

# Course description

**Course abbreviation:** KCH/OBCH1  
**Course name:** General Chemistry 1  
**Academic Year:** 2016/2017

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<b>Department/Unit /</b>	KCH / OBCH1	<b>Academic Year</b>	2016/2017
<b>Title</b>	General Chemistry 1	<b>Type of completion</b>	Exam
<b>Accredited/Credits</b>	Yes, 4 Cred.	<b>Type of completion</b>	Combined
<b>Number of hours</b>	Přednáška 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>	YES
<b>Summer semester</b>	0 / -      0 / -      0 / -	<b>Min. (B+C) students</b>	not determined
<b>Winter semester</b>	52 / -      0 / 0      0 / 0	<b>Repeated registration</b>	NO
<b>Timetable</b>	Yes	<b>Semester taught</b>	Winter semester
<b>Language of instruction</b>	Czech	<b>Internship duration</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**  
Study of the general relations and laws that are a necessary prerequisite for further study of chemistry. It covers interpretation of basic chemical concepts, basic knowledge about atom structure, and periodic table of elements, chemical bonds and chemical reactions.

## Requirements on student

**Requirements**  
Requirements for the subject finishing:  
Participating in the written part of exam (minimum 60% of points)  
Participating in the oral part of exam

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. Basic chemical concepts and laws.
  2. Atomic nucleus
  3. Atomic electron shell
  4. Periodic law and periodic table of elements.
  5. Chemical bond.
  6. Chemical reactions.
  7. Bases of chemical thermodynamics
  8. Bases of chemical kinetics

## Prerequisites - other information about course preconditions

none

## Competences acquired

**Competences**

The students know basic concepts from the field of general chemistry (in accordance with the subject content). They can justify validity of the general relations from the field of general chemistry (in accordance with the subject content). They can explain the selected phenomena and processes from the field of general chemistry (in accordance with the subject content). They explain formation of chemical bond and describe the individual types of chemical bonds and their properties. They consciously use connection between structure and properties of organic for explaining and justifying.

**Fields of study****Guarantors and lecturers**

- **Guarantors:** doc. PaedDr. Dana Kričfaluši, CSc.
- **Lecturer:** doc. PaedDr. Dana Kričfaluši, CSc.

**Literature**

- **Recommended:** Klikorka, J., Hájek, B., Votinský, J. *Obecná a anorganická chemie*. SNTL, Praha, 1989.
- **Recommended:** Žúrková, L. *Obecná chémia*. SPN, Bratislava, 1985.
- **Recommended:** Vacík, J. *Obecná chemie*. SPN, Praha, 1986.
- **Recommended:** Polák, R., Zahradník, R. *Obecná chemie: stručný úvod*. Academia Praha, 2000.

**Time requirements**

Activities	Time requirements for activity [h]
Being present in classes	26
Self-tutoring	26
Preparation for an exam	40
Consultation of work with the teacher/tutor (incl. electronic)	8
<b>Total:</b>	<b>100</b>

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

- Oral examination
- Written examination

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

- Dialogic (discussion, dialogue, brainstorming)
- Monologic (explanation, lecture, briefing)
- Projection (static, dynamic)

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

The students know basic concepts from the field of general chemistry (in accordance with the subject content). They can justify validity of the general relations from the field of general chemistry (in accordance with the subject content). They can explain the selected phenomena and processes from the field of general chemistry (in accordance with the subject content). They explain formation of chemical bond and describe the individual types of chemical bonds and their properties. They consciously use connection between structure and properties of organic for explaining and justifying.

**Course is included in study programmes:**

Study Programme	Type of	Form of	Branch	Stage	St. plan v.	Year	Block	Status	R.year	R.
Applied Physics	Bachelor	Full-time	Biophysics	1	2014	2016	Povinné předměty	A	1	ZS
Applied Physics	Bachelor	Full-time	Biophysics	1	2012	2016	Povinné předměty	A	1	ZS
Chemistry	Bachelor	Full-time	Chemistry	1	2012	2016	Povinné předměty	A	1	ZS
Chemistry	Bachelor	Full-time	Chemistry with Other Degree Specialization	1	2	2016	Povinné předměty	A	1	ZS
Chemistry	Bachelor	Full-time	Chemistry with Other Degree Specialization	1	2014	2016	Povinné předměty	A	1	ZS
Physics	Bachelor	Full-time	Chemistry with Other Degree Specialization	1	2014	2016	Povinné předměty	A	1	ZS