidents.
2. Knowledge and application of toxicity tests.
3. Biotransformation of chemical substances (absorption, distribution, metabolism, excretion).
4. Toxicological mechanisms of inorganic compounds, organic compounds, poisonous gases, and naturally occurring poisons.
5. Knowledge of drug abuse (narcotic drugs, stimulant drugs, hemp, psychotropic drugs).

3. Grading Policy

Evaluate according to the result of periodic test (100%).

Example answers and explanations of the exam will be uploaded on LMS.

4. Textbook and Reference

Textbook

Lecture materials are uploaded on LMS.

5. Requirements(Assignments)

- Before the lecture, preparing for the contents of the next lecture document uploaded on LMS. (1hr)
- After the lecture, review the lecture contents and solve the confirmation test. (2hr)

6. Note

7. Schedule

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| [1] | Introduction to Toxicology |
| [2] | History of poisons and human |
| [3] | Toxic incidents, pollution issues and harmful effects of medicine |
| [4] | Toxicity tests and assessment of the safety of chemical substances |
| [5] | Biotransformation of chemical substances (absorption, distribution, metabolism, excretion) |
| [6] | Chemical carcinogenesis |
| [7] | Toxicity of inorganic chemical substances (Cd, Pb, Hg, As etc.) |
| [8] | Toxicity of organic chemical substances (PCB, Dioxin, Pesticide etc.) |
| [9] | Toxicity of naturally occurring poisons |
| [10] | Toxicity of poisonous gases and pathogenic microorganism |
| [11] | Effective utilization of poisons |
| [12] | Poisoning accident with the chemical substance and its treatments |
| [13] | Drug abuse (narcotic drugs, stimulant drugs, hemp, psychotropic drugs) |
| [14] | Legal regulations of chemical substances |
| [15] | Test, Review |