

Course Specifications

Valid as from the academic year 2017-2018

Course size (nominal values; actual values may depend on programme)
Credits 5.0 Study time 150 h Contact hrs 60.0 h

Course offerings and teaching methods in academic year 2018-2019

A (semester 2)	Dutch	seminar	15.0 h
		lecture	45.0 h
E (semester 2)	English	seminar	15.0 h
		guided self-study	7.5 h

Lecturers in academic year 2018-2019

Strubbe, Katrien WE06 lecturer-in-charge

Offered in the following programmes in 2018-2019

	crdts	offering
Master of Science in Economics	5	A
Preparatory Course Master of Science in Business Engineering	5	E
Preparatory Course Master of Science in Business Engineering	5	A

Teaching languages

Dutch, English

Keywords

General chemistry

Position of the course

This course is aimed towards the fundamental training of the practicionning economist in chemistry.

It adresses the development of insight into the basics of chemistry as well as the development of problem solving skills. Besides that, the role and impact of chemistry in daily life and industry is adressed.

Contents

- 1 Matter, elements, compounds
- 2 Periodic system and nomenclature
- 3 Atomic theory
- 4 Chemical bond
- 5 Thermochemistry and elementary thermodynamics
- 6 Chemical reactions, chemical calculations
- 7 Rate of reactions, catalysis
- 8 Redox reactions
- 9 Chemical equilibrium
- 10 Acids and bases
- 11 Intermolecular interactions

Initial competences

Basic knowledge of chemistry, mathematics, physics.

Final competences

- 1 To possess the ability to express chemical reactions in a quantitative way (yield, composition, concentration, mass...).
- 2 To clarify and understand the differences between the lab scale and the industrial scale.
- 3 To provide an insight in the structure and behavior of matter.
- 4 To know some important reactions and processes in society

Conditions for credit contract

Access to this course unit via a credit contract is unrestricted: the student takes into consideration the conditions mentioned in 'Starting Competences'

Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

Teaching methods

Guided self-study, lecture, seminar

Extra information on the teaching methods

Course session A:

Lectures.

Seminar: exercises (data will be communicated in the lectures and on the ELO)

Course session E:

This course is taken by self study of selected chapters in the handbook. The book provides an electronic learning environment with exercises and extra learning material. There are four sessions (max 2 hours each) fore-seen (on mutual consultation between students and professor - to be discussed at the start of the semester)) for discussion on the learning contents; exercises (in English) on the electronic learning environment (curios) with immediate feedback

Seminar: exercises (data will be communicated in the lectures and on the ELO)

Learning materials and price

Course session A:

- syllabus, 200 pages (12 €)
- slides (Minerva)
- Exercises (Seminar and Minerva)

Course session E:

- Book: "Chemistry", Raymond Chang, Mc Graw Hill, latest edition (80 Euro)
- Online resources (exercises, clips, ..) available with the book (after registration)
- Exercises on Minerva (curios)

References

Chemistry, Raymond Chang, Mc Graw Hill, most recent edition

Course content-related study coaching

Possibility to ask questions during the contact sessions

Exercises by means of the electronic learning environments (curios + website related with the course material)

Evaluation methods

end-of-term evaluation

Examination methods in case of periodic evaluation during the first examination period

Written examination with open questions, written examination

Examination methods in case of periodic evaluation during the second examination period

Written examination with open questions, written examination

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

not applicable

Extra information on the examination methods

Written examination with open questions. the focus is on showing insight into and being able to apply the material. Knowledge of concepts is tested under applied form.

Calculation of the examination mark

Every question corresponds to a given percentage of the global mark. The scores on the individual questions are summed.