

Course description

Course abbreviation:	KCH/ITECH	Page:	1 / 2
Course name:	Information and Communication Technology		
Academic Year:	2016/2017	Printed:	22.05.2018 09:59

Department/Unit /	KCH / ITECH	Academic Year	2016/2017
Title	Information and Communication Technology	Type of completion	Pre-Exam Credit
Long Title	Information and Communication Technology in Chemistry		
Accredited/Credits	Yes, 2 Cred.	Type of completion	Oral
Number of hours	Přednáška 1 [Hours/Week] Seminář 1 [Hours/Week]		
Occ/max	Status A Status B Status C	Course credit prior to	NO
Summer semester	0 / - 8 / - 0 / 0	Counted into average	NO
Winter semester	0 / - 0 / - 0 / -	Min. (B+C) students	not determined
Timetable	Yes	Repeated registration	NO
Language of instruction	Czech	Semester taught	Summer semester
Substituted course	None	Internship duration	0
Preclusive courses	N/A		
Prerequisite	N/A		
Informally recommended courses	N/A		
Courses depending on this Course	N/A		

Course objectives:

The course introduces students to the possibilities of using ICT in chemistry.

Requirements on student

Suited to processing continuous orders and projects, including preparation of laboratory protocols.

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

Key thematic areas:

1. Internet for Chemists - information retrieval, selected services and resources.
2. ICT and database systems in chemistry.
3. Selected 2D and 3D software for modeling and presentation of chemical formulas.
4. Overview of the basic possibilities of using ICT in chemistry to create documents, presentations and data processing.
5. Computer-aided chemical experiment.

Prerequisites - other information about course preconditions

none

Competences acquired

Competences

Extending of knowledge and skills at the work with the basic application software (MS Office), skill of work with the basic software for the chemical formulas presentation, skill of looking up information in the basic chemical information sources.

Fields of study

Guarantors and lecturers

- **Guarantors:** Mgr. Martin Mucha, Ph.D.

- **Lecturer:** Mgr. Martin Mucha, Ph.D.
- **Seminar lecturer:** Mgr. Martin Mucha, Ph.D.

Literature

- **Basic:** KRIČFALUŠI, D. *ICT v chemii (studijní opora)*.
- **Recommended:** KLÁN, P., MINDL, J., ŠTĚDRÝ, A., RUBEŠOVÁ, E. *Chemická informatika. Úvod do používání Internetu*.
- **Recommended:** JINDŘICH, J. *Chemické databáze na Internetu a jejich používání*.
- **Recommended:** KLOUDA, P. *Chemie na počítači. Ostrava : Pavel Klouda, 2001..*
- **Recommended:** ZMEŠKAL, O. a kol. *Informační technologie v chemické praxi..*
- **Recommended:** *Manuál k systému IP-COACH.*
- **Recommended:** *Manuál k systému ISES.*

Time requirements

Activities	Time requirements for activity [h]
Being present in classes	26
Continuous tasks completion (incl. correspondence tasks)	14
Self-tutoring	6
Consultation of work with the teacher/tutor (incl. electronic)	4
Total:	50

assessment methods

professional knowledge

Continuous analysis of student's achievements

teaching methods

professional knowledge

Dialogic (discussion, dialogue, brainstorming)

Monologic (explanation, lecture, briefing)

Projection (static, dynamic)

Working with text (coursebook, book)

learning outcomes

professional knowledge - knowledge resulting from the course:

Competences

Extending of knowledge and skills at the work with the basic application software (MS Office), skill of work with the basic software for the chemical formulas presentation, skill of looking up information in the basic chemical information sources.

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	2	LS