SLOVENSKO
OGRODJE
KVALIFIKACIJ

Diplomirani kemik (un)/diplomirana kemičarka (un)

Selected qualifications

Name of qualification	Diplomirani kemik (un)/diplomirana kemičarka (un)
Translated title (no legal status)	Bachelor of Science in chemistry
Type of qualification	Diploma prve stopnje (UN)
Category of qualification	Izobrazba
Type of education	Academic bachelor's education
Duration	3 years
Credits	180 credits
Admission requirements	• Matura or • vocational matura with an additional examination in foreign language or mathematics; or • school-leaving examination (prior to 1 June 1995) under any four-year secondary school programme.

ISCED field

Field
Naravoslovje, matematika in statistika

ISCED subfield

subfield kemija

Qualification level

SQF 7
EQF 6
First level

Learning outcomes

The qualification holder will be able to:

(general competences)

- present knowledge and demonstrate understanding of basic facts, principles and theories in the field of chemistry in written and oral form,
- use acquired knowledge to address qualitative and quantitative tasks in the field of chemistry and chemical engineering,
- recognise and supplement good laboratory practice,
- process data in the field of chemistry and chemical engineering,
- handle chemicals safely with regard to their physical and chemical properties,
- carry out standard laboratory procedures including the use of instruments in synthesis and analytical procedures,
- observe and measure chemical properties and changes and systematically and reliably control and record data,
- present and interpret laboratory results,
- carry out a risk assessment regarding chemicals and procedures used,
- acquire knowledge from relevant literature and data sources, including computer databases,
- communicate effectively, in their mother tongue and one world language, and use modern presentation tools,
- work in multidisciplinary teams to resolve tasks in the fields of chemistry and chemical engineering,
- demonstrate understanding of the principles of chemical process management and business practice
- demonstrate understanding of own professional and ethical responsibility,
- pursue autonomous learning and lifelong learning.

(subject-specific competences)

- demonstrate mastery of knowledge in relevant basic disciplines and their genesis (particularly mathematics, biology, physics) in order to understand, describe and address phenomena in chemistry,
- demonstrate mastery of knowledge in general and inorganic chemistry: understanding of basic chemical terminology, nomenclature and the use of units, knowledge of basic types of chemical reactions and their basic characteristics, knowledge of the classification of elements and their compounds, including the periodic system, knowledge of the connection between materials and individual atoms or molecules, knowledge of the main synthesis pathways in inorganic chemistry, knowledge of the basic structural characteristics of elements and their compounds,
- demonstrate knowledge of the bases of analytical chemistry, including the procedures of chemical

analysis and the characterisation of compounds, and knowledge of the basic methods of structural tests, including spectroscopy,
- demonstrate knowledge of organic chemistry, including familiarity with the most important properties of aliphatic, aromatic, heterocyclic and organometallic compounds and the nature and properties of functional groups in organic molecules, demonstrate understanding of the basics of stereochemistry, demonstrate knowledge of the main synthesis pathways in organic chemistry,
- demonstrate knowledge of the basics of physical chemistry: understanding of the characteristics of various aggregate states and the theories that describe them, knowledge of the basics of thermodynamics and their application in chemistry, knowledge of the kinetics of chemical changes, including catalysis, knowledge of the basics of quantum mechanics and their application in the description of the structure of atoms and molecules,
- demonstrate familiarity with the chemistry of biological molecules and processes,
- demonstrate basic understanding of safety, health and environment,
- use relevant software and other advanced tools,
- carry out suitable planning and resolve problems through the application of scientific methods and procedures in a given specialised field.

Assessment and completion

Students' knowledge is assessed by means of practical exercises and seminar papers, and also via products, projects, performances, services, etc. and by examinations. Examination performance is scored as follows: 10 (excellent); 9 (very good: above-average knowledge but with some mistakes); 8 (very good: solid results); 7 (good); 6 (adequate: knowledge satisfies minimum criteria); 5–1 (inadequate). In order to pass an examination, a candidate must achieve a grade between adequate (6) and excellent (10).

Progression

In order to progress to the second year, students must have completed a minimum of 50 first-year credits and all first-year practical classes (attendance and completion of all related assignments) and passed the following examinations: Mathematics I and II, General Chemistry, Inorganic Chemistry, Physics I, Chemical Calculation I.
In order to progress to the third year, students must have completed all first-year credits, a minimum of 50 second-year credits and all second-year practical classes (attendance and completion of all related assignments) and passed the following examinations: Mathematics III, Organic Chemistry I and II, Physical Chemistry I and II and Analytical Chemistry II.

Transitions

Second-cycle master's study programmes (SQF level 8)

Condition for obtaining certificate

In order to complete the programme, students must complete all course units prescribed by the study programme.

Awarding body

University of Maribor, Faculty of Chemistry and Chemical Technology

URL

http://www.fkkt.um.si/en