1 Name, Scope and Level of the Course

The course is provided by the University of Skövde and is named Basic Chemistry G1N. It comprises 15 credits and is on basic level. The level of progression of the course is G1N.

2 Objectives

After completed course the student should be able to:

- describe the structure of atoms, molecules and how chemical bonds are formed, and use this knowledge to name and explain the properties and structures of inorganic chemical substances,

- use thermodynamics principles and laws to explain the mechanisms of chemical reactions and chemical equilibrium,

- perform stoichiometric calculations, balance chemical reactions and use these skills in the laboratory,

- name organic chemical substances and draw their structural formula,

- present different classes of organic substances, their properties, structures, reactivity and biological functions,

- describe the four classes of biological macromolecules, with focus on their structures and biochemical reactions and functions,

- plan, perform and evaluate laborations in groups and present the results in writing.

3 Course Content

The course provides knowledge in basic chemistry from a bioscientific perspective where the basic chemistry is used to describe and explain biochemical reactions and structures of biomolecules. The theoretical knowledge will be applied on chemical and mathematical problems. The knowledge will also be applied on laboratory sessions. The course forms a basis for upcoming courses in biochemistry, molecular biology and biomedicine.

4 Forms of Teaching

The teaching comprises lectures, laboratory sessions and calculation exercises.

The teaching is conducted in English.

5 Examination

The course is graded A (Excellent), B (Very good), C (Good), D (Satisfactory), E (Sufficient) or F (Fail).

The final grade is issued only when all course units are approved.

The final grade is determined by the average of the grades (A = 5, B = 4, C = 3, D = 2 and E = 1) for the examinations Supervised written examintion 1 and Supervised written examintion 2.

Registration of examination results:
### Name of examination | Credits | Grading
--- | --- | ---
Supervised written examination 1 | 5 credits | A/B/C/D/E/F
Supervised written examination 2 | 5 credits | A/B/C/D/E/F
Laboratory assignment 1 | 1.5 credits | G/U
Laboratory assignment 2 | 1.5 credits | G/U
Written assignment 1 | 1 credits | G/U
Written assignment 2 | 1 credits | G/U

Students with a permanent disability who have been approved for special educational support may be offered adapted or alternative examinations.

### 6 Admission Requirements

The special prerequisites for this programme, besides basic eligibility for university studies, are the following upper secondary school courses Mathematics B, Science studies B, Civics A, English B or Mathematics 2a / 2b / 2c, Science studies 2, Civics 1b /1a1 +1a2, English 6.

The corresponding English proficiency can normally be shown by an internationally recognized language tests, such as IELTS or TOEFL (or equivalent).

### 7 Subject, Main Field of Study and Disciplinary Domain

The course forms a part of the academic subject area of Chemistry. The course is not a part of any main field of study at the University of Skövde. The disciplinary domain of the course is Natural Sciences.

Every course at the University of Skövde belongs to a subject. The division of subjects is used for follow-up and quality assurance. A main field of study is an area in which a degree can be awarded. Disciplinary domain is a division which is used by the government for the allocation of resources for studies at basic level and advanced level.

### 8 Approval of Course and Course Syllabus

The course was approved by the Curriculum Committee for Bioscience on 25 January 2018. This course syllabus was approved by the Curriculum Committee for Bioscience on 14 June 2019. It is valid from 1 July 2019 and replaces the course syllabus approved 16 March 2018.

### 9 Overlapping with Another Course

This course cannot constitute a part of a degree also containing a course the content of which is totally or partly equivalent to the content of this course, e.g. General Chemistry G1N 7.5 credits Organic and Physical Chemistry G1F 7.5 credits

### 10 Additional Information

Further information will be available on the university’s website before a course is given.

National and local regulations for higher education are available on the university’s website.

Upon completion of the course there will be a follow-up. The main purpose of this follow-up is to contribute to improvements of the course. The students’ experiences and views constitute one of the criteria for the follow-up and are gathered by means of course evaluations. The students will be informed of the results of the follow-up and any decisions regarding actions that are to be taken.

### 11 Course Literature and Other Educational Materials