



# bachelor | Diploma Supplement

UNIVERSITEIT VAN AMSTERDAM

*Faculty of Science*

## **Purpose of this document**

This supplement provides a description of the nature, level, content and status of the studies that were pursued and successfully completed by the individual named on the accompanying degree certificate. The purpose of this supplement, in combination with the certificate itself, is to provide interested parties with sufficient independent data to make their own judgments based on the facts. For those who are not familiar with the Universiteit van Amsterdam or with the system of higher education in the Netherlands, additional information is provided in the appendix.

## CERTIFICATION OF THE SUPPLEMENT

### **Student information**

Family name  
First name(s)  
Date, place and country of birth  
Student identification number

### **Certification**

Date, place and country

Signature  
Name  
Capacity

\_\_\_\_\_  
Chair of the Board of Examiners



## INFORMATION ON THE DEGREE AWARDED

### **Name of the degree**

Bachelor of Science (BSc), undergraduate degree

### **Name of the study programme**

Bachelor Scheikunde / Bachelor Chemistry

### **Awarding institution**

Universiteit van Amsterdam, a public university recognised by the national government of the Netherlands.

### **Official duration**

The official duration of the bachelor study programme is three years, consisting of 60 ECTS credits per year.

For an explanation of the ECTS credit system, please see the appendix.

### **Language of instruction**

Official language Dutch; some courses may be taught in English.

### **Quality assessment and accreditation**

Quality Assessment Organisation QANU.

Accredited by the Accreditation Organization of the Netherlands and Flanders (NVAO).

### **General requirements for admission to Dutch universities**

The admission requirements are stated in the appendix on the higher education system in the Netherlands.

### **Specific requirements for admission to the Bachelor Chemistry**

The specific admission requirements are laid down in the Examination and Education Regulations (OER) of the Faculty of Science.



## Objective

### *The objectives of the Chemistry bachelor's programme*

The objectives of the Chemistry bachelor's programme are:

- to provide students with thorough theoretical and practical basic knowledge and skills relating to the discipline
- to provide students with the necessary mathematical and computational skills
- to enable students to analyse problems in the discipline independently
- to introduce students to scientific research in the discipline
- to enable students to develop the skills needed to give presentations, to communicate both in writing and verbally, to deal with scientific sources of information, and to work independently as well as with others
- to prepare students for an advanced degree programme
- to provide students with insight into the place and role of the discipline within science and society, and into the international character of the discipline.

### *The final attainment levels of the Chemistry bachelor's programme*

The graduate:

- has a thorough theoretical and practical basic knowledge of chemistry, and the related subjects of physics, mathematics, computer science, and biology, necessary to successfully participate in a Master's programme related to chemistry
- is familiar with conducting scientific research in the field of chemistry, and have passed a test of competence accordingly
- has sufficient insight into the various specialisations in chemistry that follow the Bachelor's programme to be able to make a responsible choice regarding advanced degree programmes
- is aware of the opportunities for employment open to those graduating from the programme with a Bachelor's degree
- is familiar with the safety and environmental aspects of chemistry
- is aware of the role of chemistry in society, and of the international character of chemistry
- has an independent, scientifically critical method of working and attitude
- is able to provide written and verbal reports on scientific results and the corresponding applications
- is able to collect and process information
- has the ICT skills that correspond to the chosen specialisation
- is able to work with others and have experience in working on projects
- has acquired a solid foundation for teacher's training.

### *General skills*

The graduate should:

- have an independent, scientifically critical method of working and attitude;
- be able to provide written and verbal reports on scientific results and the corresponding applications;
- be able to collect and process information;
- have the ICT skills that correspond to the chosen specialisation;
- be able to work with others and have experience in working on projects;
- have a solid foundation for teacher training.



### **Additional information**

Not applicable.

### **Major/minor combinations**

Not applicable.

### **Function of the degree**

#### *Admission to further study*

The bachelor's degree in Chemistry makes a student eligible for a subject related master's programme.

#### *Professional status*

Not applicable.

### **Further information**

Further information regarding this degree and its holder can be obtained from:

Universiteit van Amsterdam

Faculty of Science

P.O. Box 19268

1000 GG Amsterdam

The Netherlands

Tel +31 (0)20 525 8080

E-mail [info@uva.nl](mailto:info@uva.nl)



<i>Course</i>	<i>ECTS</i>	<i>Mark</i>
Chemistry Practical Work I	3.0	
Laboratory Skills	3.0	
General and Research Skills	3.0	
Portfolio ABC 2	3.0	
Orientation on Research and Occupation	3.0	
Literature Study Group Chemistry	3.0	
Academic Basic Skills	3.0	
Ways of Thinking: The logic of Math	6.0	
Turning Points in the Natural Sciences	6.0	
Calculus 1	6.0	
Structure in Chemistry	6.0	
Structure of Matter	6.0	
Quantum Chemistry	6.0	
Bio Chemistry	6.0	
Chemistry: Energy and Dynamics	6.0	
Chemistry Practical Work II	6.0	
Inorganic Chemistry	6.0	
Analytical Science	6.0	
Quantum Chemistry 2	6.0	
Molecule Spectroscopy	6.0	
Organic Chemistry	6.0	
Project Chemistry 1	6.0	
Project Chemistry 2	6.0	
Thermodynamics 1	6.0	
Mathematics 2	6.0	
Chemistry of Functional Materials	6.0	
Chemistry Earth and Universe	6.0	
Catalysis	6.0	
Bio-organic Chemistry	6.0	
Introduction Exact Sciences	6.0	
Science, Technology, Society and Culture	6.0	
Bachelor Project Chemistry	15.0	

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*Extra courses*

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Not applicable.

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*Initials of the Chair of  
the Board of Examiners*

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A course name given in italics indicates that for this particular student the course was a minor (as part of a major/minor combination).

### Courses and credits from other universities

Not applicable.

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*Initials of the Chair of  
the Board of Examiners*

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## Information on the marking scheme

1-5	Fail
6	Sufficient
7	Satisfactory
8	Good
9	Very good
10	Excellent

Letters instead of a mark indicate the following:

AVV	= Student met all set objectives	A = US Mark
VRY	= Student was given exemption	B = US Mark
VLD, VOL	= Student passed the course	C = US Mark
RV	= Satisfactory	
G	= Good	
ZG	= Very good	
US, UM	= Excellent	

For information on workload and ECTS, please see the appendix on the higher education system in the Netherlands.

### Special features

Not applicable.

### Distinctive classification

The Board of Examiners may award the Bachelor's degree with a distinctive classification. If so, the distinctive classification is explicitly mentioned on the degree certificate itself.

## FURTHER DETAILS ABOUT THE CERTIFYING INSTITUTION

### **Universiteit van Amsterdam**

The Universiteit van Amsterdam (UvA) was founded in 1632. It is now one of the largest comprehensive universities in Europe: it has 23,000 students, 5,000 staff members, a budget of 460 million euros, and seven major faculties teaching dentistry, economics, humanities, law, medical sciences, science, and social sciences (figures from 2005). Each faculty is headed by a dean. Teaching and research take place in separate institutes. Each faculty also has a central office responsible for the management of the faculty. The UvA is one of the leading research universities in Europe with many doctorates each year. In June 2004, 329 candidates successfully defended their doctoral dissertation.

Life in Amsterdam is multicultural and intellectually stimulating. Those studying or working at the UvA face a double challenge, namely dealing with the intellectual contents of a comprehensive academic curriculum, and Amsterdam's exciting urban environment. There are undergraduate and graduate programmes in over 60 disciplines, with over 80 master's programmes taught in English. The UvA has a reputation for upholding academic research. Internationally recognised, top-quality research is conducted in many areas.

## THE HIGHER EDUCATION SYSTEM IN THE NETHERLANDS

This section describes the higher education system in the Netherlands. It is based on a three-cycle system consisting of Bachelor's, Master's and PhD degrees. A description of admission requirements, the Dutch marking system and degree accreditation is also included.

### Secondary education

Secondary education, which begins at the age of 12 and is compulsory until the age of 16, is offered at several levels. The two programmes of general education that lead to higher education are HAVO (five years) and VWO (six years). Pupils are enrolled according to their ability, and although VWO is more rigorous, both HAVO and VWO can be characterised as selective types of secondary education. The VWO curriculum prepares pupils for university, and only the VWO diploma grants access to WO (research universities). The HAVO diploma is the minimum requirement for admission to HBO (universities of professional education). The last two years of HAVO and the last three years of VWO are referred to as the second phase (tweede fase), or upper secondary education. During these years, pupils focus on one of four subject clusters (profielen), each of which emphasises a specified area of study, in addition to satisfying general education requirements. Each cluster is designed to prepare pupils for programmes of study at the tertiary level. A pupil enrolled in VWO or HAVO can choose from the following subject clusters:

- 1) Science and Technology (Natuur en Techniek)
- 2) Science and Health (Natuur en Gezondheid)
- 3) Economics and Society (Economie en Maatschappij)
- 4) Culture and Society (Cultuur en Maatschappij)

### Higher education

Higher education in the Netherlands is offered at two types of institutions: research universities (universiteiten; WO) and universities of professional education (hogescholen; HBO). The former comprise general universities and universities specialising in engineering and agriculture. The latter comprise general institutions and institutions specialising in a particular field, such as agriculture, fine and performing arts, or teacher training.

Since September 2002, the higher education system in the Netherlands has been organised around a three-cycle system consisting of Bachelor's, Master's and PhD degrees. At the same time, the ECTS credit system was adopted as a way of quantifying periods of study. The higher education system continues, however, to be a binary system with a distinction between research-oriented education and professional higher education.

The level of a degree programme determines both the number of credits required to complete the programme and the degree that is awarded. A WO bachelor's programme requires the completion of 180 credits (3 years) and graduates obtain the degree of Bachelor of Arts or Bachelor of Science (BA/BSc), depending on the discipline. An HBO bachelor's programme requires the completion of 240 credits (4 years), and graduates obtain a degree indicating their field of study, for example Bachelor of Engineering (B. Eng.) or Bachelor of Nursing (B. Nursing). The old title appropriate to the discipline in question (bc., ing.) may still be used.

WO master's programmes mostly require the completion of 60 or 120 credits (1 or 2 years). Some programmes require 90 (1.5 years) or more than 120 credits. In engineering, agriculture, and maths and the natural sciences, 120 credits are always required. Graduates obtain the degree of Master of Arts or Master of Science (MA/MSc). The old title appropriate to the discipline in question (drs., mr., ir.) may still be used. HBO master's programmes require the completion of 60 to 120 credits, and graduates obtain a degree indicating the field of study, for example Master of Social Work (MSW).

The third cycle of higher education is offered only by research universities, which are entitled to award the country's highest academic degree, the *doctorate*, which entitles a person to use the title doctor (dr.). The process by which a doctorate is obtained is referred to as the *promotie*. The doctorate is primarily a research degree, for which a dissertation based on original research must be written and publicly defended.

### **Requirements for admission to higher education**

To enrol in a WO bachelor's programme, a student is required to hold a VWO diploma or to have completed the first year (60 credits) of an HBO programme. The minimum admission requirement for HBO is either a HAVO school diploma or a level-4 MBO diploma. For admission to both types of higher education, pupils are required to have completed at least one of the subject clusters that fulfils the requirements for the higher education programme in question. A quota (*numerus fixus*) applies to admission to certain programmes, primarily in the medical sciences, and places are allocated using a weighted lottery. Applicants older than 21 years who do not possess one of the qualifications mentioned above can qualify for admission to higher education on the basis of an entrance examination and assessment.

For admission to all master's programmes, a bachelor's degree in one or more specified disciplines is required, in some cases in combination with other requirements. Graduates with an HBO bachelor's may have to complete additional requirements for admission to a WO master's programme.

### **Credit system and marking**

A student's workload (both contact hours, and hours spent studying and preparing assignments) is measured in ECTS credits, whereby under Dutch law one credit represents 28 hours of work and 60 credits represents one year of full-time study.

The marking system has been the same for several decades: the scale is from 1 (very poor) to 10 (outstanding). The lowest pass mark is 6; the mark 9 is seldom awarded, and the highest pass mark 10 is extremely rare. Sometimes decimal points are used (e.g., 7.8).

### **Accreditation and quality assurance**

A guaranteed standard of higher education is maintained through a national system of legal regulation and quality assurance. The Ministry of Education, Culture and Science is responsible for legislation pertaining to education. A system of accreditation was introduced in 2002. Since then, the new Accreditation Organization of The Netherlands and Flanders (NVAO) has been responsible for accreditation. According to the section of the Dutch Higher Education Act that deals with the accreditation of higher education (2002), degree programmes offered by research universities and universities of professional education will be evaluated according to established criteria, and programmes that meet those criteria will be accredited, that is, recognised for a period of six years. Only accredited programmes are eligible for government funding, and students receive financial aid only when enrolled in an accredited programme. Only accredited programmes issue legally recognised degrees. Accredited programmes are listed in the Central Register of Higher Education Study Programmes (CROHO) and the information is available to the public. Institutions are autonomous in their decision to offer non-accredited programmes, subject to internal quality assessment. These programmes do not receive government funding.