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| **Course title**Toxicology – ERASMUSToksykologia – ERASMUS  | **ECTS code**13.3.1283 |
| **Name of unit administrating study** Faculty of Chemistry |
| **Studies**

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| **Field of study** | **Type** | **Form** |  |
| Chemistry | Bachelor  | Full-time studies  |  |
| Chemistry | Master | Full-time studies |  |
| Environmental sciences | Bachelor | Full-time studies |  |

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| **Teaching staff**dr hab. Dagmara Strumińska-Parulska, prof. UG; dr Grzegorz Olszewski |
| **Forms of classes, the realization and number of hours**  | **ECTS credits 4**  classes 30 htutorial classes 20 hstudent’s own work 30 hTOTAL: 100 h - 4 ECTS |
| 1. **Forms of classes, in accordance with the UG Rector’s regulations**

Lecture |
| 1. **The realization of activities**

In-class or on-line |
| 1. **Number of hours**

30 h – lecture and presentations |
| **The academic cycle**winter |
| **Type of course**facultative | **Language of instruction**English |
| **Teaching methods**Seminars with multimedia presentation | **Form and method of assessment and basic criteria for evaluation or examination requirements**  |
| **A. Final evaluation, in accordance with the UG study regulations** course completion (with a grade) |
| **B. Assessment methods** Writing exam |
| **C. The basic criteria for evaluation or exam requirements**Evaluation criteria in accordance with the UG Studies Regulations; |
| **Required courses and introductory requirements** no requirements |
| **Aims of education**Acquaint the students with history and basics of toxicology. Understanding terminology and basic concepts from toxicology. Understanding the risk of basic toxic metals contamination, toxic plants and food additives. Acquaint the basics of radiotoxicology.**Convergent to:** general and inorganic chemistry, physical chemistry, analytical chemistry, instrumental analysis, |
| **Course contents**History and aims of toxicology. Milestones in toxicology. Poisons and poisonings. Basic terms in toxicology. Basic factors of contamination and poisoning. Dose-effect. Absorption routes - ADME. Toxicity mechanisms. Chemical safety. Toxicometry – toxic effects and tests. Risk assessment of chemical substances toxic effects. Toxic plants and their active substances. Toxicity of pesticides and metals. Radiotoxicology and radiation protection. |
| **Bibliography of literature** Murray L., Daly F., Little M., Cadogan M., Toxicology Handbook, Elsevier, 2015Hodgson E., A Textbook of Modern Toxicology, John Wiley & Sons, 2011 |
| **Knowledge**1. knows the goals and tasks of toxicology,2. knows and understands terminology and basic concepts in toxicology,3. knows the general ideas of toxicology,4. knows the types and mechanisms of poisoning and general principles of prevention against poisoning,5. knows the structure and dynamic properties of selected toxic metals,6. knows national and selected foreign poisonous plants,7. knows the risks associated with the use of pesticides and selected food additives.8. knows the risk of ionizing radiation impact on living organisms. |
| **Skills**1. uses the correct toxicological terminology,2. conducts environmental toxicological interview,3. protects materials for toxicological tests,4. identifies national poisonous plants,5. uses the professional toxicological literature. |
| **Social competence**1. is aware of the risk of toxic substances in the human environment,2. makes the public aware of surrounding, readily available poisonous substances. |