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| **Course title**  Inorganic synthesis – ERASMUS  Preparatyka nieorganiczna – ERASMUS | | | **ECTS code**  13.3.1271 |
| **Name of unit administrating study**  Faculty Chemistry | | | |
| **Studies**   |  |  |  |  | | --- | --- | --- | --- | | **Field of study** | **Type** | **Form** |  | | Chemistry | Bachelor | Full-time studies |  | | Chemistry | Master | Full-time studies |  | | | | |
| **Teaching staff**  dr hab. Dariusz Wyrzykowski | | | |
| **Forms of classes, the realization and number of hours** | | **ECTS credits 5**  classes 45 h  tutorial classes 20 h  student’s own work 60 h  TOTAL: 125 h - 5 ECTS | |
| 1. **Forms of classes, in accordance with the UG Rector’s regulations**   laboratory classes | |
| 1. **The realization of activities**   In-class | |
| 1. **Number of hours**   45 h - laboratory | |
| **The academic cycle**  winter | | | |
| **Type of course**  facultative | **Language of instruction**  English | | |
| **Teaching methods**  Laboratory experiments | **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 test | | |
| **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 the course content  **Convergent to:** inorganic chemistry, general chemistry | | | |
| **Course contents**  Synthetic methods of coordination and inorganic chemistry, laboratory methods used in the preparation of inorganic and coordination compounds, quantitative and qualitative analysis of the obtained chemical compounds, physicochemical properties of inorganic and coordination compounds, physico-chemical characteristics of inorganic and coordination compounds (instrumental techniques used for assessment of control quality). | | | |
| **Bibliography of literature**  Coordination Chemistry Reviews | | | |
| **Knowledge**  Know the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. Knowledge of the Principles of Chemical Nomenclature (inorganic and coordination compounds), know the nomenclature of Coordination Complexes and inorganic compounds, know the synthetic principles of generating elements, coordination compounds and complex inorganic architectures, have a knowledge about inorganic catalysis, be able to apply the appropriate analytical techniques for the identification and characterization of inorganic compounds, be able to plan experimental work according to timeframe given and look after tidiness and safety of working area, know the application of the most important inorganic substances and coordination compounds in various branches of industry, protection of human health and everyday life. | | | |
| **Skills**  This skills will focus in the synthesis and analysis of inorganic compounds, focusing primarily on coordination compounds and their spectroscopy, syntheses in aqueous solution "soft chemistry", structural and physical properties characterizations, use a range of physical methods to characterize chemical compounds, determine the appropriate characterization techniques for different classes of inorganic materials, determine the appropriate separation/isolation techniques for different classes of inorganic materials. | | | |
| **Social competence**  Takes care of entrusted equipment, respects the work of his/her own and others, is ready for teamwork and substantive  discussion. Has the appropriate habits of work in the inorganic chemistry laboratory, in particular with toxic and caustic substances, with the gas torch work, is acting in accordance with the principles of occupational health and safety, knows the principles of proceedings in emergency. Upgrading his/her own competences in basic level according to classes content. Has awareness of need improving own competences. Participate actively in discussions. Improves his/her social competences above program of classes. Extremely effectively participates in discussion. Creates a climate of openness and solidarity in the group | | | |