



**UNIVERSITÀ DEGLI STUDI
DELL'INSUBRIA**

DIDACTIC REGULATIONS OF THE DEGREE COURSE IN
DIGITAL TECHNIQUES FOR THE ENVIRONMENT AND CONSTRUCTION

(L-P01 – Technical professions for construction and the territory)

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Table of Contents

Art. 1 - General characteristics and organization	3
Art. 2 - Teaching calendar of the course of study	4
Art. 3 - Orientation Activities.....	5
Art. 4 - Specific training objectives, expected learning outcomes and employment opportunities.....	8
Art. 5 - Admission to the Degree Programme.....	12
Art. 6 - Incoming transfers, course changes.....	14
Art. 7 - Simultaneous enrolment in two courses of study.....	15
Art. 8 - The training course.....	15
Art. 9 - Rules for the presentation of study plans and individual study plans	18
Art. 10 - Opportunities offered during the training course	19
Art. 11 - Graduation	19
Art. 12 - Quality assurance of the Degree Programme	21
Attachments	24

Art. 1 - General characteristics and organization

The Professional Degree Course in "Digital Techniques for the Environment and Construction" (TeDAC) belongs to the class of degrees L-P01 – Technical Professions for Construction and the Territory pursuant to Ministerial Decree no. 446 of 12 August 2020, and in accordance with Ministerial Decree no. 1154 of 14 October 2021, Ministerial Decree no. 96 of 6 June 2023 and Interministerial Decree no. 682 of 24 May 2023 and the University Teaching Regulations.

Like other similar professional degree courses offered in Italy, the CdS issues the title of "Technician for Construction and the Territory" which qualifies for the profession of Graduate Surveyor.

The CdS in TeDAC responds to the need to train qualified technicians with advanced digital skills, capable of operating in the construction, territory, and environmental sectors in line with the needs of the labor market and technological innovation. It forms the figure of the graduate surveyor, a qualified technician capable of operating in a multipurpose manner in the sectors of public and private construction, civil and rural infrastructures, land management, and environmental protection.

The objective of the Degree Course, also defined following consultations with various Colleges of Surveyors and Graduate Surveyors, trade associations and representatives of the professional and business world, is to provide students with the knowledge, skills and abilities necessary to understand and interpret the complexity of building and territorial projects and to facilitate the transition to digital design systems, construction and monitoring, thanks to the use of innovative geomatic and digital technologies (e.g., CAD, GIS, BIM, laser scanning, remote sensing).

The training course integrates theoretical bases with a strong application component promoted by the contribution of non-university teaching entrusted to external experts and professionals, and through lectures, laboratories, exercises, seminars, and a professional internship to be carried out in technical firms, companies, public and private bodies.

The course is developed over three years: the first two are dedicated to basic and characterizing disciplines integrated with laboratory activities, the third is strongly oriented towards practical evaluation internships (48 CFU, 1,200 hours), carried out in collaboration with local institutions, companies, and professional firms.

The graduate in TeDAC will be able to carry out digital survey and restitution activities (e.g., CAD, GIS, BIM, laser scanning, remote sensing), collaborate in the design and management of civil and environmental works, take care of the economic and accounting aspects of the construction site, deal with safety at work, monitoring and maintenance of works and infrastructures, as well as interface with cadastral databases (e.g., SISTER, PREGEO, DOCFA) and provide technical advice for public and private entities. They will find employment in the public and private sectors, as freelancers, technical employees, or consultants, contributing to the design, management, and maintenance of works and territorial systems with a view to ecological transition and digital transformation.

Access to the degree course is subject to a locally restricted number; the maximum number of places available is established annually by the Academic Senate, on the proposal of the Department, and is indicated in the call for admission. Following the applications received, a merit ranking is prepared based on the chronological order in which the applications were submitted. With the completion of the enrolment operations, in the event that the number of places has not been reached, a scrolling of the ranking list is carried out. The process is repeated until the number of available places is exhausted.

Enrolled students must take the TOLC-LP initial preparation test (in TOLC@CASA mode),

administered by the Interuniversity Consortium Integrated Access Systems (CISIA), to verify basic knowledge in mathematics, logical reasoning, and reading comprehension. In the event of a failed outcome, Additional Educational Obligations are envisaged to be fulfilled in the first year of the course through remedial activities organized by the University – see art.5 of these Regulations.

The TeDAC course was therefore created to respond to the growing need for professionals capable of combining technical tradition and digital innovation, providing the graduate surveyor with a broad and up-to-date training that makes them a protagonist in facing contemporary challenges and guiding the transition to a safer, more sustainable society that is attentive to the quality of the built environment, environmental protection, and protection of the territory.

The title allows direct qualification to the profession of graduate surveyor, recognized at the European level, and opens up immediate employment prospects both as a freelancer and as an employee in companies, studios, credit institutions, insurance institutions, and public administrations. Unlike other three-year degree courses, the path is conceived as a direct outlet to the world of work and does not provide a natural continuation into a master's degree.

The teaching structure responsible for the course of study is the Department of Theoretical and Applied Sciences.

The degree course formally identifies the reference figures for teaching coordination, Quality Assurance (President and AiQua Commission), incoming and ongoing guidance, tutoring, and *placement*. The names or functional roles of these contact persons are published annually on the Degree Course web page.

The reference teaching secretariat is available by appointment via the Microsoft Teams platform and replies to e-mails received through *InfoStudenti*. InfoStudenti is the web application that offers a communication channel with various University offices – including Student Secretariats, Integrated Student Services – Right to Education, Orientation and Placement Services, and Teaching Secretariats – available to students and external users. With this system, it is possible to send questions and receive related answers, attach documents, and track the status of your request.

The Degree Program website contains all the information required by current legislation, such as the Degree Program's educational objectives, the training activities implemented, and the list of teachers. The programmes of courses and other training activities, or syllabus, approved by the President of the Degree Course, are announced before the beginning of the academic year.

Educational activities take place at the Varese headquarters.

Art. 2 - Teaching calendar of the course of study

The calendar of teaching activities is published on the *Timetable page* of the Course website, while the calendar of exam sessions, to consult the dates and times of the exams, is published on the <https://uninsubria.esse3.cineca.it/ListaAppelliOfferta.do> page.

The timetable of teaching activities is made public at least 14 days before the start of each semester.

The minimum number of exam sessions available in an academic year is six (6), distributed over three exam periods:

- January-February;
- June-July;

- September until the start of classes.

To the six ordinary exam sessions, sessions for undergraduates and students who are not on track with the prescribed course can be added.

To register for exams, access the personal area of the Student Secretariat Web Services using the university credentials: @studenti.uninsubria.it email account username and password.

Then enter the *Exams page* and select the Exam Sessions item. On this page, select the exam session and follow the instructions to complete the registration.

Students who are up to date with their enrolment and fee payments can access the exams in compliance with any prerequisites, only after having obtained attendance and, in any case, after completing the relevant teaching courses.

Art. 3 - Orientation Activities

The Degree Course in Digital Techniques for the Environment and Construction provides a structured system of orientation, tutoring, and accompaniment to work, in line with the practices of the University of Insubria, aimed at supporting the student throughout the entire training course, from access to the University to professional integration, which can be found on the website of the University of Insubria. In addition, the Orientation and *Placement* Office participates in the initiatives of the secondary schools of the area, of the InformaGiovani, and in the University Orientation Salons (e.g. *Next Choice*, *Young JOB&Orienta*, *OrientaLombardia*).

Below is a link to information on the orientation activities carried out at the university level:

<https://www.uninsubria.it/formazione/consigli-e-risorse-utili/orientamento-e-placement>

The specific orientation activities carried out by the TeDAC Degree Programme are presented below:

Incoming orientation

Alongside the activities already planned by the University, the Degree Course in Digital Techniques for the Environment and Construction (TeDAC) promotes specific initiatives aimed at making secondary school students aware of the professionalizing nature of the course, its technical-application structure, and the related employment opportunities. The main activities are:

- Orientation meetings at secondary schools, which can be held in person or via video link. During these appointments, professors and staff explain the University's educational offerings, admission procedures, student fees, and opportunities related to the right to study.
- Collaboration with the IFTS and the ITS Academy in the construction and environment area, with the aim of promoting the vertical continuity of technical training and intercepting students and workers who wish to complete their course with a professionalizing academic qualification consistent with the profile of the graduate surveyor.
- Thematic meetings and professionalizing seminars, organized with Colleges of Surveyors and Graduate Surveyors, Professional Orders (Engineers, Geologists), trade associations, companies, and technical firms in the area. In these meetings, emerging professional needs (BIM, GIS, digital surveying, land management, environmental protection, safety, and sustainability) are presented to students, strengthening the school-university-work connection.

- Detailed illustration of the practical-evaluation internship (TPV) and the practical-evaluation test (PPV), characterizing elements of the Degree Course in TeDAC. During the orientation activities, particular attention is paid to the description of the TPV, its enabling function, and the role of the graduate surveyor in the world of work.
- Participation in local events and initiatives, including orientation fairs, Open Days dedicated to professional paths, and presentation days organized by the Colleges of Surveyors and Graduate Surveyors. During the meetings, updated data on employment prospects for technical professions in construction and the territory are also presented (source: Unioncamere-Excelsior, ANVUR, and sector analysis), highlighting strong demand for qualified technicians in digital surveying, territorial data management, sustainable construction, urban regeneration, and infrastructure management.
- Reception for freshmen, which is organized annually with the support of the staff of the DiSTA teaching secretariat, and which takes place during the lessons of the first year to welcome and provide practical information to newly enrolled students.
- The Welcome Lab, organized by the Department before the start of classes, is a laboratory designed to promote the integration of first-year students into the university context. The workshop is proposed as a moment of discussion on the issues of educational success (study method, definition of both study and personal goals, organization of time), self-knowledge, and the management of anxiety and emotions.
- Information tutors, made available by DiSTA for first-year students, who carry out reception and orientation activities in collaboration with teachers and technical-administrative staff. In particular, the information tutors provide includes how to conduct lessons and laboratories, access to the e-learning platform, administrative requirements, address choices, and the compilation of the study plan. In addition, they collaborate with the teachers and with the educational secretariat by participating in orientation initiatives, both with support activities and as testimonials.

In addition, the University's website offers useful information guides to incoming students¹ and the "*thefaculty*" app, which is useful for supporting a path of preparation and recovery of preliminary knowledge.

Orientation and tutoring *in itinere*

During the years of the course, the student benefits from some disciplinary and information services, which help in overcoming training difficulties, in managing the workload, in the use of digital tools, in attending laboratories and in the integration of theoretical and practical knowledge.

The University of Insubria offers specific services such as:

- Intra-university orientation interviews aimed at students who are already enrolled, including those about to finish their studies, with the following objectives:
- Verification of the choice made and possible redefinition of one's training project;
- Support in the choice of the course of study after obtaining the three-year degree (orientation to master's degrees).

¹ <https://www.uninsubria.it/formazione/consigli-e-risorse-utili/orientamento-e-placement/orientamento-primadelliscrizione>

- Psychological counseling, which has the following objectives:
- Offer a relationship of professional help to students who experience personal or relational difficulties, such as hindering the normal achievement of academic goals;
- To provide listening and support to students with difficulties in studying or interpersonal relationships, in order to improve self-knowledge, to enhance their skills, and to encourage adaptation to the university environment;
- To help students in crisis situations to identify the origin of their discomfort and to develop adaptive strategies to overcome difficulties;
- Provide support and advice to students who experience situations of stress and anxiety;
- To support students who have problems related to an inadequate choice of studies, focusing and clarifying personal interests and motivations, in order, if necessary, to redefine objectives and develop alternative decisions;
- To prepare a posteriori, on the basis of the systematic assessment of the needs highlighted by the service, guidance tools for the prevention and timely solution of the situations of hardship most frequently related to integration into the university reality.
- The Tutoring, carried out by professors and students of the CdS, is aimed at:
- To guide and assist students throughout their studies, and in particular in the first year;
- Make students actively participate in their training and related choices;
- Advise on the methodology of the study, on the opportunities of attendance, and on the solution of particular problems;
- Remove obstacles to successful course attendance, including through initiatives tailored to the needs, attitudes, and requirements of individuals;
- Support students in carrying out laboratory activities;
- Supporting foreign students arriving at the University as part of international mobility programs;
- Supporting, assisting, and accommodating students with disabilities and/or SLD.

In addition to the University services, the TeDAC degree course provides:

- a reference professor for each year of the course, who acts as an academic tutor for teaching issues and the organization of the study plan;
- periodic meetings (at least one per semester) dedicated to the individual cohorts to discuss the progress of studies, the workload, and the critical issues that emerged in the teaching evaluation questionnaires;
- the specific support of the TPV contact person and the teaching secretariat in the planning of the practical-evaluation internship and the practical-evaluation test;
- the involvement of student representatives in the activities of returning the results of satisfaction surveys and in the definition of any improvement actions.

The teachers also pay particular attention to working students, who normally make up a large share of the total student body, providing compensatory study material, conducting personalized interviews based on specific needs, and helping them if they have difficulty following lessons in person.

Career guidance

Towards the end of the course of study, DiSTA and the Orientation and Placement Office promote

activities aimed at career guidance:

- The *Career Day*, which takes place in one day, offers students meetings with companies.
- Counseling for integration into the world of work;
- Conferences and professional workshops promoted by the Steering Committee on the world of work and job opportunities.

The Orientation and *Placement* Office also facilitates the consultation of CV databases and professional preparation.

In addition to the University actions, the CdS in TeDAC provides for specific initiatives to accompany work closely linked to the professionalizing nature of the path. The degree course identifies one or more reference professors who, in conjunction with the Steering Committee and the Colleges of Surveyors and Graduate Surveyors and the other social partners involved, systematically collect and disseminate job placement opportunities (job offers, collaborations, internships, calls) from professional firms, companies, local authorities, and technical service companies. These opportunities are made available through a mailing list for undergraduates and graduates of the degree course and a dedicated page on the course's e-learning platform. The technical visits, the professionalizing seminars and the workshops organized as part of the teachings, as well as the events promoted with the Steering Committee (meetings on TPV, PPV, profile of the graduate surveyor, digital and green transition in the construction sector), are further structured opportunities for direct contact between students, employers and professionals, favoring the construction of professional networks and the transition from the practical-evaluation internship to the work.

Art. 4 - Specific training objectives, expected learning outcomes, and employment opportunities

Specific training objectives of the course and description of the training course, also with reference to the Dublin descriptors

The professionally oriented Degree Course in "Digital Techniques for the Environment and Construction" (TeDAC), class L-P01 – Technical Professions for Construction and the Territory, aims to train the graduate surveyor qualified in accordance with Ministerial Decree 446/2020, Law 163/2021, and D.I. 682/2023.

In line with the qualifying educational objectives of the L-P01 class, the CdS intends to provide:

- *basic technical-scientific knowledge* in the fields of applied mathematics and computer science, physics and chemistry of materials, land sciences and civil and environmental engineering, necessary to understand the behavior of materials, building structures, and environmental systems;
- *professional operational knowledge and skills* for the survey, executive design, site management, energy and structural diagnosis and control of building works and light infrastructures, as well as for the technical-administrative management of land transformations;
- *advanced digital skills* in the use of CAD, BIM, GIS, photogrammetry, remote sensing, and drone tools, for the acquisition, processing, modeling, and integrated management of territorial, building, and cadastral data;
- *estimating, legal-administrative and procedural knowledge and skills* for the drafting of building and

cadastral practices, for participation in urban planning procedures, and for the management of public and private works contracts;

- *transversal skills* (communicative, organizational, relational) necessary for working in multidisciplinary work groups, for relationships with institutions, professionals, and companies, and for continuous professional updating and language skills (English or another EU language) useful for technical communication and collaboration in international contexts.

The achievement of these specific training objectives requires the acquisition of disciplinary and transversal knowledge and skills, divided into five integrated learning areas:

1. *Basic training*, which provides the fundamental knowledge of mathematics, physics, chemistry of materials, computer science and foreign language (English or other EU language at level B1 according to the Common European Framework of Reference for Languages, CEFR, in addition to Italian), to support the understanding of physical phenomena, the behavior of materials and building and environmental systems, and for the correct reading and processing of technical data.
2. *Digital training* that provides solid preparation in the use of technologies for surveying and representation (CAD, photogrammetry, laser scanning, drones), for information modeling (BIM), and for the management of spatial data (GIS, digital cartography, cadastral databases).
3. *Environmental training*, aimed at knowledge of natural systems, geo-hydrological risks, land monitoring techniques and works, and the principles of sustainability and ecological transition applied to construction and infrastructure.
4. *Building training*, in which the science and technique of construction, geotechnics, building energy, material technology, and technical architecture are deepened, to allow the graduate to participate in a conscious way in the design, verification, and management of the built environment.
5. *Estimative-legislative training*, which ensures knowledge of estimation, private, administrative, and urban planning law, public procurement code, and building and cadastral procedures, is necessary to manage technical-administrative practices, economic evaluations, and technical-expert consultancy activities.

The *basic technical-scientific knowledge* is mainly developed in *Basic Training* and consolidated in *Environmental Training* and *Building Training*.

Professional operational knowledge and skills, and *advanced digital skills* are reflected above all in the areas of *Digital Training*, *Environmental Training*, and *Construction Training*.

Estimation, legal-administrative, and procedural knowledge and skills are overseen by the *Estimative-Legislative Training* area and integrated, together with *transversal skills*, by laboratories, internships, and professionalizing activities, organized in a progressive three-year course that leads from disciplinary foundations to operational applications on the territory and on the built environment.

The combination of this knowledge and skills will allow TeDAC graduates to carry out, with an adequate degree of autonomy, the professional functions envisaged for the graduate surveyor, such as architectural and territorial surveying and representation, building design of simple works, site management, energy diagnosis, economic estimation of works and technical-administrative consultancy, in close connection with the needs of the labor market and the Insubria territory.

The achievement of the proposed training objectives is guaranteed by traditional and innovative

educational activities such as: lectures, demonstration tutorials and workshops, execution of technical projects (learning by doing, problem solving) with periodic deliveries, collective and individual reviews, group activities for the simulation of a professional flow (cooperative learning), educational visits to production sites or construction sites.

Achievement will be verified through exams for courses, reports, and/or other documentary products of a technical nature for laboratories, and reports of results for internship activities. Finally, the final exam, consisting of the practical-evaluation test (PPV) and the degree exam, will allow us to verify the student's ability to solve a problem of a technical nature through the knowledge, skills, and abilities acquired during the training course and the suitability to carry out the profession of graduate surveyor.

Expected learning outcomes

Knowledge and understanding

The knowledge and understanding skills that students will acquire through lectures, laboratories, and internships concern:

- the fundamentals of physics, chemistry, mathematics – with hints of statistics and computer science – and advanced technical drawing;
- the operational aspects of the building process and land management, with particular reference to the construction and maintenance of civil works and territorial infrastructures;
- the methodological aspects of building and urban planning, with particular reference to environmental sustainability and energy efficiency;
- the regulatory landscape to manage building, urban planning, and contractual practices in compliance with current legislation;
- the technical-legal aspects related to safety on construction sites and the management of building processes;
- the interpretation, validation, and processing of territorial surveys and cartographic representations;
- the technical-economic evaluation of buildings and territories for the design and management of the built environment;
- the principles and deontological aspects of professional activity.

Graduates will also be able to understand the theoretical and methodological foundations of estimation, geomatics, topography, urban planning, and technical-administrative regulations related to professional activity. The acquisition of this knowledge will be verified through intermediate tests and/or final written and/or oral exams, reports, and project papers.

Ability to apply knowledge and understanding

Students will develop the ability to apply acquired knowledge to solve technical problems during teaching activities, laboratories, educational visits, and professional internships. In summary, the student will be able to:

- use IT systems to support territorial planning, building design, and digital modeling (CAD, BIM, GIS);
- apply the theoretical notions of mathematics, physics, and chemistry in solving technical-professional problems;
- adopt the reference regulations on the design, construction, and maintenance of buildings and infrastructures and land management;

- use topographic and architectural survey techniques and digital representation for the documentation and monitoring of the building heritage and infrastructures;
- develop and justify design and executive solutions, arguing the technical and economic choices made;
- prepare cadastral, building, and safety practices, draw up design documents, bills of quantities, technical reports, and specifications;
- act in accordance with the ethical principles underlying the profession of a graduate surveyor.

The achievement of these skills will be verified through written and/or oral exams, reports, and/or other documentary products of a technical nature, and reports of results for internship activities.

Making judgements

Graduates will acquire autonomy of judgment that will allow them to:

- develop and compare alternative solutions for simple technical problems, choosing the most suitable one for the context;
- critically analyze the technologies of surveying, restitution, construction, management of the built environment, and energy efficiency;
- identify bibliographic sources and relevant tools to develop technical and design solutions;
- make an informed choice of the area in which to carry out the internship experience;
- assess the ethical and social implications related to the application of professional skills.

Making judgments will be developed through seminars, individual and group work, educational visits, professional internships, and the final exam. Its acquisition will be verified through the evaluation of the papers, the internship activity, and the discussion of the final paper.

Communication skills

Graduates will develop communication skills that will enable them to:

- appropriately use the technical-scientific lexicon in the building, territorial, and environmental fields;
- draw up technical reports, appraisals, bills of quantities, cadastral and building practices, design documents, and clear and effective administrative documents;
- present and argue projects individually and in groups, results of surveys and technical choices, both to specialist interlocutors (engineers, architects, geologists, public administrations) and to non-specialist users (clients, companies, citizens);
- use digital and multimedia communication tools, including modeling, representation, and information management software (CAD, GIS, BIM);
- communicate, as well as in Italian, in English, or in another EU language, at a level of at least B1 of the CEFR, in professional situations that require interaction and exchange of technical information, also in international contexts.

These skills will be developed through practical tests, group work, laboratory activities, oral presentations, project papers, and group activities for the simulation of a professional flow and the professionalizing internship. Their acquisition will be verified through written and oral exams, discussion of papers, individual and group presentations, as well as through the assessment of language skills.

Learning skills

Graduates will develop learning skills that will enable them to:

- independently update and expand their technical-scientific knowledge, keeping their preparation in line with the regulatory, technological, and professional evolution of the sector, with a predisposition to continuous updating;
- acquire new skills through the consultation of technical manuals, scientific publications, digital databases, and professional updating tools;
- use active study and self-learning methodologies to address simple technical problems in the building, territorial, and environmental fields;
- collaborate effectively in multidisciplinary contexts, while knowing how to operate independently and integrate quickly into the work group and decision-making processes;
- critically evaluate their training needs in relation to employment opportunities and the professional roles they may cover.

These skills will be developed through laboratory, seminar, and design activities, and during the professional internship.

Career opportunities

Graduates in "Digital Techniques for the Environment and Construction" (TeDAC) can practice the profession in both the public and private sectors. In particular, the main employment opportunities are:

- The freelance profession as a graduate surveyor, with direct qualification pursuant to Ministerial Decree 446/2020 and D.I. 682/2023 (PPV + final exam), without a separate State Exam.
- Entrepreneurial activity in the construction, surveying, and technical services sector.
- Employee or consultant of professional firms, design companies, construction and reclamation companies, local public bodies, companies, and consortia.
- Offices and public bodies for urban planning, territorial planning, and environmental management and control;
- Technical and expert support activities for credit institutions, insurance companies, and judicial authorities.
- Bodies and agencies that deal with environmental monitoring, civil protection, and management/maintenance of works and infrastructures.

Art. 5 - Admission to the Degree Programme

In accordance with current legislation, admission and any subsequent enrolment to the degree programme require the possession of a secondary school diploma, or another qualification obtained abroad and recognized as suitable by the University.

In application of Law no. 33 of 12 April 2022 and the subsequent Ministerial Decrees 930/2022 and Ministerial Decree 933/2022, requests for double enrolment will be evaluated by a special Degree Programme Committee, subject to verification of the possession of the admission requirements and the compatibility of the study plans.

Enrolment takes place within a local restricted number, pursuant to art. 2 of Law no. 264 of 2 August 1990. The maximum number of eligible students is defined annually by the Department Council, on the proposal of the Course Council, taking into account the availability of internship locations, the capacity of the teaching laboratories, and the needs of the professional context and the labor market.

The information and dates for applying for enrolment are made public in a specific call for applications issued by the University of Insubria. Following the applications received, a merit ranking is prepared based on the chronological order in which they were submitted. Upon completion of the enrolment operations, if the number of places has not been reached, the ranking list will be scrolled. The process is repeated until the number of available places is exhausted.

Pursuant to art. 6 paragraph 1 of Ministerial Decree 270/2004, the following basic knowledge is required for admission to the Degree Course:

- knowledge and ability to use the main tools of mathematics (set, arithmetic, algebra, exponentials and logarithms, analytic geometry, plane geometry, solid geometry, percentages and proportions);
- logical reasoning skills;
- verbal comprehension skills.

Enrolled students must take the TOLC-LP initial preparation test (in TOLC@CASA mode), provided by the Interuniversity Consortium Integrated Systems for Access (CISIA). The test can be taken at any location that has adopted this verification test, even multiple times, but in any case, no later than November 30th. The test consists of answering multiple-choice questions (5 possible alternatives, of which only one is correct) organized into three thematic sections: Mathematics, Verbal Comprehension, and Logic. The test is considered passed if the student scores at least 12 out of 30. Students are required to send the certificate issued by CISIA by 30 November, even in the event of a negative outcome, following the instructions provided on the course of study web page.

Students who do not pass the initial knowledge test are assigned an additional educational obligation (OFA), which provides for the compulsory attendance of a remedial course in Mathematics, at the end of which there is a further test, by the end of the first semester of the first year of the course. Students who still do not pass the above tests will be required to pass the Elements of Mathematics for Data Processing and Management exam, scheduled at the end of the first semester of the first year, before being allowed to take other exams. Enrolment in the second year of the programme in a regular position is, in any case, subject to the fulfillment of the OFA by 30 September of the calendar year following the year of enrolment. In the event of late enrolment, the CCdS may decide to provide extraordinary test dates and dedicated office hours to support students to whom the OFA is attributed.

On the other hand, students who do not take the initial knowledge test or do not submit the certificate issued by CISIA are subject to a career block and therefore cannot take exams.

Preparatory training activities for the verification of initial knowledge

As preparation tools for the initial knowledge test, students can use the CISIA platforms: you can refer to the CISIA Basic Mathematics MOOC (after registering at link <https://lms.federica.eu/enrol/index.php?id=568>).

In addition, it is possible to attend the preparation courses for the entrance tests organized by the University in the period from the end of August to the beginning of September www.uninsubria.it/precorsi

Link: <https://www.uninsubria.it/servizi/vivere-insubria/immatricolarsi-e-iscriversi/immatricolazioni/verifica-della-preparazione-7>

(Verification test: Procedure and Syllabus.)

Waiver of the verification test

Students are exempt from the test if:

- transfer from another degree course at the University of Insubria (internal transfer), provided that they have taken an initial preparation test similar to that required for the degree course;
- transfer from another university where they have already taken an initial preparation test similar to that required for the degree course;
- enroll having already obtained a university degree.

Students seeking an exemption must submit a certificate or self-certification of their prior career to the Student Secretariat.

Art. 6 - Incoming transfers, course changes

Students coming from another university or from another course of study at this University can request a transfer/transfer to the Degree Course in TeDAC. Transfer/transfer requests will be evaluated by a Commission appointed by the Course Council, which will formulate the recognition of university credits on the basis of the following criteria:

- analysis of the program carried out;
- CFU assigned to the course;
- evaluation of the congruity of the scientific-disciplinary sectors and the contents of the training activities passed by the student in the previous career, with the specific educational objectives of the course of study and of the individual training activities envisaged in the training course.

The above recognition is carried out in accordance with the provisions of art. 3 paragraphs 10 and 11 of Ministerial Decree no. 1648 of 19 December 2023 redefining the Classes. Recognition is carried out up to the amount of university training credits provided for by the training course.

Link to recognition page: <https://www.uninsubria.it/servizi/consulenza-e-supperto/pratiche-studenti/servizi-segreterie-studenti/riconoscimento-di>

Recognition of professional skills

The Degree Programme Council may recognize, up to a maximum total of 48 credits:

- certified professional knowledge and skills in accordance with current legislation on the subject;
- knowledge and skills gained in post-secondary level training activities in the design and implementation of which the university has contributed.

The student must attach documentation of the activities carried out (programs, certificates, certifications) to the application for recognition; recognition is provided if these activities are consistent with the specific educational objectives of the Degree Course, taking into account the contents and duration in hours.

Students coming from courses provided by Higher Technical Institutes, which include internships and/or laboratory activities consistent with the objectives of this professionally oriented Degree Course, can obtain the recognition of the relevant credits as part of the internships and/or laboratory activities of TeDAC, upon presentation of appropriate certification and evaluation by a Commission appointed by the Course Council.

The recognition of credits is always arranged on a case-by-case basis, exclusively on the basis of the skills

actually demonstrated by each student.

Art. 7 - Simultaneous enrolment in two courses of study

Starting from the 2022-2023 academic year, students are allowed to enroll simultaneously in two degree programmes in application of Law no. 33 of 12 April 2022 and subsequent Ministerial Decrees no. 930 of 29 July 2022 and no. 933 of 2 August 2022. Requests for double enrolment will be evaluated by a special Commission of the CdS, after verifying that the admission requirements are met and the study plans are compatible.

Art. 8 - The training course

The training course does not include the articulation of curricula, and the teaching activity is organized in two semesters. All courses are carried out in conventional mode and in Italian.

The Degree Course lasts three years and provides for the achievement of a total of 180 credits through various training activities: lectures, field and application exercises on the use of specialized software, laboratory activities, seminar activities, a practical-evaluation internship (48 CFU), and a final exam (3 CFU).

The plan includes eight (8) compulsory courses in the first year and four (4) in the second. In addition, during the first two years, the training plan includes eight (8) laboratories for a total of 51 credits. In the second year, a course of 6 credits is available to the student's choice. The plan is completed in the third year by teaching English or other community languages and the Practical-Evaluation Internship (TPV) activity.

English or other EU language proficiency

To obtain the qualification, the student must demonstrate that he or she has acquired eligibility certifying knowledge of English or another EU language (3 CFU). The recognition of the 3 CFU of "English language or other EU language" can take place in one of the following ways:

- by presenting the Student Secretariat with a certificate proving that they have passed a level test at least equivalent to CEFR B1. This certificate must not have been obtained for more than 5 calendar years, with the exception of IGCSE, IELTS, and TOEFL certifications, which, on the other hand, are valid for only two (2) calendar years. To find out the complete list of recognized certifications, please refer to the following link: https://www.uninsubria.it/sites/default/files/2025-05/Riconoscimento_Certificazioni_Inglese_DISTA.pdf
- acquiring the ECTS credits internally at the University by passing an English language or other EU language exam provided by the University in the third year of the training course. The student will be able to take this exam throughout the academic year in the specially scheduled sessions.

Prerequisites and attendance at teaching activities

There are no prerequisites for all courses. However, it is not possible to begin the third-year practical-evaluation internship without having accumulated at least 105 credits.

Attendance at teaching activities is not formally mandatory, but it is strongly recommended for all training activities in order to ensure a full understanding of the contents and effective learning.

Working students

The courses are delivered in person. The merging of lesson hours into full days and particular attention by teachers in providing compensatory study material are measures introduced to facilitate the use of the degree course by working students. The teachers carry out personalized interviews based on the specific needs of students who have difficulty following lessons in person. The teachers of the individual courses have the right to decide to record and then provide the recordings through the University's e-learning tool.

Students with disabilities or specific learning disorders

In order to facilitate the path of students with declared disabilities, the CdS, on the recommendation of the Services Office for the inclusion and promotion of psychological well-being, supports students with disabilities or specific learning disorders (SLD) in order to prepare the necessary measures to allow easier attendance at courses and laboratories and to better face the exams.

Correspondence of CFU/hours for each type of activity (lectures, exercises, laboratories, internships and apprenticeships, seminars, etc.)

The commitment required of students is standardized for each teaching activity in university credits (CFU). The CFU is the measure of the volume of learning work, including individual study, required of a student in possession of adequate initial preparation for the acquisition of knowledge and skills in the training activities provided for by the Educational Regulations of the courses of study, as indicated in art. 5 of Ministerial Decree 270/04.

Therefore, each training activity (teaching, laboratory, internship, thesis, etc.) in the courses of study corresponds to a specific number of CFUs.

Each CFU corresponds to 25 hours of student commitment, including hours of training activities in the teacher's presence and hours of independent study and personal re-elaboration, necessary to complete his training.

The credits corresponding to each training activity are acquired by the student after passing the exam or other form of assessment established in these Teaching Regulations.

For each training activity, a standard commitment is assigned, estimated in hours per CFU:

- lectures: up to a maximum of 8 hours/CFU;
- exercises: up to a maximum of 12 hours/CFU;
- teaching laboratory: up to a maximum of 16 hours/CFU;
- field laboratory: up to a maximum of 16 hours/CFU;
- seminar: up to a maximum of 12 hours/CFU;
- practical-evaluation internship: 25 hours/CFU;

Lectures: this is the main and fundamental activity of teaching, the student attends the lesson held by the teacher and independently elaborates the contents heard. Other innovative teaching techniques can be included during class hours;

Exercise: this is the activity that allows you to clarify the contents of the lessons by carrying out practical

problems. No content is added to the lessons. Typically, the exercises are associated with the lessons and do not exist independently. In passive exercises, the problems are carried out by the teacher; in the active ones, the student carries out the assigned exercises under the supervision of the teacher;

Laboratories: these are assisted activities that involve the student's interaction with tools, equipment or application software packages;

Seminar: is an activity in which recognized experts in the field of a course are invited to present their experience, showing both scientific advances in the field of research and professional applications;

Practical-evaluation internship: this is the activity of supporting the student with professionals or researchers in the sector to carry out technical tasks pertinent to the topics covered in the course of study;

Practical-evaluation test: this is the activity that involves the execution of technical and professional applications, carried out and documented by the student to demonstrate operational skills and autonomy;

Educational visits: distance learning experiences that allow students to directly observe works, construction sites, and professional practices in real-world contexts, accompanied by one or more teachers.

Training activities can include up to 10% of innovative teaching (e.g., *blended learning*, virtual laboratories, projects with external partners), in line with the ANVUR 2023 guidelines on integrated digital teaching models. The AiQua Commission verifies its effectiveness through student evaluation questionnaires.

Assessment methods for training activities

For each training activity, there is a final assessment at the end of the period in which it is carried out. If the activity is divided into several modules, the final evaluation of progress takes place in a unified and collegial manner. The acquisition of the course credits is contingent on passing the relevant final exam.

The verification tests may consist of one or more of the following methods:

- written, oral, or combined exam;
- paper or written report;
- oral presentation;
- multiple-choice or open-ended tests;
- laboratory activities;
- computer exercise;
- practical test or technical application project.

The assessment methods and evaluation criteria are specified in the syllabus of the individual courses.

Before the start of a course or laboratory, the teacher in charge informs the students of the methods of the final assessment, any mid-term tests, and the evaluation criteria adopted. These methods must be uniform for all students and consistent with the course syllabus.

The verification of language knowledge in English (or another EU language), corresponding at least to level B1 of the Common European Framework of Reference, is carried out through possession of an appropriate certification or through a specific test organized by the University, as indicated in the course syllabus.

The evaluation of the Practical-Evaluation Internship (TPV) is carried out by the teacher in charge, in compliance with the provisions of art. 2 of Interministerial Decree no. 682 of 24 May 2023. The

achievement of the credits attributed to the TPV is a mandatory requirement for admission to the Practical-Evaluation Test (PPV), which is an integral part of the final degree examination.

Study experiences undertaken abroad are subject to evaluation and recognition by the Course Council, which may award the relevant credits in place of the equivalent training activities specified in the study plan.

Art. 9 - Rules for the presentation of study plans and individual study plans

Students must submit their study plan in the second year, with the option of updating it annually, according to the deadlines listed on the Student Secretariat's web page: <https://www.uninsubria.it/servizi/presentazione-piano-di-studio>.

The "Student's Choice" training activities equal to 6 credits can be chosen from the basic, characterizing, and related courses offered by the University, subject to assessment of consistency with the training course by the CCS.

Students are required to complete the study plan, which may be updated annually by the deadlines published on the Student Secretariat website of the University of Insubria (<https://www.uninsubria.it/servizi/presentazione-piano-di-studio>).

The compilation is done online through the reserved area of the ESSE3 platform, indicating the chosen courses, including the one "chosen by the student" as provided for in the CdS teaching plan.

For students participating in national or international mobility programmes, the study plan must be supplemented by a Learning Agreement, which specifies the training activities to be carried out at the host university and the equivalent activities of the study plan that will be replaced. Both documents constitute the official study plan for the mobility student and can be updated based on documentation of the recognition process for the educational activities carried out abroad.

Students with disabilities or SLD are guaranteed personalized support in defining a possible individual study plan, in compliance with the constraints of the course's educational regulations.

Art. 10 - Opportunities offered during the training course

The CdS promotes some initiatives that complete and enrich the academic experience. In particular, students can take advantage of the following programs or services:

- Mobility abroad – Erasmus and other mobilities: <https://www.uninsubria.it/internazionale/mobilita-allestero/programma-erasmus>
- Student collaborations: <https://www.uninsubria.it/servizi/tutti-i-servizi/collaborazioni-studentesche-200-ore>
- DiSTA Internship Desk: <https://www.uninsubria.it/ateneo/tutte-le-sedi/sportello-stage-dista>

DiSTA offers an Internship Desk for the offer and orientation of practical-evaluation internships, which represent the moment when the student can concretely apply and deepen the knowledge and skills acquired during the course of study. The training objectives for the practical-evaluation internship are set out in Article 11 of these Regulations.

Art. 11 - Graduation

To obtain the title of Digital Technician of the Environment and Construction, the student must complete the practical-evaluation internship (TPV) and obtain its eligibility, and must pass the final exam, which includes the practical-evaluation test (PPV) and the degree exam.

Practical-Evaluation Internship

In the TeDAC Degree Course, the Practical Evaluation Internship (TPV) represents a central training moment, aimed at acquiring the technical-professional skills necessary for the autonomous exercise of the profession of graduate surveyor.

The CdS, in collaboration with the Colleges of Surveyors and Graduate Surveyors of the provinces of Varese, Como, Novara, and Verbano-Cusio-Ossola, guarantees a structured support service to students for the activation of TPV in companies, professional firms, public administrations, public or private bodies, including third sector organizations and professional associations.

Access to the TPV is allowed to students who have accumulated at least 105 credits. The TPV, carried out under the supervision of a company tutor and an academic tutor, provides for the attribution of 48 credits and is configured as a true "on the job" experience, which allows the student to deal with real cases and processes in the technical and digital sector for the environment and construction.

The TPV, the PPV, and the final exam verify the students' level of autonomy, their ability to apply knowledge, and their mastery of the operational skills gained during their training.

The evaluation of TPV and PPV is conducted using standardized grids developed jointly by academic and professional tutors. The grids must include indicators of autonomy, application capacity, and mastery of digital technologies in the building, environmental, and territorial fields.

The DiSTA coordinates the stipulation of the necessary agreements with the host entities, in compliance with the current legislation on training and orientation internships. These agreements provide for the presence, at each host facility, of professional tutors who collaborate with the university tutors, in a number proportionate to the students involved, in order to ensure consistency between the activities carried out and the educational objectives of the course.

The updated information relating to the internship offer, the activation methods, the academic contacts, and the active agreements, together with the forms and operating procedures for the drafting of the

individual training project, will be published on the page:

<https://www.uninsubria.it/ateneo/tutte-le-sedi/sportello-stage-dista>.

Final exam

The final exam for the achievement of the Professional Degree in "Digital Techniques for the Environment and Construction (TeDAC)", belonging to class L-P01 – Technical Professions for Construction and the Territory, qualifies to practice the profession of Graduate Surveyor, pursuant to art. 2 of Law no. 163 of 8 November 2021 and Interministerial Decree no. 682 of 24 May 2023.

The final exam, which corresponds to 3 CFU, is divided into two distinct and complementary moments carried out in Italian: 1.

1. The practical-evaluation test (PPV) aims to ascertain the knowledge, skills, and technical-professional skills acquired by the student during the practical-evaluation internship (TPV), as well as his ability to operate independently in the main areas of competence of the graduate surveyor. 2.
2. The degree exam, which consists of the drafting and public discussion of a written paper (degree thesis), is aimed at verifying the candidate's maturity, the ability to deal with concrete problems, and the ability to apply the knowledge acquired in the training course in an integrated way.

The PPV is carried out on the basis of traces and application cases consistent with the activities carried out in the TPV and provides for the resolution of technical-professional problems, the drafting of papers or operational reports, and the oral discussion of the solutions adopted. The outcome of the PPV is evaluated by a Selection Committee, expressed as a judgment of suitability, and does not contribute to the determination of the degree grade.

The PPV Selection Committee is composed of at least four members: two designated by the Course Council from among university professors, and two designated by the competent professional representatives from among professionals with at least five years of practice as surveyors. The appointment of an academic substitute and an external substitute is envisaged in the event of the unavailability of a member of the Selection Committee.

The degree exam involves the presentation and discussion of a written paper that may be related to the internship experience or to a design, estimation, or management topic pertaining to class L-P01. The thesis preparation activities are coordinated with the TPV in order to ensure consistency with the educational objectives and the expected learning outcomes. The paper is delivered by the student in the manner provided by the University.

The degree examination is evaluated by a Degree Commission composed of five members, including at least three professors of the Degree Course, one of whom is designated President, and is supplemented by two professionals enrolled in the Register of Surveyors and Graduate Surveyors, designated pursuant to art. 3, paragraph 1, of Law no. 163/2021 and art. 3 of D.I. no. 682/2023. The appointment of an academic substitute and an external substitute is envisaged in the event of the unavailability of a member of the Graduation Committee.

The final grade is expressed in one hundred and ten. The basic grade for presentation to the degree exam is calculated as the overall average of the marks, weighted with respect to the number of CFUs, i.e. each grade contributes to the average in proportion to the number of credits to which the related course gives

rise. Training activities for which only the "approved" result is expected do not contribute to the overall average.

The Commission may award a maximum increase of 8 points in relation to:

- quality and autonomy demonstrated during the internship and in the final exam;
- ability to critically apply the knowledge acquired;
- clarity, effectiveness, and completeness of oral and written presentation;
- the candidate's overall curriculum.

If the score resulting from the increase is equal to or greater than 112/110, the Graduation Committee may unanimously grant honors. The proclamation is made by the President of the Graduation Committee at the end of the session.

For detailed information on the types of final papers, with particular reference to the length and evaluation criteria, please refer to the University Teaching Regulations.

The calendar of sessions with how to register for the degree exam is available at the following link:
<https://www.uninsubria.it/servizi/vivere-insubria/laurearsi/esame-di-laurea-triennale>

Upon graduation, the Diploma Supplement is issued, an information report accompanying the official qualification with a description of the nature, level, context, content, and status of the studies carried out and completed by the student. It is issued in both Italian and English. The purpose of the document is to provide independent data to support international transparency in qualifications (diplomas, degrees, certificates, etc.) and to enable fair academic and professional recognition, thereby promoting student mobility. The Diploma Supplement conforms to the Europass standard.

The legislation and the facsimile of the document are available at the following link:

<https://www.mim.gov.it/web/guest/-/nuovo-supplemento-al-diploma-con-4-allegati-relativi-alla-compilazione-e-alle-linee-guida-nazionali-per-la-digitalizzazione>

Art. 12 - Quality assurance of the Degree Programme

As far as Quality Assurance is concerned, reference is made to the procedures, methodological approach, and terms defined by the University Quality Assurance Committee, taking into account the provisions of the Ministry of University and Research and the National Agency for the Evaluation of the University and Research System (ANVUR).

The Course Council ensures the didactic and organizational coordination of the activities of the Course of Study in compliance with the competences and indications of the Department Council and the Regulations.

The Course Councils refer, if any, to the first and second level degree courses attributable to the same disciplinary area.

Each Course Council elects a President from among its members, who serves as the Head of the Degree Course. The President is responsible for the educational offer, self-assessment, and review of the degree course. The Degree Programme Council normally meets monthly for ordinary management actions, to view and deliberate, where required, on the preliminary activities carried out by the various commissions delegated on the individual activities of the Degree Course and expresses proposals and opinions to the

Department Council on the basis of its own competences and in particular with regard to the annual teaching planning, student practices, internships and apprenticeships, orientation activities, agreements and collaborations with other Italian and foreign universities and with institutions and companies, laboratories and seminars, exam and degree calendars, etc.

The President is assisted by the AiQua Committee of the Course of Study (Commission for Internal Quality Assurance) in the management of the quality processes of the Degree Course, in the self-assessment and review activities, and in the drafting of the key documents for the QA of the Degree Course.

The AiQua Commission is composed of the President of the Degree Course, one or more professors, one or more students of the Degree Course and an MDQ (Educational Manager for Quality) who acts as a facilitator of the QA system, provides administrative support and with a view to the process of self-assessment and continuous improvement transmits observations, critical issues and proposals regarding the training course and teaching support services.

The Department has set up a Joint Teacher-Student Committee, consisting of one student and one lecturer for each degree programme belonging to the Department, representing the different subject areas. Students are elected by their representatives in the Course Councils or, failing that, in the Department Council. The functions of the President and Vice-President are carried out respectively by a teacher and a student. A Department Support MDQ participates in meetings.

The Joint Teacher-Student Committee carries out monitoring activities on the educational offer, quality of teaching, and student services managed by the Department and identifies indicators to evaluate their results; formulates opinions on the activation or cancellation of courses and courses of study and draws up proposals to improve teaching performance and efficiency of training structures, submitting them to the Department Council.

The Joint Teacher-Student Committee normally schedules periodic meetings in order to carry out careful monitoring activities.

Students elect their representatives within the Department Council, the Course Council and the Joint Committee, while they appoint representatives within the AiQua Commissions.

Link to the page that shows the names of the representatives:

<https://archivio.uninsubria.it/siti-tematici-o-federati/siti-dei-dipartimenti/dipartimento-di-scienze-teoriche-e-applicate-dista-2#cpds>

Teaching evaluation questionnaires and *Opinion Week*

The evaluation of teaching by students is carried out by means of an online questionnaire divided by "attending" and "non-attending". The questionnaire is administered to all students in a defined time frame between 2/3 and the end of the lessons, for each semester, through the career management system (ESSE3), which the student accesses to register for the exam session. The system guarantees anonymity to the compiler. Link to the dedicated web page: <https://www.uninsubria.it/ateneo/la-nostra-qualita/opinioni-degli-studenti>

The Degree Programme, in implementation of the directives of the University Quality Assurance



Committee, adheres to the Opinion Week initiative, a week dedicated to the compilation of teaching evaluation questionnaires, in which teachers invite students in the classroom to take advantage of this important tool to express their opinions. In addition, it identifies a moment for returning to students the results of the questionnaires of the previous semester and any activities that have resulted from them.

At the end of the internship, the student is required to fill in an evaluation form of the experience, the data of which are useful to the University for the monitoring and evaluation of the activity carried out and for a continuous improvement of the service; in addition, the student must submit to the Internship Desk of the degree course the report of the regular performance of the internship for the recognition of training credits.

For the results of the opinions of undergraduates and graduates, the Course refers to the surveys of the AlmaLaurea Interuniversity Consortium which can also be found on the web page of the Course of Study - section "Student opinion and employment status".



Attachments

Annex 1 – Study plan - PLANNED TEACHING - COORTE 2026/2027

Annex 2 – Summary of the objectives of compulsory courses

Annex 1 – Study plan

PLANNED TEACHING - COORTE 2026/2027

By planned teaching we mean the set of courses provided for the entire course of study, which must be taken by all students who enrol in the current academic year (Enrolment Cohort) to complete the training course and obtain the qualification.

I YEAR								
Period	Training Activity	Module	ECTS	SSD	TAF/Scope	Hours Att. Front.	Course type	Assessment methods*
I	ELEMENTS OF MATHEMATICS FOR DATA PROCESSING AND MANAGEMENT		6	IINF-05/A	A – Basic computer science, mathematics and statistics training	LEZ: 48	Required	V
I	CHEMISTRY OF MATERIALS AND ELEMENTS OF PHYSICS	CHEMISTRY OF MATERIALS	3	CHEM-01/A	A – Basic chemical and physical training	LEZ: 24	Required	V
		ELEMENTS OF PHYSICS		PHYS-01/A	A – Basic chemical and physical training	LEZ: 24	Required	
I	SAFETY ON CONSTRUCTION SITES		6	CEAR-02/A	B – Territory	LEZ: 48	Required	V
I	TECHNICAL DRAWING AND DIGITAL REPRESENTATION		6	CERA-10/A	B Representation –	LEZ: 48	Required	V
I	DIGITAL DRAWING AND BIM MODELING WORKSHOP		6	–	F – Additional training activities	LABS: 72	Required	I
II	SCIENCE AND TECHNOLOGY OF BUILDING MATERIALS		6	IMAT-01/A	C – Related or supplementary training activities	LEZ: 48	Required	V
II	STATICS AND STRUCTURES		6	CEAR-06/A	B - Construction	LEZ: 48	Required	V
II	ENERGY EFFICIENCY OF BUILDINGS AND QUALITY OF THE INDOOR ENVIRONMENT		6	IIND-07/B	B – Monitoring, diagnostics and plant engineering	LEZ: 48	Required	V
II	TOPOGRAPHY AND DIGITAL SURVEY		6	CEAR-04/A	B – Construction	LEZ: 48	Required	V
II	LABORATORY OF DIGITAL SURVEY OF BUILDINGS AND TERRITORY (GIS), DRONES AND CADASTRAL PROCEDURES		9	–	F – Additional training activities	LAB: 108	Required	I

II YEAR



Period	Training Activity	Module	ECT S	Industry	TAF/Scope	Hours Att. Front.	Course type	Assessment methods*
I	ARCHITECTURAL COMPOSITION		3	CEAR-09/A	B – Construction	LEZ: 24	Required	V
I	APPRAISAL AND ECONOMIC EVALUATION OF PROJECTS		6	CEAR-03/C	B – Estimate and legal administrative management	LEZ: 48	Required	V
I	URBAN PLANNING AND PUBLIC PROCUREMENT LAW	URBAN AND CONSTRUCTION LAW	3	GIUR-06/A	B – Estimate and legal administrative management	LEZ: 24	Required	V
		PROCUREMENT CODE AND PUBLIC WORKS MANAGEMENT		GIUR-06/A	B – Estimate and legal administrative management	LEZ: 24	Required	
I	URBAN PLANNING LABORATORY		3	–	F – Additional training activities	LAB: 36	Required	I
I	MEDIATION AND CONCILIATION WORKSHOP		3	–	F – Additional training activities	LAB: 36	Required	I
I	ENERGY SERVICES LABORATORY FOR BUILDINGS		9	–	F – Additional training activities	LAB: 108	Required	I
II	GEOTECHNICAL WORKS		6	CEAR-05/A	B – Territory	LEZ: 48	Required	V
II	LABORATORY OF BUILDING PATHOLOGY, DIAGNOSTICS AND CONSOLIDATION		6	–	F – Additional training activities	LABS: 72	Required	I
II	LABORATORY OF PLANTS FOR ENVIRONMENTAL SUSTAINABILITY		9	–	F – Additional training activities	LAB: 108	Required	I
II	COMPUTATIONAL SIMULATION LABORATORY FOR SUSTAINABLE BUILDINGS		6	–	F – Additional training activities	LABS: 72	Required	I

III YEAR								
Period	Training Activity	Module	ECT S	Industry	TAF/Scope	Hours Att. Front.	Course type	Assessment methods*
I	ENGLISH OR OTHER COMMUNITY LANGUAGE		3	ANGL-01/C	E – Final exam and language	LEZ: 24	Required	I



Other mandatory activities								
Year	Period	Training Activity	ECTS	Industry	TAF/Scope	Hours Att. Front.	Course type	Assessment methods*
II	II	Student's choice	6	–	D- At the student's choice		Required	V
III	Yearly	PRACTICAL-EVALUATION INTERNSHIP	48	–	F – Internship	IRR: 1200	Required	I
III	II	FINAL EXAM	3	–	E – Final exam and language		Required	V

***G** – GRADE **V** – EXAM **I** – GRADE **F** – ATTENDANCE

HOURS and type of activity **LEZ:** ESE **lesson:** **LAB** exercise: **SEM** laboratory: **TIR seminar:** internship



Annex 2 – Summary of the objectives of compulsory courses

Course name	Year	Learning objectives – summary taken from the syllabus
ELEMENTS OF MATHEMATICS FOR DATA PROCESSING AND MANAGEMENT	I	To provide students with the basic knowledge of linear algebra, analysis and descriptive and inferential statistics necessary for the modeling and quantitative interpretation of technical and environmental phenomena. Develop the ability to process, represent and analyze complex datasets related to surveys, measurements and building performance.
CHEMISTRY OF MATERIALS AND ELEMENTS OF PHYSICS	I	Understand the fundamentals of the laws of mechanics, thermodynamics and electromagnetism useful for understanding environmental and technological phenomena. To develop and make the basic chemistry of interest to the future graduate surveyor. Understand the chemical phenomena that regulate the use of materials and their interaction with the environment. In this way, the student will acquire the ability to evaluate the chemical-physical properties of solid-liquid-gaseous materials, to better apply them during the building project.
SAFETY ON CONSTRUCTION SITES	I	To acquire regulatory, technical and organizational knowledge on safety in temporary and mobile construction sites. The student will be able to collaborate in identifying risks, collaborate in drawing up safety plans and collaborate in coordinating activities in compliance with Legislative Decree 81/2008 and good professional practices.
TECHNICAL DRAWING AND DIGITAL REPRESENTATION	I	To provide the theoretical and practical bases of the graphic representation of architecture and civil works. The student will learn the conventions of technical drawing, the UNI-ISO standard and the principles of 2D/3D modeling, aimed at project communication and digital interoperability.
DIGITAL DRAWING AND BIM MODELING WORKSHOP	I	Develop operational skills in the use of BIM platforms for information modeling of the building. The laboratory activity will make it possible to integrate geometric, performance and documentary data, promoting interoperability and multidisciplinary collaboration.
SCIENCE AND TECHNOLOGY OF BUILDING MATERIALS	I	Know the origin and production techniques of the main building materials, including materials for structural use (concrete, steel, brick, mortar, wood, etc.), and finishing materials (insulation, waterproofing, plaster, screeds, coatings, etc.). Learn the main stratigraphy of slabs, walls and roofs. Notes on the details of structural elements in reinforced concrete, steel, wood and masonry.
STATICS AND STRUCTURES	I	Know the fundamentals of 1D (beam frames), 2D (plates/slabs/shells), 3D (blocks) structural systems. Solve kinematics and statics of isostatic beam systems. Analyze the systems of deformable beams (isostatic and hyperstatic): the elastic line and the method of forces. Calculate elastic stresses by solving the Saint Venant problem. Learn the regulatory design approach, loads and load combinations. Know simplified methods for verifying the strength of structural elements in reinforced concrete, steel, wood and masonry.
ENERGY EFFICIENCY OF BUILDINGS AND QUALITY OF THE INDOOR ENVIRONMENT	I	To provide knowledge on the principles of heat transfer, on the energy efficiency of buildings and on the parameters of thermo-hygrometric, visual and acoustic comfort and indoor air quality. The student will be able to evaluate the energy and environmental performance of new and existing buildings.



<i>Course name</i>	<i>Year</i>	<i>Learning objectives – summary taken from the syllabus</i>
TOPOGRAPHY AND DIGITAL SURVEY	I	To acquire theoretical and practical skills on topographic surveying and georeferencing techniques using traditional and digital tools (total stations, GNSS). The student will be able to set, execute and process topographic measurements for the representation of the territory and buildings.
LABORATORY OF DIGITAL SURVEY OF BUILDINGS AND TERRITORY (GIS), DRONES AND CADASTRAL PROCEDURES	I	To provide the theoretical and practical knowledge for an efficient use of modern digital cartography tools (Geographic Information Systems – GIS) in the context of territorial planning. The theoretical foundations on which both "classical" cartography and modern digital cartography are based will be provided. The student will acquire the ability to understand the processes and paradigms used in the production of maps, apply the technologies and methodologies currently used for the production and sharing of geographical information and use in an autonomous and productive way application programs for the production of maps.
ARCHITECTURAL AND URBAN COMPOSITION	II	To provide theoretical and methodological tools for the integrated reading and design of architecture and urban space. The student will learn the compositional, morphological and functional principles that govern the construction of architectural space in relation to the context, the environment and the urban scale. Particular attention will be paid to the relationship between building form, environmental sustainability and the quality of public space, through exercises in representation and graphic verification of the project.
APPRAISAL AND ECONOMIC EVALUATION OF PROJECTS	II	To provide tools for estimating the economic value of real estate, works and building interventions, according to market, cost and benefit criteria. The student will acquire the ability to draw up bills of quantities, synthetic estimates and analysis of technical-economic convenience.
URBAN PLANNING AND PUBLIC PROCUREMENT LAW	II	To acquire knowledge on the rules governing urban planning, construction activity and public procurement. The student will be able to apply legislative and procedural references to the technical-administrative management of projects.
URBAN PLANNING LABORATORY	II	Apply the knowledge of urban planning and design to real case studies, through the development of plans and executive urban planning tools in a GIS environment. The student will develop operational skills for the morphological and functional analysis of the territory.
MEDIATION AND CONCILIATION WORKSHOP	II	Develop conflict management and effective communication skills in technical and real estate processes. The student will learn mediation, negotiation and conciliation techniques applicable to professional disputes.
ENERGY SERVICES LABORATORY FOR BUILDINGS	II	Deepen the analysis and design of integrated energy services (heating, cooling, ventilation, lighting, motive power). Analyze and understand electrical phenomena and provide basic skills for the knowledge of electrical systems in buildings and security systems. Understand the different renewable energy sources and calculate their annual energy production. The student will be able to evaluate and optimize the plants according to the efficiency and internal environmental quality offered.



Course name	Year	Learning objectives – summary taken from the syllabus
GEOTECHNICAL WORKS	II	Know the fundamental principles of geotechnics and soil mechanics, including the role of groundwater and experimental tests. Learn excavation techniques, soil consolidation interventions, management of surface aquifers, surface and deep foundation works, also for infrastructures, earth retaining walls and embankments.
LABORATORY OF BUILDING PATHOLOGY, DIAGNOSTICS AND CONSOLIDATION	II	Understand and know how to interpret the main mechanisms of building pathology, both mechanical and environmental, know and know how to use instrumentation for mainly non-destructive diagnostics, learn the main consolidation techniques.
LABORATORY OF PLANTS FOR ENVIRONMENTAL SUSTAINABILITY	II	Deepen the principles and techniques of design, sizing and verification of water-sanitary systems and reclamation and drainage works in the building and territorial sectors. The laboratory integrates theoretical and applied aspects related to the sustainable management of water resources, wastewater treatment, rainwater recovery and environmental remediation systems.
COMPUTATIONAL SIMULATION LABORATORY FOR SUSTAINABLE BUILDINGS	II	Introduce the use of energy and environmental simulation software for the evaluation of building performance. The student will develop operational skills in the analysis of energy flows and in the validation of comfort and sustainability strategies.
ENGLISH OR OTHER COMMUNITY LANGUAGE	III	Consolidate language competence at least at level B1 of the CEFR, with particular attention to the technical terminology of the construction, environment and territory sectors. The student will be able to understand technical texts, draft documents and communicate in European professional contexts.