UNIVERSITÀ DEGLI STUDI
DELL'INSUBRIA

DEPARTMENT

Academic (Teaching) Regulations
for the
Bachelor's Degree Program
in Environmental and Natural Sciences
(Class L-32 – Environmental and Nature Sciences and Technologies)
Academic Year 2025/2026)

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1. General information and organization

Bachelor's Degree Program in Environmental and Natural Sciences – Class L-32 R
(Ministerial Decree of March 16, 2007, reformed pursuant to MD 1648/23 and MD 1649/23)
Academic Regulations – Academic Year 2025/2026

The Bachelor's Degree Program in Environmental and Natural Sciences (Class L-32 R) is offered in accordance with the academic regulations established for the year 2025.

Environmental issues are of critical importance for the functioning of ecosystems, the promotion of sustainable use of natural resources, and the protection of human health—in short, they are vital to the future of the planet. The Bachelor's Degree in Environmental and Natural Sciences (SAN) adopts a global and interdisciplinary approach to topics of pressing relevance and significance, such as pollution and health, climate change, sustainable resource management, ecosystem services, renewable energy sources, biodiversity conservation, and hydrogeological instability—areas which are also the focus of the faculty's teaching and research activities.

The program addresses major issues related to natural processes, environmental matrices, and anthropogenic disturbances in a synergistic manner. It provides students with a multidisciplinary and integrated education, drawing on the broad range of expertise available across the university's campuses. The curriculum is designed to develop a solid foundation in biological sciences, environmental and analytical chemistry, ecology, and geology, enabling students to understand the functioning of natural systems, whether undisturbed or impacted by human activity.

The educational offering aims to provide strong foundational knowledge in the core scientific disciplines, complemented by a comprehensive natural sciences curriculum that integrates content from chemistry, earth sciences, life sciences, and human health. The course structure is organized to harmonize training in ecological disciplines and environmental analysis—both in natural and anthropogenically influenced contexts—thus equipping students with the skills required for either further academic study or professional employment in environmental and nature-related fields.

Lectures are conducted in person and are streamed simultaneously between the Como and Varese campuses, allowing students to attend from either location depending on the instructor's presence, which alternates between the two sites. Classroom instruction is complemented by laboratory work and field excursions. These practical components are fundamental for learning how to use instruments and materials, as well as for collecting, analyzing, and interpreting data related to various environmental matrices. This integrated approach ensures comprehensive mastery of scientific methods and content while promoting a holistic and interdisciplinary perspective on environmental and natural systems.

The program also prepares students for the international context by offering selected elective courses in English, including *Conservation Ecology*, *Ecotoxicology*, *Biodiversity and Evolution of Plants*, *Geopedology*, and *Geosphere and Geoprospects for the Environment*.

The degree grants access to second-cycle (Master's) degree programs, particularly the Master's Degree in Environmental Sciences (Class LM-75), which is also offered at the University. Graduates may also apply to the first-level University Master's Program in *Fauna and Human Dimension*.

The academic department responsible for the program is the **Department of Theoretical and Applied Sciences**.
The Chair of the Degree Program Committee is **Professor Andrea Pozzi** (https://uninsubria.unifind.cineca.it/get/person/000236).

2. Admission to the study program

In accordance with current legislation, admission to the Bachelor's Degree Program requires possession of an upper secondary school diploma or an equivalent qualification obtained abroad and officially recognized as valid.

No specific type of secondary school diploma is required. The following knowledge and skills are considered sufficient for admission: a solid general education; logical reasoning and reading comprehension abilities; and a sound grasp of basic mathematical concepts.

Enrollment in the degree program is open (non-selective). However, all enrolled students are required to take the **TOLC-S** test (Scientific Test), administered by **CISIA**, in the **TOLC@CASA** format, as a mandatory initial knowledge assessment.

TOLC-S Test Structure:

- **Basic Mathematics**: 20 questions – 50 minutes
- **Logic, Problem Solving, and Reading Comprehension**: 15 questions – 30 minutes
- **Basic Sciences**: 20 questions – 40 minutes
  (5 questions in 10 minutes for each of the following subjects: Biology, Chemistry, Physics, Earth Sciences)

Scoring System:

- +1 point for each correct answer
- 0 points for unanswered questions
- –0.25 points for each incorrect answer

The test may be taken at any of the participating institutions, multiple times if desired, but no later than **November 30**. The test is considered passed if the student obtains:

- A **section score** of at least **7** in *Basic Mathematics*, and
- A **section score** of at least **3** in *Logic, Problem Solving, and Reading Comprehension*. No minimum threshold is required for the *Basic Sciences* section.

Students must upload the official **CISIA test certificate** to the course portal by **November 30**, even in the event of a negative result, following the instructions provided on the program's official webpage.

Additional Learning Requirements (OFA – Obblighi Formativi Aggiuntivi)

Students who do not pass the TOLC-S by November 30 will have their academic progress temporarily suspended (i.e., they will not be permitted to take examinations) and will be assigned **Additional Learning Requirements (OFA)**. These consist of:

- A **mandatory remedial course**, followed by
- A **follow-up test**, to be passed **by the end of the first semester**.

The OFA obligation is considered fulfilled if, by **September 30 of the calendar year following enrollment**, the student satisfies **at least one** of the following conditions:

- Successfully passes a new TOLC-S administered by CISIA; or
- Passes the **Mathematics and Statistics** exam (scheduled in the first semester of the first year).

Enrollment in the **second year** of the program as a regular student is contingent upon completion of OFA requirements by the aforementioned deadline.

In the case of **late enrollment**, the Degree Program Committee (CCdS) may arrange **extraordinary test dates** and **dedicated office hours** to support students with OFA requirements.

Students who **fail to take the TOLC-S** or **do not submit** the required CISIA certificate will also have their academic progress suspended and will be **unable to take exams**.

Exemptions

The following students are exempt from taking the initial knowledge assessment test:

- Students transferring from another degree program within the University of Insubria (internal transfer), provided they have already taken a comparable initial assessment;

- Students transferring from another university who have previously taken a comparable initial assessment;
- Students who already hold a university degree.

Students seeking exemption must submit either an official certificate or a self-declaration to the **Student Services Office**, documenting the assessment undertaken during their previous academic career.

Preparation Resources

To prepare for the TOLC-S, students are encouraged to use the official **CISIA preparation platforms**, including the **CISIA Basic Mathematics MOOC**, available upon registration at: https://lms.federica.eu/enrol/index.php?id=568

Additionally, students may participate in **preparatory courses** organized by the University between late August and early September:
https://www.uninsubria.it/la-didattica/orientamento/precorsi

Further details, including test procedures and syllabus, are available at the following link:
https://www.uninsubria.it/servizi/vivere-insubria/immatricolarsi-e-iscriversi/immatricolazioni/verifica-della-preparazione-8

3. Transfer procedures from other degree courses

Students coming from another university, from a different programme within this University, or from previous academic regulations may apply for transfer/admission into the Degree Programme. Transfer applications will be evaluated by the Degree Programme Council, which will assess the recognition of academic credits (ECTS) based on the following criteria:

- An analysis of the syllabi of completed courses;
- An evaluation of the relevance of the academic disciplinary fields and content of the educational activities completed in the student's previous academic career, in relation to the specific learning objectives of the current degree programme and its individual course units.

Recognition of credits will be carried out in accordance with Article 3, paragraphs 10 and 11, of Ministerial Decree No. 1648 of December 19, 2023, which redefines academic degree classes.

Credit recognition webpage:
https://www.uninsubria.it/servizi/consulenza-e-supporto/pratiche-studenti/servizi-segreterie-studenti/riconoscimento-di

Recognition of Professional Skills

The Degree Programme Council may recognise:

- Certified professional knowledge and skills in accordance with current legislation;
- Knowledge and skills acquired through post-secondary educational activities in which the university has participated in planning and/or implementation.

Requests for recognition, which must include course syllabi of previously completed exams (including those taken at this University), shall be submitted together with the application for recognition. The application will be reviewed by a Commission appointed by the Degree Programme Council. Recognition will be granted if the activity is consistent with the specific learning objectives of the degree programme and the relevant course units, also considering the content and the number of hours involved. A maximum of 12 ECTS may be recognised.

4. Simultaneous enrollment in two study programs

From the academic year 2022–2023, students are permitted to enrol simultaneously in two higher education programmes, pursuant to Law No. 33 of April 12, 2022 ("Provisions regarding the concurrent enrolment in two higher education programmes") and subsequent ministerial decrees (DM 930/2022 and DM 933/2022). Applications for dual enrolment will be reviewed by a dedicated commission of the degree programme, subject to verification of admission requirements.

5. The educational path

The programme does not include different curricula. The study plan consists of:

- 6 compulsory courses in the first year,
- 9 compulsory courses in the second year,
- 2 compulsory courses in the third year.

In the third year, students must also choose 3 elective courses. Additionally, the third year includes 12 ECTS of freely chosen courses and 9 ECTS for internships.

Admission Test for First-Year Laboratory Courses

To gain access to the laboratory components of *Geology and Lithology* and *Analytical Chemistry Laboratory*, students must pass a specific evaluation test held prior to the course. The test will assess basic knowledge in geography, cartography, Earth sciences, and fundamental chemistry and physical science (high school level), and will typically be administered in January.

A minimum score of 22/30 is required to pass.

Students who do not pass the admission test may take the laboratory courses in the second year. Attendance of laboratory activities is mandatory in order to sit for the corresponding exams.

Working Students

Students recognised as "working students" are granted exemptions from attendance requirements for mandatory lectures or exercises, but **not** from attendance of laboratory and fieldwork activities, which remain compulsory. Working students must agree on a personalised plan with the instructor regarding attendance, schedules, and possible make-up sessions.

Status as a "working student" will be granted to those who present a valid employment contract (temporary contracts must align with the academic semester or year timeframes).

Students with Disabilities

The Degree Programme complies with the measures established by the relevant office regarding accommodations for exams and the assignment of tutors for laboratory and field activities, as requested.

Attendance Requirements

Attendance is **mandatory** for all laboratory courses, including fieldwork. Students must attend **at least 75%** of the scheduled instructional activities, in line with the year of enrolment. Exceptions may be granted, particularly in cases of internal transfers or transfers from other universities. While working students may benefit from flexible schedules, they are still required to meet the attendance threshold. Students may **not** enrol in individual courses that include laboratory or practical components.

ECTS/Hours Correspondence for Each Type of Educational Activity

The European Credit Transfer and Accumulation System (ECTS) quantifies the total student workload, including independent study, required to acquire the knowledge and skills defined by the degree programme, as established by Article 5 of Ministerial Decree 270/04.

Each educational activity (lectures, laboratories, internships, thesis, etc.) corresponds to a defined number of ECTS credits.

One ECTS corresponds to **25 hours** of student work, including:

- Time spent in class with the instructor,
- Independent study and personal elaboration.

ECTS are awarded upon successful completion of exams or other assessments defined in the course's academic regulations.

Educational Activity / Hours per ECTS:

- Lectures: up to **8 hours/ECTS**
- Exercises: up to **12 hours/ECTS**
- Theoretical Laboratory (LAB-T): up to **16 hours/ECTS**
- Practical Laboratory (LAB-P): up to **16 hours/ECTS**
- Field Laboratory (LAB-C): up to **16 hours/ECTS**
- Seminars: up to **12 hours/ECTS**
- Internships: **25 hours/ECTS**

Definitions:

- **Lectures**: The primary instructional activity where students attend lectures and independently process the material presented.
- **Exercises**: Activities designed to clarify lecture content through applications. In "passive" exercises, the instructor performs the application; in "active" exercises, students work under supervision.
- **Theoretical Laboratory (LAB-T)**: Focused on elaboration and development of scientific applications, including theoretical design of lab exercises and planning for field activities.
- **Practical Laboratory (LAB-P)**: Hands-on activities involving instruments, software, or other tools.
- **Field Laboratory (LAB-C)**: Field-based application of theoretical and practical knowledge, often in multidisciplinary contexts aimed at developing environmental analysis skills.
- **Seminars**: In-depth sessions focused on specific topics within a course.
- **Internship/Thesis**: Practical application of acquired skills and knowledge in the form of laboratory or fieldwork, followed by individual and group analysis under academic supervision, culminating in the thesis.

Assessment of Learning Outcomes

Assessment and evaluation methods are specified in each course syllabus. These may include written and/or oral examinations.

For courses that include laboratory components, attendance may be checked as a prerequisite for participation in the final exam, in accordance with the course syllabus.

Prerequisites

In order to sit for examinations, students must comply with the following prerequisites:

Course	Not Accessible Unless the Following is Passed
Environmental Chemistry and Human Health Risk	General and Organic Chemistry
Analytical Chemistry Laboratory	General and Organic Chemistry
Environmental Analytical Chemistry	Analytical Chemistry Laboratory

PLANNED TEACHING – COHORT 2025/2026

I stYEAR							
Integrated Course/ Teaching Module	**Teaching Module/Course unit**	**ECTS**	**Academic Field**	**Disciplinary Area**	**HOURS**	**SEM**	**Assessment Methods**
ANIMAL BIOLOGY	*ANIMAL BIOLOGY – Zoology*	9	BIO/05	B / Biological Sciences	LEC:40 EXE:24 LAB:32	Second	M
	ANIMAL BIOLOGY – Biology applied to the animal cell	6	BIO/06	B/ Biological Sciences	LEC:48	First	M
GENERAL AND ORGANIC CHEMISTRY	*GENERAL AND ORGANIC CHEMISTRY - General Chemistry module*	6	CHIM/03	A / Chemical Sciences	LEC:40 EXE: 16	First	M
	GENERAL AND ORGANIC CHEMISTRY - Organic Chemistry module	6	CHIM/06	A / Chemical Sciences	LAB:48	Second	M
MATHEMATICS AND STATISTICS		9	MAT/08	A / Mathematical, Computer, and Statistical Sciences	LEC:72	First	M
PHYSICS		6	FIS/01	A / Physical Sciences	LEC:48	First	M
ANALYTICAL CHEMISTRY WORKSHOP		6	CHIM/01	A / Chemical Sciences	LEC:16 EXE: 16 LAB:24 FIELD OUTINGS :24	Second	M
GEOLOGY AND LITOLOGY		9	GEO/03	B / Earth Sciences	LEC:56 LAB:12 FIELD OUTINGS :20	Second	M
EDUCATIONAL BACKGROUND ASSESSMENT TEST		0	N/N	Elective	LEC:0	ND	I

2stYEAR							
Integrated Course/ Teaching Module	**Teaching Module/Course unit**	**ECTS**	**Academic Field**	**Disciplinary Area**	**HOURS**	**SEM**	**Assessment Methods**
ENGLISH		3	L-LIN/12	E / For knowledge of at least one foreign language	LEC: 0	Annual	M
GIS APPLICATIONS IN BIODIVERSITY MONITORING		6	BIO/05	B / Biological Sciences	LEC:32 SEM: 24	First	M
BIOGEOGRAPHY		6	BIO/05	B/Biological Sciences	LEC:48	First	M
CHEMICAL AND ENVIRONMENTAL RISK TO HUMAN HEALTH	*CHEMICAL AND ENVIRONMENTAL RISK TO HUMAN HEALTH - Environmental Chemistry Module*	6	CHIM/12	B / Agricultural, Chemical, Physical, Legal, Economic, and Contextual Disciplines	LEC:48	First	M
	CHEMICAL AND ENVIRONMENTAL RISK TO HUMAN HEALTH - Human Exposure Assessment	6	MED/44	C / Related or Integrative Educational Activities	LEC:48	First	M
ECOLOGY		9	BIO/07	B / Ecological Sciences	LEC:68 LAB:8	First	M
PHYSICAL GEOGRAPHY AND GEOMORPHOLOGY		9	GEO/04	A / Natural Sciences	LEC:64 FIELD OUTIN GS:16	Second	M
PLANT BIODIVERSITY AND TAXONOMY		6	BIO/02	B/Biological Sciences	LEC:36 EXE:8 FIELD OUTIN GS: 16	Second	M
ENVIRONMENTAL MICROBIOLOGY		6	AGR/16	B/ Agricultural, Chemical, Physical, Legal, Economic, and Contextual Disciplines	LEC:48	First	M
ENVIRONMENTAL ANALYTICAL CHEMISTRY		6	CHIM/01	B/ Agricultural, Chemical, Physical, Legal, Economic, and Contextual Disciplines	LEC:48	Second	M

3stYEAR							
Integrated Course/ Teaching Module	**Teaching Module/Course unit**	**ECTS**	**Academic Field**	**Disciplinary Area**	**HOURS**	**SEM**	**Assessment Methods**
ENVIRONMENTAL BOTANY		9	BIO/03	B /Ecological Sciences	LEC:64 FIELD OUTIN GS:	First	M

					16		
PALEONTOLOGY		9	GEO/01	B / Earth science	LEC:72	First	M

JUDGMENT **M** - EXAM **Q** - QUALIFICATION **A** - ATTENDANCE

3stYEAR The student must choose 3 optional courses (18 ECTS) from the list:							
Integrated Course/ Teaching Module	**Teaching Module/Course unit**	**ECTS**	**Academic Field**	**Disciplinary Area**	**HOURS**	**SEM**	**Assessment Methods**
REMOTE SENSING		6	GEO/03	C / Related or Integrative Educational Activities	LEC:48	First	M
TERRESTRIAL WILDLIFE BEHAVIOURAL ECOLOGY		6	BIO/05	C / Related or Integrative Educational Activities	LEC:40 EXE:16 (including field outings)	Annual	M
CONSERVATION ECOLOGY		6	BIO/07	C / Related or Integrative Educational Activities	LEC:48	First	M
ECOTOXICOLOGY		6	BIO/07	C / Related or Integrative Educational Activities	LEC:40 EXE: 12 FIELD OUTINGS: 4	First	M
BIODIVERSITY AND EVOLUTION OF PLANTS		6	BIO/02	C / Related or Integrative Educational Activities	LEC:40 EXE: 16	Second	M
APPLIED ECOLOGY		6	BIO/07	C / Related or Integrative Educational Activities	LEC:32 FIELD OUTINGS:32	Second	M
GEOPEDOLOGY		6	GEO/04	C / Related or Integrative Educational Activities	LEC:36 EXE:8 FIELD OUTINGS:16	Second	M
GEOSPHERE AND GEOPROSPECTS FOR THE ENVIRONMENT		6	GEO/03	C / Related or Integrative Educational Activities	LEC:40 EXE:16	Second	M
HISTORY AND RESOURCES OF MOUNTAINS		6	M-STO/05	C / Related or Integrative Educational Activities	LEC:40, SEM:12	Second	M

JUDGMENT **M** - EXAM **Q** - QUALIFICATION **A** – ATTENDANCE

3st YEAR OTHER MANDATORY COURSES							
Integrated Course/ Teaching Module	**Teaching Module/Course unit**	**ECTS**	**Academic Field**	**Disciplinary Area**	**HOURS**	**SEM**	**Assessment Methods**
ELECTIVE		12	Electives	D/ Electives	//		
FINAL EXAM		3	Finex_S	E / For the final assessment	FE:75	Annual	M
TRAINING		9	NN	F / Training and Orientation Internship	STA: 225	Annual	A