

DIDACTIC REGULATIONS OF THE DEGREE PROGRAM IN DIGITAL TECHNOLOGIES FOR CONSTRUCTION

CLASS LP-01

School: Polytechnic and Basic Sciences

Department: Structures for Engineering and Architecture

Regulations in force since the academic year 2026-2027

ACRONYMS

CCD	[Commissione di Coordinamento Didattico]	Didactic Coordination Commission
CdS	[Corso/i di Studio]	Degree Program
CFU	[Crediti Formativi Universitari = 1 ECTS]	University training credits
CPDS	[Commissione Paritetica Docenti-Studenti]	Joint Teachers-Students Committee
OFA	[Obblighi Formativi Aggiuntivi]	Additional Training Obligations
SUA-CdS	[Scheda Unica Annuale del Corso di Studio]	Annual single form of the Degree Program
RDA	[Regolamento Didattico di Ateneo]	University Didactic Regulations

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Art. 1 Object

1. These Didactic Regulations govern the organisational aspects of the CdS in Digital Technologies for Construction (class LP-01). The CdS in Digital Technologies for Construction is hinged the Department of Structures for Engineering and Architecture and is a qualifying degree course.

CdS name in Italian and English: Tecnologie Digitali per le Costruzioni, Digital Technologies for Construction

Class: LP-01 – Technical professions for building and land use

Teaching language: Italian

Course delivery methods: conventional course of study

2. The CdS is governed by the Didactic Coordination Commission (CCD), pursuant to Art. 4 of the RDA. CdS Coordinator: prof. Asprone Domenico

Collegial Management Body of the CdS: Didactic Coordination Commission

Structure: Department of Structures for Engineering and Architecture

Students representatives: nominated

Quality Assurance Manager: prof. Asprone Domenico

Tutor: prof. Domenico Asprone

3. The Didactic Regulations are issued in compliance with the relevant legislation in force, the Statute of the University of Naples Federico II, and the RDA.

Art. 2 Training objectives

The educational objectives of the Degree Course is to train a professional figure with strong operational skills with a basic preparation in the disciplinary areas related to construction and with strong skills, knowledge and abilities in the use of digital systems to support the design and management of civil works. The graduate is able to fill technical operational roles, collaborating with other professional figures; the specificity that distinguishes him/her is being able, through his/her skills in the use of digital systems, to support processes involving civil engineering systems and works, even of high complexity. The graduate therefore has strong skills in bringing other professionals in the sector into dialogue with the most advanced technologies and digital systems. The training objectives are strongly oriented towards a “learning by doing” and “learning by thinking” approach, especially thanks to the internships and workshops that will commit students to acquiring 48CFU. Moreover, the notional aspects are conveyed not only through lectures but also through practical laboratory activities appropriately designed to stimulate the student to reasoning and experimentation supported by reflection.

In this context, the curriculum includes a series of activities in the first year related to mathematics, physics and computer science in order to refine analytical skills. Already at the basic subject level, the teachings make extensive use of simulation tools and laboratory activities to stimulate the student to learn through experimentation. Teachings related to the discipline of Mechanics (ICAR08) will be included in the basic activities. The aim is to transfer skills focused on mathematical and physical models relating to the behaviour of structures, and the analytical and computational tools to handle these models, in the first lessons taught.

Subsequently, in the second and third years, the student undertakes a path of knowledge and in-depth study of operational techniques for the civil area with a strong contribution of digital systems

to support the design and management of works and the territory. Significant laboratory activity is also included in this context. In the final part of the course, the preparation is supported by 'project work' type lessons in which the student refines his skills by working on significant engineering cases, specifically designed to highlight aspects that require a strongly integrated approach between the civil area and digital technologies and systems. The preparation is also supported and supplemented by adequate knowledge of a foreign language, 'soft-skills' and a substantial internship in structures outside the university, through which the student comes into close contact with concrete problems.

Through the training course, the student acquires an aptitude to document and improve his or her understanding and knowledge of new technologies and tools through study, bibliographic research, research on web sources, and exchange of experiences with professionals in the field.

Pursuant to Articles 2 and 3 of Act No. 163 of 8 November 2021, the final examination for graduation in Technical Professions for Building and Territory - class L-P01 qualifies the candidate to exercise the profession of graduate “geometra”. To this end, the aforementioned final examination includes the performance of a practical test assessing the professional skills acquired through the internship within the course of study, aimed at ascertaining the candidate's suitability to exercise the profession, which precedes the final examination.

Art. 3

Professional profile and work opportunities

The study course aims to train the professional figure of the Expert in Digital Technologies and Processes for the Design and Management of Civil Works.

The functions that the graduate will be able to perform are manifold. In particular, a preliminary consultation of the companies involved identified the following:

- Functions junior member of project teams, with mainly executive roles;
- Functions as a digital systems specialist supporting the design and management of civil works;
- Functions as a technician specialising in digital systems for surveying and civil engineering;
- Management and information modelling according to UNI 11337-7, i.e. BIM specialist for different subject areas;
- Management of legal-administrative issues of medium complexity relating to the management and design of civil and construction works.
- Executive functions in the field of civil design;
- Commercial functions of systems for the construction industry;
- Technical office draughtsman functions;
- Functions of site manager;
- Functions of technological management of construction processes. skills associated with the function: Specific knowledge, competences, skills and abilities in the technical-engineering field are required to perform the functions described above.

Specifically, the skills associated with this professional figure are as follows

- Basic knowledge relating to the operational aspects of the basic sciences of civil engineering (e.g. construction science and technology, hydraulics, geotechnics, etc.).
- Knowledge related to related and complementary disciplines aimed at enriching and completing skills, i.e. related to the more technological aspects of civil engineering and to the methodological and management aspects of civil works (e.g. materials engineering, surveying

technologies, estimation, law, etc.).

- hardware and software knowledge of digital survey systems;
- hardware and software knowledge of digital design systems;
- hardware and software knowledge of digital management systems;
- knowledge of BIM systems for design and management;
- knowledge of GIS systems for planning and management;
- capacity for self-learning and continuous updating, adequate transversal communication-relational, organisational-managerial and planning skills.

Employment outlets

Skills in the use of digital technologies and the management of digital processes in civil engineering are strongly demanded by the market. The transition from traditional civil engineering design and management systems to digital systems and systems based on BIM technologies is underway and the demand for professionals capable of working with these new systems is significant.

Professional outlets may therefore include

- private technical structures involved in the design and management of civil works;
- construction companies;
- public technical facilities;
- companies supplying systems and components for civil engineering;
- softwarehouse for civil engineering.

Enrolling in a Master's degree is not a natural outlet for graduates.

Art. 4

Admission requirements and knowledge required for access to the Degree Program¹

Possession of an upper secondary school diploma or other recognised foreign qualification is required.

The following knowledge and skills are also required

– Logical reasoning skills

- Ability to use the main results of elementary mathematics and the fundamentals of experimental science.

The knowledge required for admission is verified by means of an entrance test with multiple-choice questions. If the assessment is not positive, specific additional training obligations are indicated which must be fulfilled within the academic year according to the regulations of the course.

Art. 5

Procedures for access to the Degree Program (CdS)

The CCD of the Degree Program normally regulates the admission criteria and any scheduling of enrolments, except in cases subject to different provisions of law².

In the event of negative assessment of the adequate initial preparation regarding knowledge requirements for admission to the Degree Program, the CCD assigns specific Additional Formative Obligations (OFA), indicating the means of verification to be fulfilled within the Program's first year.

¹ Artt. 7, 13, 14 of the University Didactic Regulations.

² National programmed access is regulated by L. 264/1999 and subsequent amendments and supplements.

Art. 6

Teaching activities and university training credit (Teaching activities and CFU)

Each training activity, prescribed by the CdS detail sheet, is measured in CFU. Each CFU corresponds to 25 hours of overall training commitment³ per student and includes the hours of teaching activities specified in the curriculum as well as the hours reserved for personal study or other individual training activities.

For the Degree Program covered by this Didactic Regulations, the hours of teaching specified in the curriculum for each CFU, established in relation to the type of training activity, are as follows ⁴:

- Lecture or guided teaching exercises: 8 hours per CFU.
- Practical laboratory activities: 8 hours per CFU.
- Internship: 25 hours per CFU.

For internship activities, each credit corresponds to 25 hours of overall training commitment⁵.

The CFU corresponding to each training activity acquired by the student is awarded by satisfying the assessment procedures (examination, pass mark) indicated in the Course sheet relating to the course/activity attached to these Didactic Regulations.

Art. 7

Description of teaching methods

The didactic activity is carried out in modality conventional.

If necessary, the CCD decides which courses also include teaching activities offered online.

Detailed information on how each course is conducted can be found in the course sheets.

Art. 8

Testing of training activities⁶

The CCD, within the prescribed regulatory limits⁷, establishes the number of examinations and other means of assessment that determine the acquisition of credits. Examinations are individual and may

³ According to Art. 5, par. 1 of Italian Ministerial Decree No 270/2004, "25 hours of total commitment per student correspond to university training credits; a ministerial decree may justifiably determine variations above or below the aforementioned hours for individual classes, by a limit of 20 per cent".

⁴ The number of hours considers the instructions in Art. 6, par. 5 of the RDA: "of the total 25 hours, for each CFU, are reserved: a) 5 to 10 hours for lectures or guided teaching exercises; b) 5 to 10 hours for seminars; c) 8 to 12 hours for laboratory activities or fieldwork, except in the case of training activities with a high experimental or practical content, and subject to different legal provisions or different determinations by DD.MM."

⁵ For Internship activities (Inter-ministerial Decree 142/1998), subject to further specific provisions, the number of working hours equal to 1 CFU may not be less than 25.

⁶ Article 22 of the University Didactic Regulations.

⁷ Pursuant to the DD.MM. 16.3.2007 in each Degree Programs the examinations or profit tests envisaged may not be more than 20 (Bachelor's Degrees; Art. 4, par. 2), 12 (Master's Degrees; Art. 4, par. 2), 30 (five-year -cycle Degrees) or 36 (six-year single-cycle Degrees; Art. 4, par. 3). Pursuant to the RDA, Art. 13, par. 4, "the assessments that constitute an eligibility evaluation for activities referred to in Art. 10, par. 5, letters c), d), and e) of Ministerial Decree no. 270/2004, including the final examination for obtaining the degree, are excluded from the calculation." For Master's Degree Program and single-cycle Master's Degree Program, however, pursuant to the RDA, Art. 14, par. 7, "the assessments that constitute a progress evaluation for activities referred to in Art. 10, par. 5, letters d) and e) of Ministerial Decree no. 270/2004 are excluded from the exam count; the final examination for obtaining the Master's Degree and single-cycle Master's Degree is included in the maximum number of exams".

consist of written, oral, practical, graphical tests, term papers, interviews, or a combination of these modes.

The examination procedures published in the course sheets and the examination schedule will be made known to students before the start of classes on the Department's website.⁸

Examinations are held subject to booking, which is made electronically. In case the student is unable to book an exam for reasons that the President of the Board considers justifiable, the student may still be admitted to the examination, following those students already booked.

Before examination, the President of the Board of Examiners verifies the identity of the student, who must present a valid photo ID.

Examinations are marked out of 30. Examinations involving an assessment out of 30 shall be passed with a minimum mark of 18; a mark of 30 may be accompanied by honours by a unanimous vote of the Board. Assessments following tests other than examinations are marked out with a simple pass mark.

Oral exams are open to the public. If written tests are scheduled, the candidate has the right to see his/her paper(s) after correction.

The University Didactic Regulations govern Examination Boards⁹.

Art. 9

Degree Program structure and Study Plan

The legal duration of the Degree Program is 3 years. Enrolment on the basis of a contract is also possible in accordance with the rules laid down by the University (Art. 24 of the University Teaching Regulation).

The student must acquire 180 CFU¹⁰, attributable to the following Types of Training Activities (TAF):

- A) basic,
- B) characterising,
- C) related or complementary,

⁸ Reference is made to Art. 22, par. 8, of the University Teaching Regulations, which states that "the Department or School ensures that the dates for progress assessments are published on the portal with reasonable advance notice, which normally cannot be less than 60 days before the start of each academic period, and that an adequate period of time is provided for exam registration, which is generally mandatory."

⁹ Reference is made to Art. 22, paragraph 4 of the RDA according to which "Examination Boards and other assessments committees are appointed by the Director of the Department or by the President of the School when provided for in the School's Regulations. This function may be delegated to the CCD Coordinator. The Commissions comprise of the President and, if necessary, other professors or experts in the subject. In the case of active courses, the President is the course instructor, and in such cases, the Board can validly make decisions even in the presence of the President alone. In other cases, the President is a professor identified at the time of the Board's appointment. In the comprehensive evaluation of the overall performance at the conclusion of an integrated course, the professors in charge of the coordinated modules participate, and the President is appointed when the Commission is appointed."

¹⁰ The total number of CFU for the acquisition of the relevant degree must be understood as follows: six-year single-cycle Degree, 360 CFU; five-year single-cycle Degree, 300 CFU; Bachelor's Degree, 180 CFU; Master's Degree, 120 CFU.

- D) at the student's choice¹¹,
- E) for the final exam,
- F) further training activities.

The degree is awarded after having acquired 180 CFU by passing examinations, not exceeding 20 and the performance of other training activities.

Unless otherwise provided for in the legal framework of University studies, examinations taken as part of basic, characterising, and related or supplementary activities, as well as activities chosen autonomously by the student (TAF D) are taken into consideration for counting purposes.

Examinations or assessments relating to activities independently chosen by the student may be taken into account in the overall calculation corresponding to one unit¹². Integrated Courses comprising of two or more modules are subject to a single examination.

In order to acquire the CFU relating to independent choice activities, the student is free to choose among all the Courses offered by the University, provided that they are consistent with the training project. This consistency is assessed by the Didactic Coordination Commission. Also, for the acquisition of the CFU relating to autonomous choice activities, the "passing the exam or other form of profit verification" is required (Art. 5, par. 4 of Ministerial Decree 270/2004).

The study plan summarises the structure of the Degree Program, listing the envisaged teachings broken down by course year and, in case, by curriculum. At the end, the propedeuticities envisaged by the Degree Program are listed. The study plan offered to students, with an indication of the scientific-disciplinary sectors and the area to which they belong, of the credits, of the type of educational activity, is set out in Annex 1 to these Didactic Regulations.

Pursuant to Art. 11, paragraph 4-bis, of Ministerial Decree 270/2004, it is possible to obtain the Degree according to an individual study plan that also includes educational activities different from those specified in the Didactic Regulations, as long as they are consistent with the CdS detail sheet of the academic year of enrollment. The individual study plan is approved by Didactic Coordination Commission.

Art. 10

Attendance requirements¹³

In general, attendance of lectures is compulsory. In particular, for courses that include laboratory activities, attendance of at least 70% of them is a prerequisite for access to assessment. For certain training activities, the Council of Study Courses may establish, in addition to the conventional mode, the activation of distance teaching modes (teledidactics), in compliance with Ministerial Decree no. 289 of 25 March 2021 (general guidelines for the three-year planning of universities 2021-2023) in Annex 4, letter A.

If the lecturer envisages a different syllabus modulation for attending and non-attending students, this is indicated in the individual Course details published on the CdS web page and on the teacher's UniNA website.

¹¹ Corresponding to at least 12 ECTS for Bachelor's Degrees and at least 8 CFU for Master's Degrees (Art. 4, par. 3 of Ministerial Decree 16.3.2007).

¹² Pursuant to the D.M. 386/2007.

¹³ Art. 22, par. 10 of the University Didactic Regulations.

Attendance at seminar activities that award training credits is compulsory. The relative modalities for the attribution of CFU are the responsibility of the CCD.

Art. 11

Prerequisites and prior knowledge

The list of incoming and outgoing propedeutics (necessary to sit a particular examination) can be found at the end of Annex 1 and in the teaching/activity course sheet (Annex 2).

Any prior knowledge deemed necessary is indicated in the individual Teaching Schedule published on the course webpage and on the teacher's UniNA website.

Students must be able to use fluently, in written and oral form, at least one European Union Language in addition to Italian, identified as English, with competences equivalent to level B1. To this end, the course provides 3 CFU of additional language skills. Students may present appropriate certification of their possession of level B1 English Language skills, which will be examined and, if necessary, recognised by the CoS. In the absence of such certification, students may take a B1 level test at the CLA (Centro Linguistico di Ateneo). In the event of a negative test result, the student may follow an "ad hoc" course with a final test, also organised by the CLA, in order to verify the attainment of level B1 in English. Alternatively, in order to achieve this qualification, at least 15 answers of the English TOLC must be answered correctly.

Art. 12

Degree Program Calendar

The Degree Program calendar can be found on the Department's website well before the start of the activities (Art. 21, par. 5 of the RDA).

Art. 13

Criteria for the recognition of credits earned in other Degree Programs in the same Class¹⁴

For students coming from Degree Programs of the same Class, the Didactic Coordination Commission ensures the full recognition of CFU, when associated with activities that are culturally compatible with the training Degree Program, acquired by the student at the originating Degree Program, according to the criteria outlined in Article 14 below. Failure to recognise credits must be adequately justified. It is without prejudice to the fact that the number of credits relating to the same scientific-disciplinary sector directly recognised by the student may not be less than 50% of those previously achieved.

¹⁴ Art. 19 of the University Didactic Regulations.

Article 14

Criteria for the recognition of credits acquired in Degree Programs of different classes, in university or university-level Degree Programs, through single courses, at online Universities and in international Degree Programs¹⁵; criteria for the recognition of credits acquired in extra-curricular activities

With regard to the criteria for the recognition of CFU acquired in Degree Programs of different Classes, in university or university-level Degree Programs, through single courses, at online Universities and in International Degree Programs, the credits acquired are recognised by the CCD on the basis of the following criteria:

- analysis of the activities carried out;
- evaluation of the congruity of the disciplinary scientific sectors and of the contents of the training activities in which the student has earned credits with the specific training objectives of the Degree Program and of the individual training activities to be recognised.

Recognition is carried out up to the number of credits envisaged by the didactic system of the Degree Program. Failure to recognise credits must be adequately justified. Pursuant to Art. 5, par. 5-bis, of Ministerial Decree 270/2004, it is also possible to acquire CFU at other Italian universities on the basis of agreements established between the concerned institutions, in accordance with the regulations current at the time ¹⁶.

Any recognition of CFU relating to examinations passed as single courses may take place within the limit of 36 CFU, upon request of the interested party and following the approval of the CCD. Recognition may not contribute to the reduction of the legal duration of the Degree Program, as determined by Art. 8, par. 2 of Ministerial Decree 270/2004, except for students who enrol while already in possession of a degree of the same level¹⁷.

With regard to the criteria for the recognition of CFU acquired in extra-curricular activities, pursuant to Art. 3, par. 2, of Ministerial Decree (D.M.) 931/2004, within the limit of 48 CFU (Bachelor's Degrees and single-cycle Master's Degrees), or 24 CFU (Master's Degrees), the following activities may be recognised (Art. 2 of D.M. 931/2004):

- Professional knowledge and skills, certified in accordance with the current regulations as well as knowledge and skills acquired in post-secondary-level training activities.
- Training activities carried out in the cycles of study at the public administration training institutions as well as knowledge and skills acquired in post-secondary-level training activities, which the University contributed to developing and implementing.
- Achievement of an Olympic or Paralympic medal or the title of absolute world champion, absolute European champion or absolute Italian champion in disciplines recognized by the Italian National Olympic Committee or the Italian Paralympic Committee.

¹⁵ Art. 19 and Art. 27, par. 6 of the University Didactic Regulations.

¹⁶ Art. 6, par. 9 of the University Didactic Regulations.

¹⁷ Art. 19, par. 4 of the University Didactic Regulations.

Art. 15

Criteria for enrolment in individual teaching courses

Enrolment in individual teaching courses, provided for by the University Didactic Regulations¹⁸, is governed by the "University Regulations for enrolment in individual teaching courses activated as part of the Degree Program"¹⁹.

Article 16

Features and modalities for the final examination

The final degree examination consists of the preparation of a written paper and subsequent public discussion on a topic consistent with the objectives of the course of study. The student must demonstrate the ability to apply and communicate the knowledge acquired in the course of study. The final examination may be linked to a project or an internship activity.

Pursuant to Articles 2 and 3 of Act No. 163 of 8 November 2021, the final examination for the professional degree in Industrial and Information Technology Professions - Class LP-01 - qualifies the graduate surveyor.

In accordance with Interministerial Decree No. 682 of 24-05-2023, the final examination is preceded by a Practical Assessment Test (PPV) of the professional skills acquired through the apprenticeship, aimed at ascertaining the candidate's level of technical preparation for the licence to practise the profession.

For admission to the final examination, the student must have acquired all the credits for activities other than the final examination, distributed in the different types according to the indications of the teaching plan. The written report is drawn up by the student on an activity carried out by the same under the guidance of a lecturer. The activity may be of a project, experimental or in-depth nature and must focus on topics consistent with the educational objectives of the course of study. The type and topic of the activity are agreed with the lecturer. The degree mark is expressed in hundredths of a second. The award of honours is subject to the unanimous decision of the Commission.

The final examination for the professional degree includes the performance of a practical assessment test (PPV) that precedes the final examination, with the aim of verifying the acquisition of knowledge/skills suitable for the performance of the profession; the PPV consists of the examination of the profession's discipline and the solving of one or more practical problems consistent with those analysed during the practical assessment placement.

The Selection Committee has a joint composition and consists of at least four members. Half of the members of the Commission are university lecturers, one of whom acts as chairman, appointed by the study course Council, and the other half are professionals with proven experience, appointed by the competent professional representatives, with at least five years' practice in the student's chosen profession.

¹⁸ Art. 19, par. 4 of the University Didactic Regulations.

¹⁹ R.D. No. 348/2021.

Two registered members of the profession to which the student is qualified are invited to attend the graduation session.

The student passes the PPV by obtaining a suitability assessment, which does not contribute to the final degree grade, and proceeds to the discussion of the thesis

A maximum of 8 (eight) points may be awarded for the final degree examination as follows: final grade = A+B+C.

The A, B and C rates are established according to the following schedule.

The A-value is almost equal to 103.00/110 as the minimum value for the Commission to award honours on the motivated proposal of the Rapporteur.

Final grade calculation (degree with focus on the acquisition of specific professional knowledge)

A (average profit grade): average in hundredths (weighted according to the CFUs attributed to each teaching) of the marks obtained in all the profit examinations passed for the acquisition of the 180 CFUs relating to the three- year degree course. For this purpose, the mark of the examinations passed with distinction will be taken as 31;

B (quality of the paper and presentation): up to 5 points;

C (student's career): up to 3 points of which: 2 points if the degree is obtained within the legal duration of the course of study, and one point less for each additional year or fraction thereof (minimum 0), 1 point if the basic average (calculated taking praise into account) is greater than or equal to 100.00.

Article 17

Guidelines for traineeship and internship

Students enrolled in the Degree Program may decide to carry out internships or training periods with organisations or companies that have an agreement with the University. Traineeship and internship are compulsory and contribute to the award of credits for the other training activities chosen by the student and included in the study plan, as provided for by Art. 10, par. 5, letters d) and e), of Ministerial Decree 270/2004²⁰.

The CCD regulates the modalities and characteristics of traineeship and internship with specific regulations.

The University of Naples Federico II, through the Educational Office of the Department of Structures for Engineering and Architecture, ensures constant contact with the world of work to offer students and graduates of the University concrete opportunities for internships and work experience and to promote their professional integration.

The study manifesto for the professional degree course in Digital Building Technology at the University of Naples Federico II envisages that students complete their preparation through work placement activities. For these activities the study manifesto currently provides for a number of credits equal to 48 CFU (University Educational Credits) in the third year of the degree course.

The practical-assessment traineeships (PTV) are carried out for no more than 40 hours per week and each CFU reserved for them corresponds to 25 hours of average commitment per student.

²⁰ Traineeships ex letter d) can be both internal and external; traineeships ex letter e) can only be external.

Traineeships are of an individual nature and constitute an educational activity carried out from a pre-established date (usually the 1st day of the month) for a period of approximately 6 months. They will be carried out in companies, professional firms, public or private bodies, public administrations, including those in the third sector, or professional orders or colleges (referred to for the sake of simplicity hereafter as 'companies') (extra-moenia traineeships).

These regulations do not cover Erasmus placements, for which please refer to the specific regulations.

In the event that TPV activities are carried out in non-professional settings, 12 of the 48 CFUs are acquired in agreement with professional orders or colleges.

A Training Project is stipulated, in which the details of the individual student are set out, the names of the Company Tutor appointed by the company (who is responsible for supervising the trainee's activities) and of the University Tutor are indicated, and the objectives and procedures for carrying out the work placement are clearly described.

No remuneration is provided by the company to the student (this does not preclude the company from giving the student a small fee or reimbursement of expenses). The student and the university tutor are obliged not to divulge confidential data or information, particularly on the methods and tools owned by the company, if they become aware of them during the training activity.

Role and tasks of the traineeship commission

Within the framework of the Coordination of the Professional Degree Course in Digital Construction Technology a traineeship commission takes care of the allocation of traineeships to students and relations with the companies that host trainees. It is assisted by the Didactics Office of the Department of Structures for Engineering and Architecture, which takes care of all the initiation activities, and among others, periodically collects the availability of companies and prepares a list of available internship topics.

Procedure for the allocation and conduct of the traineeship

Following the assignment of the company and compilation of the training project, the procedure is as follows:

- completion of the traineeship booklet by the trainee, subject to verification and approval by the tutors
- drawing up the final training report drafted by the trainee and supervised by the tutors
- recording of internship credits by the university tutor using the Credit Acquisition Form (Form AC)
- delivery of the traineeship booklet and the AC Form to the Department's Education Office.

During the placement, periodic meetings of the student with the tutors are scheduled to check progress.

The Professionalising Course of Study in Digital Technologies for Construction envisages workshop and operational activities of an individual and/or group nature, such as topographical surveys and workplace safety investigations in urban and rural areas, to be carried out in the open field and/or on construction sites for at least 48 CFU.

Laboratory activities are carried out in a conventional manner. In particular, there will be face-

to-face lectures, autonomous student activities on the basis of the lecturer's instructions, periodic receptions to monitor the activities and a final assessment.

The laboratory activity will be tested by means of a final report relating to the content of the students' activities. The type of this paper will be agreed upon with the contact person, who will then verify, together with the lecturer in charge, the suitability for the granting of the relevant training credits.

In view of the type of teaching organisation envisaged in these regulations and, in particular, of how profit is assessed, attendance is normally required for all training activities. In particular, for courses that include laboratory activities, attendance of at least 70% of the face-to-face activities is a prerequisite for access to assessment. For certain training activities the Course Council may establish, in addition to the conventional mode, the activation of distance teaching modes (teledidactics).

Annex 1 shows the plan of laboratory activities. There are two compulsory modules per semester (Tools and Geotechnics in the first and Site Organisation and Metric Calculations in the second), while the other two are to be chosen from the remaining four.

The Lecturer's recording of traineeship credits is done via the Credit Acquisition Form (Form AC).

Laboratory training activities

LABORATORIO I				
Attività prevista	Descrizione	Numero crediti	Numero ore frontali	Elaborato finale
Strumenti	Descrizione della strumentazione necessaria per effettuare le varie tipologie di prove su materiali; descrizione della sensoristica utile per il monitoraggio (LVDT, inclinometri ecc.).	6	24	Report descrittivo delle tipologie di prove associate alle diverse strumentazioni e delle proprietà strutturali monitorabili con la sensoristica analizzata.
Geotecnica	Descrizione delle principali attrezzature per l'esecuzione di prove di identificazione e di caratterizzazione meccanica dei terreni: analisi granulometrica, caratteristiche fisiche generali, edometro, apparecchio di taglio diretto, celle di compressione triassiale convenzionale. Descrizione della sensoristica. Valutazione dell'accettabilità dei risultati e stima delle proprietà meccaniche.	6	24	Progettazione di un piano di indagine geotecnico.

Prove su cls	Indagini distruttive su provini di cls; Indagini non distruttive: a) pacometriche; b) sclerometriche; c) soniche o ultrasoniche; d) scansioni mediante georadar. Valutazione dell'accettabilità dei risultati e stima delle proprietà meccaniche.	6	24	Progettazione di un piano di indagine per una struttura in cls armato con riferimento alle prove sul cls.
Prove su acciaio e su compositi	Indagini distruttive su provini di acciaio (prova diretta a trazione ecc); prove a trazione per compositi. Valutazione dell'accettabilità dei risultati e stima delle proprietà meccaniche.	6	24	Progettazione di un piano di indagine per una struttura in cls armato con riferimento alle prove su acciaio.
Prove su elementi strutturali	Indagini distruttive su elementi di muratura (martinetti piatti singoli e doppi). Indagini non distruttive (soniche ecc.). Indagini sulle malte. Altre tipologie di prove su elementi strutturali.	6	24	Progettazione di un piano di indagine per una struttura in muratura.
Stampante 3D	Comprendere potenzialità e limiti della Stampa 3D. Imparare a valutare i modelli 3D dal punto di vista della "fabbricabilità". Imparare a utilizzare una stampante 3D. Apprendere l'anatomia della stampante 3D.	6	24	Progetto da definire col referente.

LABORATORIO II				
Attività prevista	Descrizione	Numero crediti	Numero ore frontali	Elaborato finale
Organizzazione del cantiere	Le attività si propongono di individuare ed analizzare metodi e strumenti per la gestione del ciclo produttivo in cantiere allo scopo di garantire la conoscenza delle attività nello svolgimento della funzione di direttore di cantiere e di direttore dei lavori. Fornire le conoscenze dei fondamentali metodi e strumenti per la gestione della produzione in cantiere, della programmazione dei lavori, del progetto architettonico,	6	24	Progetto da definire col referente.

	della sicurezza del cantiere e delle fasi di lavoro.			
Computi Metrici	Definizione di computo, tipi di computo, differenza tra Computo Metrico Estimativo e Computo Metrico, differenza tra Computo Metrico Estimativo e Computo Metrico Consuntivo. Obbligatorietà, titoli di legge, differenze di uso tra lavori privati e lavori pubblici, ruolo del Computo Metrico Estimativo nel capitolato speciale d'appalto.	6	24	Progetto da definire col referente.
Autocad	Lo scopo delle attività è quello di fornire tutte le conoscenze e gli strumenti di base per un corretto utilizzo di Autocad per la creazione e gestione di progetti.	6	24	Progetto in autocad da definire col referente
Excel	Lo scopo delle attività è quello di fornire tutte le conoscenze e gli strumenti di base per un corretto utilizzo di Excel per la creazione e gestione di progetti.	6	24	Progetto in excel da definire col referente
Droni	Fotografie, riprese aeree, rilevazioni, ispezioni e sorveglianza: tutte le attività che prevedono l'utilizzo di un drone per uso professionale (APR e SAPR) verranno trattate in tale modulo.	6	24	Progetto da definire col referente.
Rilievo (topografico)	Metodologie e strumenti di rilievo che consentono di misurare parametri quali distanze, superfici ecc nonché di rappresentare su carta i rilievi effettuati.	6	24	Progetto da definire col referente.

Article 18

Disqualification of student status²¹

A student who has not taken any examinations for eight consecutive academic years incurs forfeiture unless his/her contract stipulates otherwise. In any case, forfeiture shall be notified to the student by certified e-mail or other suitable means attesting to its receipt.

Article 19

Teaching tasks, including supplementary teaching, guidance, and tutoring activities

Professors and researchers carry out the teaching load assigned to them in accordance with the provisions of the RDA and the Regulations on the teaching and student service duties of professors and researchers and on the procedures for self-certification and verification of actual performance²².

Professors and researchers must guarantee at least two hours of reception every 15 days (or by appointment in any case granted no longer than 15 days) and, in any case, guarantee availability by e-mail.

The tutoring service has the task of orienting and assisting students throughout their studies and of removing the obstacles that prevent them from adequately benefiting from attending courses, also through initiatives tailored to the needs and aptitudes of individuals.

The University ensures guidance, tutoring and assistance services and activities to welcome and support students. These activities are organised by the Schools and/or Departments under the coordination of the University, as established by the RDA in Article 8.

Article 20

Evaluation of the quality of the activities performed

The Didactic Coordination Commission implements all the quality assessment forms of teaching activities envisaged by the regulations in force according to the indications provided by the University Quality Presidium.

In order to guarantee the quality of teaching to the students and to identify the needs of the students and all stakeholders, the University of Naples Federico II uses the Quality Assurance (QA)²³ System, developed in accordance with the document "Self-evaluation, Evaluation and Accreditation of the Italian University System" of ANVUR, using:

- surveys on the degree of placement of graduates into the world of work and on post-graduate needs;
- data extracted from the administration of the questionnaire to assess student satisfaction for each course in the curriculum, with questions relating to the way the course is conducted, teaching materials, teaching aids, organisation, facilities.

²¹ Art. 24, par. 5 of the University Didactic Regulations.

²² R.D No. 2482//2020.

²³ The Quality Assurance System, based on a process approach and adequately documented, is designed in such a way as to identify the needs of the students and all stakeholders, and then translate them into requirements that the training offer must meet.

The requirements deriving from the analysis of student satisfaction data, discussed, and analysed by the Teaching Coordination Committee and the Joint Teachers' and Students' Committee (CPDS), are included among the input data in the service design process and/or among the quality objectives.

The QA System developed by the University implements a process of continuous improvement of the objectives and of the appropriate tools to achieve them, ensuring that planning, monitoring, and self-assessment processes are activated in all the structures to allow the prompt detection of problems, their adequate investigation, and the design of possible solutions.

Article 21

Final Rules

The Department Council, on the proposal of the CCD, submits any proposals to amend and/or supplement these Rules for consideration by the Academic Senate.

Article 22

Publicity and Entry into Force

These Rules and Regulations shall enter into force on the day following their publication on the University's official notice board; they shall also be published on the University website. The same forms and methods of publicity shall be used for subsequent amendments and additions.

Annex 1 (CdS structure) and Annex 2 (Teaching/Activity course sheet) are integral parts of this Didactic Regulations.