A.D. MDLXII

University of Sassari

Department of Chemical, Physical, Mathematical, and Natural Sciences

ACADEMIC PROGRAM GUIDE - Academic Year 2026/2027

Valid for students enrolled in the A.Y. 2026/2027

Bachelor's Degree in Chemistry

DEGREE CLASS: Chemical Sciences and Technologies (Class L-27)

The University of Sassari offers a three-year Bachelor's Degree Programme in Chemistry, falling under the degree class of Chemical Sciences and Technologies (Class L-27). Enrollment in the programme is regulated by the standard regulations governing access to university studies.
For the academic year 2026/2027, the degree programme has open admission. A questionnaire will be administered to assess students' knowledge of basic subjects, particularly Mathematics.This assessment will be carried out via the TOLC-I test, following the procedures established by the CISIA National Consortium.
Remedial/realignment courses in mathematics may be provided, the dates of which will be communicated on the degree programme website.
Information on registration and enrollment procedures for the CISIA test will be made available on the same website at https://www.uniss.it/en

Course Objectives

Upon completion of their studies, graduates in Chemistry must:
have acquired solid knowledge in the various fields of chemistry, covering fundamental, theoretical, and experimental aspects;
be able to apply experimental investigation methods, including those relevant to applied problems;
have a basic understanding of quality certification processes and safety regulations in chemical environments;
be able to communicate effectively, both in written and oral form, in at least one European Union language other than Italian, within their field of expertise and for the exchange of information;
be capable of working in team, operating with defined levels of autonomy, and integrating smoothly into professional environments;
possess adequate knowledge of computer tools required for data management and for acquiring and exchanging information on both local and global networks.

Professional Aims and Career Opportunities

Graduates in Chemistry will be able to apply the skills acquired in professional roles within industry, research and analysis laboratories, and in sectors such as environmental protection, agri-food, cultural heritage conservation, healthcare, and energy.
They will be proficient in using complex scientific equipment and in applying the scientific method to practical problems across all sectors where chemical methodologies, technologies, and processes are involved. Graduates will also be eligible to access Master's degree programmes in Chemical Sciences (LM-54).

Admission Requirements

To successfully undertake their studies, students must possess basic mathematical knowledge and skills, and be capable of understanding texts involving logical reasoning and problemsolving.

To verify that these entry requirements are met, all enrolled students—or those intending to enrol—are required to take an assessment test. This may be either: the TOLC-I online test, following the procedures established by the CISIA National Consortium, or a mathematics assessment test prepared by the Degree Programme, which will be administered in person. To avoid being assigned an educational debt, students must achieve a minimum score of 8 in the Mathematics section of the TOLC-I test (other sections are for self-assessment and orientation only), or obtain a positive evaluation in the test provided by the Degree Programme. Students who are assigned an educational debt must formally commit to addressing their learning gaps, following the methods and support actions proposed by the Degree Programme (e.g. MOOCs, tutoring, remedial courses).

In any case, the educational debt can be resolved by passing the Mathematics I exam.

Part-time Enrollment

Students who, due to work, family, or health reasons, believe they can dedicate only part of their time to studying may choose to enroll as part-time students. Part-time students are allowed to fulfill the requirements for obtaining their degree over a longer period of time—up to twice the standard duration of the program—without being considered as having exceeded the regular time limit.

Programme Duration and Organization

The teaching and training activities of the degree programme are organised on a semester basis. Consequently, the academic year is divided into two semesters, during which lectures and tutorials are held. These are interspersed with breaks in teaching for examination sessions.

Courses will be held according to the following calendar:

First Semester: October 1, 2026 – January 31, 2027

Second Semester: March 1 – June 10, 2027

Examination sessions will take place according to the following calendar:

1st Session (two exam dates): February 1 – February 28, 2027

2nd Session (two exam dates): June 15 – July 15, 2027

3rd Session (two exam dates): September 1 – September 30, 2027

The total number of credits required to complete the degree is 180 ECTS.

One ECTS credit corresponds to 25 hours of student work, divided between hours of activities organised by the University (guided learning) and hours of individual study. Specifically, one credit for lectures or theoretical exercises corresponds to 8 guided learning hours, while one credit for laboratory activities corresponds to 14 guided learning hours.

Attendance at teaching activities is mandatory.

International Mobility

The Degree Programme promotes international student mobility to allow students to spend a period of study at a foreign university to attend classes and take exams, or to carry out an internship, which may also be utilized for their degree thesis. Student mobility is supported by the availability of Erasmus+ grants for both study purposes (SMS) and traineeships (SMT), within Europe or non-European regions (Ulisse programme). These activities must be authorized in advance by the Department's Erasmus Committee. Students are exempt from attendance requirements for the courses scheduled in the semester during which they are on mobility. The programme involves no additional tuition fees and guarantees, upon return, the recognition of the studies carried out and the credits earned. Credits acquired abroad will be recognized by the Department's Erasmus Committee based on the Transcript of Records (ToR) and will confer a bonus towards the final degree grade and, in some cases, financial rewards.

FIRST YEAR (A.Y. 2026/2027)					
First Semester					
Type	**SSD**	**COURSE**	**ECTS**		
			Lectures	Tutorials	Laboratory
A	MATH-03/A	Mathematics I	6		2
A/B	CHEM-03/A	General and Inorganic Chemistry Laboratory	3	1	2
A	CHEM-03/A	General and Inorganic Chemistry	8	1	
A	PHYS-01/A	Physics 1	4	1	
D		Elective Formative Activities*			

Second Semester					
Type	**SSD**	**COURSE**	**ECTS**		
			Lectures	Tutorials	Laboratory
A	MATH-03/A	Mathematics II	5	1	
B	CHEM-01/A	Basic Analytical Chemistry with Laboratory	6		2
A	PHYS-01/A	Physics 2	4	1	
E		English Language	3	1	
D		Elective Formative Activities*			

SECOND YEAR (A.Y. 2027/2028)					
First Semester					
Type	**SSD**	**COURSE**	**ECTS**		
			Lectures	Tutorials	Laboratory
B	CHEM-05/A	Organic Chemistry I	10		1
B	CHEM-01/A	Instrumental Analytical Chemistry	6	1	2
A/B	CHEM-02/A	Physical Chemistry I with Laboratory	8		1
D		Elective Formative Activities*			
			Lezioni Frontali	Esercitazioni	Laboratorio
Second Semester					
Type	**SSD**	**COURSE**	**ECTS**		
			Lectures	Tutorials	Laboratory
B	CHEM-03/A	Inorganic Chemistry I with Laboratory	6		2

A/B	CHEM-02/A	Physical Chemistry II with Laboratory	7		2
B	CHEM-05/A	Organic Chemistry II	8		2
D		Elective Formative Activities*			

THIRD YEAR (A.Y. 2028/2029)					
First Semester					
Type	**SSD**	**COURSE**	**ECTS**		
			Lectures	Tutorials	Laboratory
B/C	CHEM-01/A	Techniques of Chromatographic Analysis	7		2
B	CHEM-05/A	Structural Characterisation Methods in Organic Chemistry	4		2
B/C	CHEM-02/A	Physical Chemistry III with Laboratory	9		2
D		Elective Formative Activities*			

Second semester					
Type	**SSD**	**COURSE**	**ECTS**		
			Lectures	Tutorials	Laboratory
B/C	CHEM-03/A	Inorganic Chemistry II with Laboratory	5		2
B	CHEM-04/A	Polimer Chemistry	4		4
B	BIOS-07/A	Biochemistry	6		
F		Internship 6 CFU			
E		Final Exam 8 CFU			

Types of Formative Activities: A = basic; B = characterising; C = related or integrative; D = student's choice (elective); E = final exam and foreign language; F = other activities.
Lectures (1 ECT = 8 assisted hours); Tutorials (1 ECT = 8 assisted hours); Laboratory practicals (1 ECT = 14 assisted hours).
Regarding the English Language Course, students must take a placement test in the first semester. Those who pass the test proceed directly to the English Language exam assessment. Students who do not pass the test must attend the course lectures scheduled for the second semester and take the final exam. Credits for the English Language are awarded via a pass/fail evaluation.

*Elective Formative Activities (Student's Choice): the student may utilize a total of 12 ECTS. Exams with contents consistent with the educational design of the degree programme, relating to official courses taught within the University, will be fully recognized, provided there is no duplication of programmes. Elective activities chosen by the student must be approved by the Course Council.

At the beginning of each academic year, elective courses will be proposed within the degree programme.

In the A.Y. 2026/2027, the following elective courses will be offered:

Type	SSD	COURSE	ECTS		
		First semester	Lectures	Tutorials	Laboratory
D	CHEM-06/A	Chemical Laboratory Safety	4		
D	PHYS-01/A	Elements of Electromagnetism and Optics	3		
D	MATH-03/A	Differential Equations	2		
		Second semester			
D	CHEM-03/A	Didactics and History of Chemistry	4		

Credits relative to the Internship (6 ECTS) will be acquired through a pass/fail evaluation following an interview, or they may, upon request, be combined with those of the final exam.

The credits corresponding to each training activity will be earned by the student upon passing the exam. The assessment will be expressed on a scale of 30.
To obtain the total of 180 CFU required for the three-year period, the credits for the Internship and Final Exam must be counted alongside the sum of CFUs from lectures + tutorials + laboratories, together with the 12 CFUs of Elective Activities chosen by the Student.

Exams	1. Mathematics I (8 ECTS)	2. General and Inorganic Chemistry + General and Inorganic Chemistry Laboratory (9 ECTS + 6 ECTS = 15 ECTS)
3. Mathematics II (6 ECTS)	4. Physics 1 (5 ECTS)	5. Physics 2 (5 ECTS)
6. Organic Chemistry I (11 ECTS)	7. Basic Analytical Chemistry with Laboratory (8 ECTS)	8. Inorganic Chemistry I with Laboratory (8 ECTS)
9. Physical Chemistry I with Laboratory (9 ECTS)	10. Instrumental Analytical Chemistry (9 ECTS)	11. Physical Chemistry II with Laboratory (9 ECTS)
12. Organic Chemistry II (10 ECTS)	13. Chromatographic Analysis Techniques (9 ECTS)	14. Methods of Structural Characterization in Organic Chemistry (6 ECTS)
15. Physical Chemistry II with Laboratory (11 ECTS)	16. Inorganic Chemistry II with Laboratory (7 ECTS)	17. Polymer Chemistry (8 ECTS)
18. Biochemistry (6 ECTS)		

Prerequisites
The exams General and Inorganic Chemistry and General and Inorganic Chemistry Laboratory are prerequisites for all exams in chemical disciplines.
The exam Organic Chemistry I is a prerequisite for the Biochemistry exam and the Methods of Structural Characterisation Methods in Organic Chemistry exam.
The exam Mathematics I is a prerequisite for the Physical Chemistry I with Laboratory exam.
The exam Basic Analytical Chemistry with Laboratory is a prerequisite for the Instrumental Analytical Chemistry exam.
The exam Instrumental Analytical Chemistry is a prerequisite for the Techniques of Chromatographic Analysis exam.

Furthermore, prerequisites between exams of the same discipline characterized by progressive numbering must be respected..

Final Examination for the Degree
The final exam consists of the discussion of a paper related to an experimental activity worth 8 ECTS (14 ECTS if combined with the traineeship), carried out individually by the student in the last semester under the supervision of a lecturer appointed by the Course Council.