

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Pharmacy	
Course ID: FaF.KChTL/06-Mgr-A/26	Course title: General and Inorganic Chemistry
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning	
Number of credits: 9	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Seminars: The student is required to complete all seminars during semester. During the course each student must write 3 interim tests (max 20 points each). The exam admission requires to reach more than 60% of the total maximum point score from all tests. Laboratory exercises: During the semester, the student is required to complete all laboratory exercises. According to the study programme he/she must write one test from the laboratory techniques (0-40 points) and independently perform one synthetic work (0-10 points). The exam admission requires to reach more than 60% of the total maximum point score from the laboratory exercises. The points reached within the seminars and laboratory work are multiplied by the factor of 0,3 and their value is 30% of the exam grade in case of a successful completion of the exam. The coefficient obtained from the seminars applies solely to the academic year in which it was obtained. Exam: The participation in the exam is conditioned by the full completion of the seminars and laboratory exercises programme and by the acquisition of more than 60% of the total maximum point score from the seminars and more than 60% of the total maximum point score from the laboratory exercises. In case of an in-person exam, the whole exam is taken in writing. In case of an on-line exam, the exam consists of the written part and of the oral part. To pass the in-person exam successfully, the student must reach more than 60 % of the maximum point score in the General Chemistry part and more than 60 % of the maximum point score in the Inorganic Chemistry part. To pass the on-line exam successfully, the student must reach more than 60 % of the maximum point score in the written exam part and more than 60 % of the maximum point the General Chemistry oral exam part and more than 60 % of the maximum point score in the Inorganic Chemistry oral exam part. The mean final percentage obtained from all exam parts is then multiplied by the factor of 0,7. The final exam grade is composed from the part obtained for seminars (30%) and from the part obtained for laboratory exercises and the examination test (70%). Grading scale of the overall result of the exam (after considering the outcome of the interim control): A: 92,00 % – 100,00 %; B: 84,00 % – 91,99 %; C: 76,00 % – 83,99 %; D: 68,00 % – 75,99 %; E: 60,00 % – 67,99 %; Fx: 0,00 - 59,99 %.	

Scale of assessment (preliminary/final): 30/70						
Learning outcomes: The aim of the course is to acquire the basic knowledge of general and inorganic chemistry. In the context of teaching the course will give students basic laboratory skills and carry out the synthesis of selected types of inorganic compounds. The gained knowledge and skills are necessary for the completion of the other chemical courses, such as Organic Chemistry 1, 2 and are also needed for the pharmaceutically oriented courses, e.g. Pharmaceutical Chemistry.						
Class syllabus: The course of General and Inorganic Chemistry is the first principal subject in the complex chemical preparation of students of pharmacy. The first part – general chemistry – includes topics such needed as the theoretical base of the follow up courses of chemical, pharmaceutical, biological and medical orientation. Great attention is paid to the issue of the chemical bond and the structure of substances, in particular to their relevance in explaining the characteristics of pharmaceutical compounds, including their pharmacotherapeutic effects. In the second part of the course – systematic inorganic chemistry – the chemistry of elements and their compounds is presented according to their rational division into the groups of the periodic system of elements. Alongside with the interpretation of the nature of the chemical reactivity of elements and their compounds, emphasis is laid on their use in pharmacy and medicine on the basis of their function, place and importance in biological systems. Needed attention shall be paid to the environmental education. The course is comprehensively designed, focusing on Master Degree accredited study programme of Pharmacy. Further pharmaceutically significant knowledge from the systematic inorganic chemistry is supplemented in the course of Selected Chapters in Inorganic Chemistry. Teaching includes self-study of educational videos, assigned problems and independent student work.						
Recommended literature: 1. C. E. Housecroft, A. G. Sharpe: Inorganic Chemistry, 4th Edition, Pearson Publ. 2012. 2. J. C. Kotz, P. M. Treichel, J. R. Townsend: Chemistry & Chemical Reactivity, 7th Edition, Brooks/Cole 2010. 3. K. A. Strohfeldt: Essentials of Inorganic Chemistry for Students of Pharmacy, Pharmaceutical Sciences and Medicinal Chemistry, Wiley 2015 4. L. Habala, L. Lintnerová, N. Miklášová, M. Kohútová: Chemical calculations and introduction to laboratory work in general and inorganic chemistry, Univerzita Komenského v Bratislave, 2024						
Languages necessary to complete the course: English language						
Notes: The course is held only in winter semester.						
Past grade distribution Total number of evaluated students: 0						
A	ABS	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Ing. Martin Pisárčik, CSc., doc. Ing. Ladislav Habala, Dr.rer.nat., Mgr. Lucia Lintnerová, PhD.						
Last change: 11.06.2026						

Approved by: prof. PharmDr. Ján Klimas, PhD., MPH