



Decreto Rep. 2304/2015 Prot. n. 190360
Anno 2015 Tit. III Cl. 2 Fasc. 5

OGGETTO: Regolamento didattico di Corso di studio - Emanazione.

IL RETTORE

Visto la legge 19 novembre 1990, n. 341, relativa alla riforma degli ordinamenti didattici, e in particolare l'art. 11, comma 2;

Visto il decreto del ministro dell'istruzione dell'università e della ricerca 22 ottobre 2004 n. 270, relativo alle modifiche al regolamento recante norme concernenti l'autonomia didattica degli atenei, approvato con decreto del ministro dell'università e della ricerca scientifica e tecnologica 3 novembre 1999, n. 509;

Visto il decreto del ministro dell'università e della ricerca 16 marzo 2007, relativo alla determinazione delle classi delle lauree magistrali;

Visto il decreto del ministro dell'istruzione, dell'università e della ricerca 30 gennaio 2013, n. 47, relativo ad autovalutazione, accreditamento iniziale e periodico delle sedi e dei corsi di studio e valutazione periodica, così come modificato dal decreto ministeriale 23 dicembre 2013, n. 1059;

Visto lo Statuto dell'Università degli Studi di Padova emanato con decreto rettorale n. 3276 del 16 dicembre 2011, e successivamente modificato con decreto rettorale n. 1664 del 27 giugno 2012;

Tenuto conto dell'art. 4 del Regolamento Didattico di Ateneo, emanato con decreto rettorale n. 1623 del 16 giugno 2008, e successivamente modificato con decreto rettorale n. 693 del 26 febbraio 2013;

Vista la delibera del Senato Accademico del 12 maggio 2014, n. 56, avente a oggetto "Approvazione degli schemi di Regolamento Didattico dei Corsi di studio (Laurea, Laurea magistrale e Laurea magistrale a ciclo unico)", rivisti ai sensi del su citato art. 4 del Regolamento Didattico di Ateneo;

Tenuto conto di quanto stabilito dal Senato Accademico con la delibera del 4 ottobre 2010, n. 185 avente a oggetto "Linee guida per l'adeguamento dei Corsi di Laurea e di Laurea magistrale in vista della predisposizione dell'offerta formativa 2011/2012 e, successivamente, con la delibera del 7 aprile 2014, n. 46, avente a oggetto "Linee guida per il miglioramento della qualità della didattica";

Vista la delibera del Consiglio della Scuola di Ingegneria del 12 giugno 2015 in cui è stato approvato il Regolamento didattico del Corso;

Verificato che il Regolamento è conforme al Regolamento Didattico di Ateneo, parte generale, e alla normativa vigente;

DECRETA

art. 1. di approvare il Regolamento didattico del seguente Corso di studio raggruppato nella Scuola di Ingegneria:

- Corso di laurea magistrale in MATHEMATICAL ENGINEERING - INGEGNERIA MATEMATICA (LM-44)
Dipartimento di Ingegneria Civile, Edile e Ambientale (ICEA)

dando atto che il Regolamento didattico del Corso di studio in allegato costituisce parte integrante del presente decreto, ed entra in vigore dall'anno accademico 2015/2016.

Prima dell'inizio dell'anno accademico il Regolamento sopra elencato, completo dei propri allegati, verrà pubblicato nel sito di Ateneo all'indirizzo: <http://www.didattica.unipd.it> nella pagina del Corso di studio;

art. 2. di dare atto che ogni Regolamento sopra elencato decadrà qualora non si provveda all'aggiornamento, se dovuto, dei suoi allegati;

art. 3. di incaricare il Servizio Accreditamento, sistemi informativi e qualità della didattica dell'esecuzione del presente provvedimento, che verrà registrato nel Repertorio Generale dei Decreti.

Padova, 14/07/2015

Il Rettore
Giuseppe Zaccaria

Il Pro-Rettore Vicario
Prof. Francesco Gnesotto

Il Pro-Rettore Vicario
Prof. Francesco Gnesotto



CHAPTER I COURSE OBJECTIVES AND DEGREE COURSE STRUCTURE

Art. 1 — Introduction and objectives

1. The second cycle degree course in MATHEMATICAL ENGINEERING (INGEGNERIA MATEMATICA) pertains to the LM-44 class of second cycle degree courses as referred to in Ministerial Decree 270/2004.
2. The second cycle degree course in MATHEMATICAL ENGINEERING comes under the Department of CIVIL, ENVIRONMENTAL AND ARCHITECTURAL ENGINEERING (ICEA) and is coordinated by the School of ENGINEERING.
The organs of the second cycle degree course consist of the Chair and the Degree Course Teachers' Council in Mathematical Engineering, hereinafter referred to as the DCTC.
3. The degree course structure of the second cycle degree course with the general framework for educational activities was prepared in the defined scheme defined by pertinent Ministerial Decrees and in compliance with ANVUR (National Agency for the Evaluation of University and Research) requirements, as set forth in Attachment 1, which forms an integral part of this current Regulation.
4. The annual activation of the second cycle degree course is dependent upon the number of students who had enrolled in the previous academic year or equal to the number required by national legislation and University regulations. The second cycle degree course, although included in the educational offer, will not be activated if the number falls short of the annual minimum required, published in the University's Manifesto degli Studi (official overview of educational offer), and indicated in the course's Admission Notice by the deadline for pre-enrolment.
5. The current Regulation, consistent with the University Educational Regulation (UER) (Regolamento Didattico di Ateneo – RDA) and with the Regulation of the University Schools (Regolamento delle Scuole di Ateneo), regulates the educational organization of the second cycle degree course regarding any aspects not defined by the aforementioned Regulations.

Article 2 — Admission

1. Students who wish to register for the second cycle degree course in MATHEMATICAL ENGINEERING must already have a degree or a three-year university diploma or other educational qualification obtained in Italy or abroad, recognized in accordance with current Italian legislation, and also possess specific educational requirements, as well as the following knowledge, skills and abilities:
Adequate knowledge of basic subjects, such as mathematical and numerical analysis, linear algebra and geometry, physics and statistics, as well as the use of standard software for word processing, data analysis, scientific computing. The ability to use the operational methodological aspects of mathematics and other basic sciences to interpret and describe engineering problems, physical and/or financial engineering in addition to setting up and conducting experiments, analyzing and interpreting extrapolated data and to understand the impact of engineering solutions in the financial

and physical environment context.

Admission to the "Mathematical Modelling for Engineering and Science" degree course track is open, however, admission to the "Financial Engineering" degree course track, which requires students to have spent their entire second year abroad (Paris, France), has a limited number of places per each Academic Year. The number of places will be determined annually by the DCTC and then announced in the Second Cycle Degree Course's Admissions Notice. Students will be selected based on:

- degree mark;
- alternatively, the time in months it takes to graduate;
- alternatively, the number of University Educational Credits (CFUs) cum laude (with outstanding honour);
- alternatively, the number of exams passed with a mark/grade equal to 30/30.

The student's knowledge, skills and abilities will be assessed in accordance with the guidelines stipulated in paragraph 3.

2. The educational requirements are as follows:

- a. have a degree in class(es) L-7 "Civil and Environmental Engineering", L-8 "Information Technology Engineering", L-9 "Industrial Engineering", L-30, "Physics", L-31, " Computer Sciences", L-35 "Mathematics", L-18 " Business Administration", covered by current Ministerial Decree (D.M.) no. 270/04, or alternatively earning 25 University Educational Credits (CFUs) in the following Disciplinary Scientific Sector (SSDs): MAT/02, MAT/03, MAT/05, MAT/06, MAT/07, MAT/08, FIS/01, SECS-S/01, SECS-S/02, SECS-S/03, SECS-S/06
- b. knowledge of English at the B1 level

For graduates with a high level of preparation, resulting from the knowledge and skills certified in their degree course track, from educational trainings which are not completely consistent with access requirements, students may initially choose a different path and/or specific admissions entrance exam.

For applicants holding an Italian degree with a different structure from those covered by the Ministerial Decree 509/99 and Ministerial Decree 270/2004, or in possession of a foreign qualification, verification of educational requirements will be carried out by the Admissions Board.

3. For the purposes of admission, the possession of knowledge, skills and abilities referred to in paragraph 1 will be verified according to the following criteria:
 - o a minimum graduation mark for admission, equal to 84/110 or its equivalent.Regarding those students, who have obtained their degree from studies abroad, the verification referred to in this paragraph shall be implemented in accordance with the criteria established by the DCTC.
4. For candidates who are Non-EU residents, with foreign qualification, the assessment of their personal preparation should ensure the establishment of a merit, except where international agreements provide for a different method of the students' admission.
5. During the annual activation of the second cycle degree course, the Department of reference, by a proposal from DCTC, establishes the form and content of the assessment of the student's knowledge, skills and abilities required for entrance, also with reference to the non-resident, non-EU candidates with foreign qualifications: such rules and contents are made public through the Admission Notice.
6. It is possible to register during the academic year, by the deadlines stipulated by the University Senate and the Department of reference, for the candidates meeting the requirements and possessing the appropriate knowledge, skills and abilities in accordance with the terms and conditions outlined in the Admission Notice.

Article 3 — Educational Organization

1. The second cycle degree course in MATHEMATICAL ENGINEERING can be organized into a single degree course track or degree course tracks. The activation of the annual degree course tracks proposed by the DCTC to the Department of reference, is made known in the University's Manifesto degli Studi, and is subject to the minimum number of students stipulated by the University Senate: no less than 5 students.
2. The teaching of the lessons is organized according to a semestral structure.
3. This Regulation is complemented by the three documents (Attachments 2, 3 and 4) prepared annually during the activation of the second cycle degree course in relation to the cohort of students of said academic year.
4. In Attachment 2, each degree course track planned for the second cycle degree course in MATHEMATICAL ENGINEERING is defined separately for:
 - o proposed educational activities, the list of course units and their organization into modules
 - o the Disciplinary Scientific Sector or the Disciplinary Scientific Sectors associated to each educational activity
 - o the University Educational Credits (CFUs) assigned to each educational activity
 - o the hours of guided learning activities for each educational activity
 - o the possible preparatory activities within the timeframe specified in the Student Regulation (Regolamento Studenti)
 - o the year in which the planned course unit is provided
 - o the instruction period (semester or trimester)
 - o the language used for instruction of each course unit
 - o the type of evaluation planned for each course unit
5. In Attachment 3, diagrams are presented detailing the degree study plan that do not require rulings of approval.
6. All the information required by law, such as educational aims and educational activities, the list of teachers involved in the second cycle degree course in MATHEMATICAL ENGINEERING, are disclosed and updated according to the terms provided by the University Educational Regulation (UER).

The course units programs and other educational activities validated by the Chair of the DCTC, as well as the class schedules, the exam sessions and other forms of final evaluation will be made published prior to the beginning of the academic year.

Article 4 — Examinations and Tests

1. With regard to each educational activity, a conclusive test will be administered at the end of the period in which the activity has been carried out. Concerning the educational activities which consist of modules, the final assessment for graduation is, in any event, uniform and collegial. Only a successful pass mark during the final examination will enable the student to obtain the University Educational Credits (CFUs) allocated to the educational activity in question. The educational activities explicitly listed in Attachment 2, the final assessment of which shall entail the allocation of a mark expressed in units of thirty, jointly determine the final second cycle degree mark.
2. The maximum number of tests or final exams necessary to obtain the qualification may not exceed 12. The following educational activities are taken into consideration when calculating the number:
 - i. Core
 - ii. related or supplementary
 - iii. optional (cumulatively counted as a single exam)
3. The final exams may include: an oral or written exam or both, or a written or oral report on the activities carried out, or tests with essay or multiple choice questions, or a laboratory test or an exercise on your computer or project. The teacher responsible for

course unit, prior to the start of each academic year, will communicate the modalities of the final exam, which may include more than one of the forms indicated above, the evaluation criteria and the possibility of mid-course partial assessments. The manner in which the assessments will be administered must be the same for all students, and respect the provisions established at the beginning of the academic year.

4. The possible mid-course assessments must not undermine the educational program of other teachers and cannot replace the assessments envisioned in paragraph 1 herein.
5. As for the knowledge of English (or more language skills), said knowledge will be verified the corresponding B2 Level, approved by the Council of Europe, by an examination.

The results of the internship will be verified by the teacher in charge of the internship itself on the basis of the opinion expressed by the company tutor.

The results of the study periods abroad will be tested, and the relevant University Educational Credits (CFUs) will be recognized by the DCTC as a replacement for those allocated to previously identify educational activities envisioned by the study plan.

Article 5 — Final Exam

1. The final exam consists of an original thesis prepared by the student, under the guidance of a course supervisor. The course supervisor must be a current faculty member of the University of Padua.

The discussion of the thesis will occur before a Commission appointed by the Director of the Department of reference.

2. The thesis should be written and discussed in English.
3. With regard to information, knowledge and sensitive materials, which are not accessible to the general public, they will be made available for the development of the thesis or other final exams. The graduate will be required to sign a "Confidentiality Agreement", in accordance with the model approved by the Academic Senate.

Article 6 — Obtaining the Second Cycle Degree

1. The second cycle degree will be awarded upon the completion of at least 120 University Educational Credits (CFUs), in compliance with the maximum number of examinations or final evaluations as referred to in Article 4, paragraph 2. The student must also have successfully passed the final exam stated in the preceding article.

2. The final mark of the second cycle degree is expressed as a percentage and is the sum:

- a. of the weighted average WA of the marks m_i , testing as referred to in Article 4, paragraph 1 and Article 10, paragraph 2, weighed with the related credits c_i , and compared to 110, according to the following formula

$$WA = (\sum_i m_i c_i / \sum_i c_i) 110/30$$

- b. of the increase/decrease of the mark, expressed in 110, achieved on the final exam
- c. from an eventual increase of marks linked to the awarding of the degree.

If the candidate has obtained the highest mark, he or she can be considered as an honor graduate.

3. The criteria for determining the increases/decreases in marking outlined in subparagraphs b) and c) of paragraph 2 are approved by the Department of reference by a proposal from the DCTC and indicated in Attachment 4.
4. You can also obtain the second cycle degree in an accelerated manner, finishing prior to the official end of the degree course, which is two years.

CHAPTER II STANDARD OPERATING PROCEDURES

Article 7 — Attendance Requirements

1. Attendance at teaching activities is not mandatory.
2. The teacher is entitled to refuse admittance during a lab lesson, or other similar activities, to those students who have failed to pass the final exams outlined in Attachment 2, as a preliminary to the laboratory activity itself or to the teaching program wherein the lab work is included.
3. The second cycle degree course in MATHEMATICAL ENGINEERING involves the registration of part-time students who have the prerequisites, which is annually published in the University's Manifesto degli Studi.

Article 8 — Transfers from other Degree Course or from other Universities

1. The transfer from other degree courses or other universities is permitted only upon verification that all requirements have been met as stipulated in Article 2 of this Regulation and in accordance with local regulations.
2. In the presence of acknowledgments and/or validations, the DCTC offers the academic year of registration.

Article 9 — Acknowledgement of Credits

1. In the event of a transfer referred to in article 8, acknowledgment of University Educational Credits (CFUs) is done by the DCTC in accordance with the following criteria:
 - a. if the student comes from a second cycle degree course in the same class, provided that the share of University Educational Credits (CFUs) related to the same Disciplinary Scientific Sector, outlined in Attachment 1, recognized is equal to at least 50%, said recognition will be carried out by identifying the educational activities outlined in Attachment 2 of the target second cycle degree course, while also providing any supplementary tests aimed at verifying the student's knowledge. Other educational activities might similarly be acknowledged, as long as they fall within the purview of optional credits. The lack of credit acknowledgment shall be properly justified by the DCTC. In the event that the course is taught via distance-learning, it will have to be accredited in accordance with Ministerial Decree (D.M.) No. 47 dated 30 January 2013.
 - b. if the student comes from a degree course offered by the University of Padova that belongs to a different class, provided that the acknowledged quota of University Educational Credits (CFUs) relating to the same Disciplinary Scientific Sector outlined in Attachment 1 is equal to at least 30%, said recognition will be carried out by identifying the educational activities outlined in Attachment 2 of the target second cycle degree course, while also providing any supplementary tests aimed at verifying the student's knowledge. Other educational activities might similarly be acknowledged, as long as they fall within the purview of optional credits. The lack of credit acknowledgment shall be properly justified by the DCTC.
 - c. If the student comes from a degree course from another University that belongs to a different class or is taught via distance-learning but is not accredited in accordance with Ministerial Decree No. 47 dated 30 January 2013, the DCTC will,

- on a case by case basis, evaluate the individual courses of instruction.
2. In the event of credit recognition, the awarding of any mark will take place according to the following rules:
 - o in the event that one or more exams is recognized, the entire average of marks achieved, to be weighted against the University Educational Credits (CFUs) if the information exists, or calculated arithmetically and rounded up to a higher number
 - o in the event that a single exam is recognized as an exam in addition to another educational activity, the mark is maintained for both examinations
 - o examinations taken at any of the Military Academy, the Vatican University and the University of the Republic of San Marino are always recorded with an evaluation of "approved"
 - o in all other cases, the DCTC ruling justifies the marks to be attributed to the student.

Article 10 — Study Plans

1. All students are required to submit the study plan, within the time specified by the Department of reference of the second cycle degree course within the periods provided for the Academic Calendar.
2. The educational activities freely chosen by the student, provided they are consistent with the educational project and are approved by the DCTC, might be selected among the basic, core and related activities provided by the University, or pursuant to special conventions, in other Universities and other Academic Institutions. They are recorded with the mark and the most beneficial University Educational Credits (CFUs). The mark contributes to the determination of the second cycle degree mark referred to in article 6, paragraph 2 of the current Regulation.
3. The student who requests to pursue one of the study plans offered by Attachment 3 shall nevertheless have to submit the study plan within the time limits annually prescribed by the Department of reference pursuant to modalities laid down by the University.
4. Students who intend to follow a different educational training, within the restrictions outlined in the degree course structure, provided as part of the educational activities effectively provided and the number of University Educational Credits (CFUs) established, will present their study plan by the deadline dates annually established by the Department of reference and in the manner prescribed by the University. The study plan must be approved by the DCTC, upon being examined by a commission appointed by the DCTC itself, which will take into account the needs of the educational and professional training of the student and the specific educational aims of the second cycle degree course.
5. The study plans referred to in the preceding paragraph 1, may, in any event, not envision any overlapping in the contents of the various educational activities, including the type referred to in Article 10, paragraph 5, subparagraph "a" of Ministerial Decree No. 270/2004.
6. The study plan of those students who follow an international mobility program must be accompanied by the "*Learning Agreement*" which identifies all the educational activities in foreign countries and — in correspondence — the totality of study plan activities that will not be supported.

These two documents represent the student's international study plan.
The international study plan may be updated on the basis of the documentation presented pertaining to the process of the acknowledgement of studies completed abroad.
7. Students with disabilities will be guaranteed the necessary support for the eventual establishment of an individualized study plan, within the parameters outlined in the educational structure of the second cycle degree, and may provide for the replacement

of compulsory educational activities with other activities deemed equivalent by the DCTC.

Article 11 — Tutorship

1. The DCTC can arrange tutoring activities in accordance with University Regulation for the Tutorship (Regolamento di Ateneo per il Tutorato) and with the ruling by the relevant educational framework.

Article 12 — Assessment of Teaching Activity

1. The DCTC implements forms of evaluating the quality of teaching activities, provided by law, with the procedures and deadlines established by the Presidium of the University regarding the educational quality.

Article 13 — Assessment of the Educational Load

1. Under Article 4, paragraph 3, subparagraph b of the UER, the Joint Committee of the School of ENGINEERING is responsible for assessing the consistency between the University Educational Credits (CFUs) assigned to educational activities and specific educational aims, making use of the analyzes produced by the DCTC.

CHAPTER III FINAL AND TRANSITIONAL RULES

Article 15 — Amendments to the Regulation

1. Amendments to this Regulation are proposed by the Chair of the DCTC or by at least one third of the Council's membership and must be approved by the favorable vote of an absolute majority of those in attendance. These amendments must be submitted to the Council of the School of ENGINEERING, once the formal opinion of the relevant Departments' Council has been obtained.
2. Amendments to this Regulation, subject to verification of their compliance with University Educational Regulation (UER) and with the legislation in force, are issued by the Chancellor with the typical scheme of educational regulations regarding the degree course.
3. With the entry into force of eventual amendments to the UER or the Department/School Regulations or other new provisions, the process of verification and integration of this Regulation will, in any case, be implemented.
4. Eventual problems arising from the interpretation or application thereof, obtained from the series of Regulations, will be subject to a special examination by the DCTC.

Art. 16 — Transitional rules

1. This regulation shall apply from the 2015/2016 cohort.

Attachments to this regulation:

- Annex 1 at:
<http://didattica.unipd.it/didattica/allegati/regolamento/allegato1/1003386.pdf>
- Annex 2 at:
<http://didattica.unipd.it/didattica/allegati/regolamento/allegato2/1003386.pdf>
- Annex 3 at:
<http://didattica.unipd.it/didattica/allegati/regolamento/allegato3/1003386.pdf>
- Additional annex at:
<http://didattica.unipd.it/didattica/allegati/regolamento/allegato4/1003386.pdf>