

# Course description

**Course abbreviation:** KCH/SANC1  
**Course name:** Seminar - Inorganic Chemistry 1  
**Academic Year:** 2016/2017

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<b>Department/Unit /</b>	KCH / SANC1	<b>Academic Year</b>	2016/2017
<b>Title</b>	Seminar - Inorganic Chemistry 1	<b>Type of completion</b>	Pre-Exam Credit
<b>Accredited/Credits</b>	Yes, 2 Cred.	<b>Type of completion</b>	Oral
<b>Number of hours</b>	Seminář 2 [Hours/Week]	<b>Course credit prior to</b>	NO
<b>Occ/max</b>	Status A      Status B      Status C	<b>Counted into average</b>	NO
<b>Summer semester</b>	0 / -      34 / -      0 / 0	<b>Min. (B+C) students</b>	not determined
<b>Winter semester</b>	0 / 0      0 / 0      0 / 0	<b>Repeated registration</b>	NO
<b>Timetable</b>	Yes	<b>Semester taught</b>	Winter, Summer
<b>Language of instruction</b>	Czech	<b>Počet dnů praxe</b>	0
<b>Substituted course</b>	None		
<b>Preclusive courses</b>	N/A		
<b>Prerequisite</b>	N/A		
<b>Informally recommended courses</b>	N/A		
<b>Courses depending on this Course</b>	N/A		

## Course objectives:

### Aims

The subject deals with study of properties of elements and the single inorganic compounds including their theoretical and practical applications. Theoretical base of the laboratory preparation of the selected inorganic compounds, their isolation and characterization.

## Requirements on student

Evaluation of the subject as well as the exam grading is made according to the articles No 31 - 33 in the Regulations on Study and Examinations University of Ostrava

## Content

### Content

- 1 Periodic table of elements, relations, assessment of properties of elements and their compounds according their position in periodic table.
- 2 Solubility of compounds, estimation of the precipitating reactions courses. Strengths of acids and bases, neutralization, salt cake process, hydrolysis.
- 3 Stability of the elements oxidative state, Frots' s diagrams, estimation of the redox reactions courses, oxidizing and reducing agents.
- 4 Test
- 5 Reactions of the 1. and 2. group elements and their compounds
- 6 Reactions of the 13. and 14. group elements and their compounds
- 7 Test
- 8 Reactions of the 15. group elements and their compounds
- 9 Reactions of the 16. and 17. group elements and their compounds
- 10 Test
- 11 The seminary reports
- 12 The seminary reports
- 13 The seminary reports and the credits awarding

## Prerequisites - other information about course preconditions

none

**Competences acquired**

## Competences

The students can predict the basic reactions courses in inorganic chemistry. They orientate in reactivity of s- and p-elements and their compounds.

**Studijní opory****Guarantors and lecturers**

- **Guarantors:** doc. RNDr. Václav Slovák, Ph.D.
- **Seminar lecturer:** doc. RNDr. Václav Slovák, Ph.D.

**Literature**

- **Basic:** Leško,J. - Tržil,J. - Štarha,R. *Anorganická chemie, VŠB-TU Ostrava,2000..*
- **Recommended:** Housecroft E.H., Sharpe A.G. *Anorganická chemie.* Praha, 2014.

**Time requirements**

Activities	Time requirements for activity [h]
Being present in classes	26
Preparation for test	24
<b>Total:</b>	<b>50</b>

**assessment methods****professional knowledge**

Continuous analysis of student's achievements

**teaching methods****professional knowledge**

Dialogic (discussion, dialogue, brainstorming)

**learning outcomes****professional knowledge - knowledge resulting from the course:**

Competences

The students can predict the basic reactions courses in inorganic chemistry. They orientate in reactivity of s- and p-elements and their compounds.

**Course is included in study programmes:**

Study Programme	Type of	Form of	Branch	Stage	St. plan v.	Year	Block	Status	R.year	R.
Chemistry	Bachelor	Full-time	Chemistry	1	2012	2016	Povinně volitelné předměty	B	1	LS
Chemistry	Bachelor	Full-time	Chemistry with Other Degree Specialization	1	2	2016	Povinně volitelné předměty	B	1	LS
Chemistry	Bachelor	Full-time	Chemistry with Other Degree Specialization	1	2014	2016	Povinně volitelné předměty	B	1	LS
Physics	Bachelor	Full-time	Chemistry with Other Degree Specialization	1	2014	2016	Povinně volitelné předměty	B	1	LS