



Universiteit Leiden

Faculty of Science

Course and Examination Regulations

Master's Programmes

valid from September 01, 2010

These course and examination regulations have been drawn up in accordance with Section 7.13 of the Higher Education and Research Act [*Wet op het hoger onderwijs en wetenschappelijk onderzoek*] (*WHW*)¹ and additional quality marks as set out in the framework document Leiden University Register of Study Programmes [*Leids universitair register opleidingen*].

Pursuant to Section 7.14 of the Act the faculty board regularly evaluates the course and examination regulations and assesses, for the purpose of monitoring and, if necessary, adjustment of the study load, the time it takes students to comply with the regulations. In conformity with Section 9.18 of the Act is assigned the task of assessing how the course and examination regulations are implemented.

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Appendix: Master degree Programmes

1. The Dutch Higher Education and Research Act [*Wet op het hoger onderwijs en wetenschappelijk onderzoek*] came into effect on 1 September 1993. It is sometimes referred to by its acronym *WHW*.

Chapter 1 General Provisions

Article 1.1 Scope of the Regulations

These regulations apply to the teaching and examinations of the master's degree programmes in:

- a. Mathematics;
- b. Computer Science;
- c. ICT in Business;
- d. Media Technology;
- e. Astronomy;
- f. Physics;
- g. Chemistry
- h. Bio-Pharmaceutical Sciences;
- i. Biology;
- j. Life Science & Technology – Leiden;
- k. Industrial Ecology

The programmes are offered by the Faculty of Science of Leiden University, hereinafter referred to as: the faculty.

Article 1.2 Definitions

In these regulations the following definitions apply:

- a. board of admissions: the committee that, under the aegis and on behalf of the faculty board, and in accordance with the admission requirements, advises which students are to be admitted to the programme;
- b. board of examiners: the board of examiners of the programme, established and appointed in accordance with Section 7.12a of the Act;
- c. component: a study unit of the programme as defined in Section 7.3 of the Act. The course load of each component is expressed as whole credits. Every component involves an examination;
- d. credit: the unit expressing the course load of a course component pursuant to the Act. According to the ECTS one credit equals 28 hours of studying;
- e. European credit (EC): the unit expressing the course load of a course component pursuant to the Act. According to the European Credit Transfer System one EC equals 28 hours of studying;
- f. examination [*tentamen*]²: an evaluation of the knowledge, understanding and skills of the student in respect of a particular component, and an assessment thereof, in accordance with Section 7.10 of the Act, by at least one examiner appointed to this purpose by the board of examiners;
- g. examiner: the person appointed by the board of examiners to conduct examinations, in accordance with Section 7.12c of the Act;
- h. final examination [*examen*]²: the interim examinations [*tentamens*] linked to the components of the programme, including, where the board of examiners has so decided, an examination in accordance with Section 7.10 (1) performed by the board itself;

2. The *examen* is actually a review of the student's academic achievements to decide whether or not (s)he has completed all requirements for graduation. The Dutch term used for a test of the student's knowledge or skills is '*tentamen*'.

- i. Leiden University Register of Study Programmes [*Leids universitair register opleidingen*] register³ of the programmes offered by Leiden University, kept under supervision of the Executive Board, referred to in Section 7 of the Executive and Management Regulations;
- j. level: the level of a component according to the abstract structure as defined in the framework document of the Leiden University Register of Study Programmes;
- k. practical: practical assignment as defined in section 7.13 (2) (d) of the Act, in one of the following forms:
- the writing of a thesis;
 - the writing of a paper, the design and implementation of a project, or the creation of a technological design,
 - the implementation of a research assignment;
 - carrying out a literature study;
 - the participation in fieldwork or an excursion;
 - the completion of a traineeship;
 - carrying out tests and experiments, or
 - the taking part in another educational activity aimed at acquiring particular skills;
- l. Study guide (prospectus): a document containing details and binding information on the programme;
- m. student: a person registered with Leiden University for the purpose of taking courses, and/or the sitting of examinations and the taking of examinations of the programme;
- n. the Act: the Higher Education and Research Act [*Wet op het hoger onderwijs en wetenschappelijk onderzoek*] (WHW).
- o. working day: Monday to Friday, excluding public holidays;

Other terms have the meaning given to them by the Act.

Article 1.3 Code of Conduct regarding ICT

The Code of Conduct for Teachers and Students in ICT supported Education [*Gedragcode docenten en studenten binnen ICT en onderwijs*]⁴ shall apply to the programme and its courses.

3. The framework document *Leids universitair register opleidingen* [Leiden University Register of Study Programmes] can be found at the following website: www.onderwijs.leidenuniv.nl/onderwijsbeleid

4. The Code of Conduct for Teachers and Students in ICT supported education [*Gedragcode docenten en studenten binnen ICT en onderwijs*] was adopted by the Executive Board on 30 June 2005 and can be found at the following website: www.regulations.leiden.edu/education-students/code-of-conduct-in-ict-supported-education.html

Chapter 2 Description of the Programme

Article 2.1 Objectives of the Programme

The programme has the following objectives:

To impart sufficient knowledge, understanding and skills as to enable the graduate to contribute independently, at an academic level and in an original manner to recognizing, coming up with and solving issues in an area of the natural sciences, to discuss this contribution with colleagues, to inform non-specialists in a clear and unambiguous manner on conclusions and considerations that form the foundation of the study, and to successfully follow a PhD programme within the discipline and its marginal areas.

In terms of structure, final qualifications and other quality marks the programme meets the provisions of “The Leiden University Register of Study Programmes”.

Article 2.2 Specialisations

The programmes offers specialisations as described in the Appendix to these regulations.

Article 2.3 Achievement Levels

The following achievement levels apply with regard to the programme:

- a. theoretical and/or practical skills in more than one specialist area of the discipline such that (s)he can carry out research under overall supervision;
- b. the ability to make an independent analysis of scientific problems, analysis of relevant specialist literature, formulate verifiable hypotheses, and set up and carry out research and critical reflection on one's own research and that of others;
- c. the ability to interrelate and integrate various areas of the discipline;
- d. the ability to present clearly, verbally as well as in writing, one's own research results, and the ability to communicate with colleagues and to present his/her research results as a contribution to a congress or as (part of) a scientific publication;
- e. sufficient understanding of the social role of the natural sciences to be able to reflect upon them and in part consequently to come to an ethically sound attitude and corresponding execution of one's professional duties.

Taking into account a shorter research training period for the Master specialisations Science Based Business, Science Communication & Society and Education, the following achievement levels apply:

Science Based Business specialisation:

- a. sufficient basic knowledge and understanding of strategic and marketing management, financial management, project management, organizational science, patents and quality management;
- b. experience in setting up and carrying out organizational research within a company, in connection with the research specialization.

Science Communication & Society specialisation:

- a. knowledge and understanding of modern information and communication technology;
- b. experience in science communication;
- c. knowledge of ethical, historical and social aspects in the area of the natural sciences.

Education specialisation:

- a. all qualifications necessary for teaching all years of secondary education and technical and vocational training (for 16-18 year-olds);
- b. an approach to education/teaching taking into account the relationship between school and society and with respect for the moral values that are accepted in our multiform society.

Article 2.4 Structure of the Programme

The programme offers full-time tuition only.

Article 2.5 Study Load

The course load of the programme is 120 EC.

Article 2.6 Start of the programme; Uniform Structure of the Academic Year

The programme can start throughout the year, unless stated otherwise in the Appendix. As to taught courses, the programme is based on the uniform structure of the academic year, with the academic year being divided into semesters⁵.

Article 2.7 Final Examinations

2.7.1 A final examination is attached to the programme:

2.7.2 Any student enrolled in the programme may, with the permission of the board of examiners, compose a curriculum from components offered by an institution that has an examination attached to it. When granting permission, the board of examiners specifies to which degree programme offered by the institution that curriculum is deemed to belong.

Article 2.8 Language of Instruction

In compliance with the Code of Conduct regarding Foreign Languages [*Gedragscode Voertaal*⁶] the language of instruction and examination in the programme is English.

The language of instruction in the master specialisations Education and Science Communication & Society is Dutch.

Students are required to be sufficiently proficient in the language of instruction used in the programme.

Article 2.9 Quality

The programme is accredited by the Accreditation Organisation of the Netherlands and Flanders (NVAO) and complies with the applicable national and international quality requirements, and with the quality standards with regard to education set out in the framework document Leiden University Register of Study Programmes.

5. The uniform structure of the academic year and the explanatory notes to the new semester structure were adopted by the Executive Board on 14 October 2004 and reviewed on 12 January 2010.

6. The Code of Conduct regarding Foreign Languages [*Gedragscode voertaal*] was adopted by the Executive Board on 11 July 2002 and can be found at the following website: www.reglementen.leidenuniv.nl/legacy/language_of_instruction.pdf

Chapter 3 Curriculum

Article 3.1 Compulsory Components

3.1.1 The programme includes compulsory components (including the master's thesis [*afstudeerverslag*]). These components are listed in the Appendix to these regulations. The study load (in credits) and level have been stated for each of the components.

3.1.2 The electronic prospectus will include more detailed information on the content and structure of each component.

Article 3.2 Freedom of Choice

3.2.1 In addition to the components referred to in 3.1.1 each programme offers students to select optional components. The following rules apply:

3.2.2 The choice of components requires the approval of the board of examiners.

3.2.3 In addition to the components taught at this university optional courses may also include, subject to the approval of the board of examiners, components offered by other Dutch universities or a foreign university or components offered by a government-funded or government-approved Institute for Higher Vocational Education.

3.2.4 A maximum of 12 EC of the entire curriculum may consist of components with a level less than 400.

Article 3.3 Practicals

3.3.1 The study guide and electronic prospectus list the components which include practicals, stating the nature and the student's workload for these practicals, and indicating whether participation in these practicals is mandatory for entry to the examination of the component. Obtaining a pass result in a practical is regarded as successfully taking an exam [*tentamen*] within the meaning of Article 7.10 of the Act.

The board of examiners may grant exemption from a practical; in that case, the board may or may not impose alternative requirements.

3.3.2 The appendix to these regulations states the size and study load of the master's thesis. Furthermore, said the study guide states the criteria with which the thesis or the traineeship report must comply, as well as the relevant procedures, including the way in which the supervisor is appointed and a substitution is made if a supervisor is no longer able to perform his tasks as such.

Article 3.4 Registration for Courses

Participation in courses is in order of registration, with the provision that students who are registered in a programme are guaranteed access to courses of the obligatory part of the programme.

Chapter 4 Examinations, the Final Examination and Further Education

Article 4.1 Frequency of Examinations

4.1.1 For each component, examinations will be held at least twice per academic year. If the student needs an extra opportunity in order to avoid a delay in completing the degree, a request to do so can be submitted to the board of examiners

4.1.2 If a component contains a practical part, students may only sit the examination as referred to in paragraph 4.1.1 if they have successfully completed the practical, unless the board of examiners provides otherwise.

4.1.3 In accordance with Section 7.13 (2) (h) of the Act, the examination dates have been included in the study guide.

4.1.4 The student is required to sit the examination at the first occasion after the course has ended, unless the board of examiners in individual cases decides otherwise.

4.1.5 Pursuant to Section 4.1.4, the board of examiners has to grant permission to sit an examination at the second or later occasion after the course has ended.

4.1.6 In an academic year in which a component that has a cycle of more than one year – e.g. an elective – is not taught, there is at least one opportunity to sit the examination [*tentamen*].

Article 4.2 Obligatory Order

When entry to examinations of the components is conditional based on the student having successfully completed the examinations of other, specified course components, this is listed in the Rules and Regulations for the examinations, practicals and final examinations of the Faculty of Science [*Regels en Richtlijnen voor de tentamens, practica en examens in de Faculteit der Wiskunde en Natuurwetenschappen*].

Article 4.3 Methods of Assessment and Examination Formats

4.3.1 The study guide and electronic prospectus states whether assessment may take place by means of either a written or an oral examination or a skills test.

4.3.2 In special cases, on request of the student, the board of examiners may allow the student to take the examination in a manner that deviates from the one prescribed in the study guide and electronic prospectus.

4.3.3 Students with a disability may take examinations in a manner that has been adjusted to their particular disability, in order to accommodate their disability as much as possible. If necessary, the board of examiners will seek expert advice before reaching a decision.

4.3.4 The examinations shall comply with the code of conduct on the language of instruction and examination [*Gedragscode voertaal*].

4.3.5 Students will be assessed on an individual basis if a component involves presentations, research, reports or other course activities that require students to work in groups.

Article 4.4 Oral Examinations

4.4.1 An oral examination may involve only one student at a time, unless the board of examiners has provided otherwise.

4.4.2 Notwithstanding the provisions of paragraph 4.4.1, the oral examinations of the components listed in the study guide or electronic prospectus will be conducted with two or more students.

4.4.3 Oral examinations are public, unless the board of examiners or the examiner concerned has decided otherwise, owing to special circumstances, or unless the student objects.

4.4.4 At the request of the student a second examiner will attend the oral examination [*tentamen*].

Article 4.5 Rules set by the Board of Examiners

4.5.1 In accordance with Section 7.12b (3) of the Act, the board of examiners has set out rules – the Rules and Regulations for the examinations, practicals and final examinations of the Faculty of Science [*Regels en Richtlijnen voor de tentamens, practica en examens in de Faculteit der Wiskunde en Natuurwetenschappen*] – concerning the execution of their tasks and responsibilities and the measures they can take in that connection. These include the measures to be taken in the event of academic fraud, including plagiarism.

Fraud is understood to mean the actions of a student that aim to make it partially or completely impossible to form a correct evaluation of his or her knowledge, understanding and skills or that of other students.

4.5.2 The board ensures the right of the student to appeal against decisions of the board or the examiners; in this respect, it shall at least set out rules regarding

- the provision of a copy of their marked examination paper to students;
- safeguarding the legal rights of students during oral examinations, for instance by recording those or by having those attended by a second examiner.

Furthermore, the board shall set out the procedure involved in the appointment of the thesis supervisor (and a second reader /referee) by the board of examiners, and the procedure regarding the assessment of the master's thesis and the division of responsibilities between the thesis supervisor and the second reader / referee.

Article 4.6 Assessment

4.6.1 Immediately after the oral examination, the examiner shall inform students of their result and hand them a written notification of that result.

4.6.2 Within fifteen working days after the date of the examination, the examiner shall mark any written or other test and provide the graduate school office of the faculty with the information necessary to present the student with a written notification of the result of the examination.

The examiner will evaluate a practical within fifteen working days of the day on which the student took part in the final component or that he submitted a report of the work to the examiner.

4.6.3 If the examiner is unable to comply with section 4.6.2, which provides that results must be submitted to the graduate school office within fifteen working days, the student shall be notified thereof within said time limit. The student shall also be informed of the relevant procedure in such cases. If necessary the date for the retake will be rescheduled in order to give the student sufficient preparation time.

4.6.4 The result of the examination shall be expressed as a whole or half number between 1 and 10, including both limits. The result shall not be expressed as a number between 5 and 6.

4.6.5 The written or electronic notification of the examination result shall inform students of their right to view their marked examination scripts – referred to in Article 4.8 below which provides for the access of students to examination scripts – and of appeals procedure.

4.6.6 The assessment of the master's thesis or traineeship report will be carried out by at least 2 examiners at least one of whom has not been involved directly with the supervision of the student. The report will be presented publicly as is customary within – and indicated in the study guide – the programme.

Article 4.7 Period of Validity of Results

Each examination result is valid for 5 years. The board of examiners may prolong the period of validity or oblige students to take an additional or a substitute test for examinations that were passed more than 5 years ago.

Article 4.8 Access to Marked Examination Scripts and Evaluation

4.8.1 Students have the right to view their marked examination script, at their request, within a period of at least thirty days following the publication of the results of the written examination.

4.8.2 During the period referred to in 4.8.1, the examination questions and assignments, as well as – if possible – the marking criteria may be inspected.

4.8.3 The marked test will be evaluated with the examiner if the student so requests. An opportunity for evaluation will be announced together with the examination results.

4.8.4 The board of examiners is authorised to decide whether the test will be evaluated collectively or individually.

4.8.5 The board of examiners determines where and when the evaluation will take place.

4.8.6 Students who, due to circumstances beyond their control, are unable to attend the evaluation referred to in paragraph 4.8.5 shall be granted another opportunity for evaluation, if possible within the period referred to in 4.8.1.

Article 4.9 Exemption from Examinations and/or Practicals

At the student's request and after consultation with the examiner involved, the board of examiners may grant the student exemption from one or more examinations or practicals under the following conditions:

- The student has successfully completed, at a university or an institute of higher professional education, one of a programme's components that is similar in content and level to the component for which the student requests exemption;
- The student has demonstrated, through relevant work or professional experience, sufficient skills and knowledge in relation to the component.

Article 4.10 The Final Examination

4.10.1 The student is awarded a diploma by the board of examiners when he provides sufficient proof that all tests have been passed. Furthermore, the student must have earned a bachelor's degree as referred to in Article 5.1, or possess proof of admission as referred to in Article 5.2. Students must file their applications for graduation with study advisor or -coordinator.

4.10.2 As part of the final examination, the board of examiners is entitled to perform an additional test of the knowledge, understanding and skills of the student and assess the result.

4.10.3 Graduation will take place at least two times per academic year on dates set by the board of examiners.

4.10.4 The board of examiners sets out rules indicating the conditions under which they will exercise the power granted to them in Section 7.12b (3) of the Act to decide that not all tests must have been passed, and/or the conditions under which results of subtests may compensate one another.

4.10.5 Graduation does not take place before the Executive Board has declared that all procedural requirements have been met. For each programme, no more than one diploma will be awarded. It is recorded on the diploma that the programme or the specialisation has been delivered by Leiden University (for Industrial Ecology jointly by Leiden University and Technical University Delft).

4.10.6 Pursuant to the regulation referred to in Section 7.11 (3) of the Act the student who is entitled to graduate may ask the board of examiners to postpone the event.

4.10.7 A supplement written in English complying with the agreed European standard format is attached to the degree certificate.

Article 4.11 The Degree

4.11.1 The degree of Master of Science is awarded to those who have passed the final examination of the programme.

4.11.2 The degree certificate states the degree awarded.

Article 4.12 Further Education

Persons awarded a master's degree are eligible to pursue a doctorate.

Chapter 5 Admission to the Programme

Section 5.1 Direct Admission

Article 5.1 Direct Admission

Requirements for direct admission to the master's programme are stipulated in the Appendix to these regulations.

Section 5.2 Conditional Admission

Article 5.2 Proof of Admission

5.2.1 The faculty board must grant proof of admission to students who meet the admission requirements laid down in Article 5.3, insofar as the maximum number of students to be enrolled will not be surpassed. The maximum number is set by the Executive Board.

5.2.2 Students may apply for proof of admission in accordance with the rules laid down in the Regulation for Admission to Master's Programmes [*Regeling toelating masteropleidingen*]⁷.

5.2.3 The proof of admission as referred to in 5.2.1 is valid until 31 August of the next entire academic year after the date of the admission decision being granted.

Article 5.3 Admission Requirements

Without prejudice to the provision in paragraph 5.2.1 regarding the capacity, those will be admitted to the programme who:

- possess the skills, understanding and knowledge that are required for earning (one of) the bachelor's degree(s) referred to in Article 5.1;
- have earned the degree of Bachelor at a university not being a university of professional education, or demonstrate to meet the requirements for such a degree;
- are sufficiently proficient in the language(s) of instruction, to be assessed by the board of admissions.

Article 5.4 Deficiencies

5.4.1 Students who have obtained a bachelor's degree or an equivalent degree, but who still have a deficiency of maximal 15 EC, may be admitted to the programme if it can be reasonably expected that they will meet the admission requirements within a limited amount of time.

5.4.2 Students with the deficiencies referred to in paragraph 5.4.1 may participate in the programme after admission, but will not be allowed to take examinations nor the tests named by the faculty board when granting admission to the programme.

5.4.3 For the admission referred to in paragraph 5.4.1, the board of admissions will compile a bridging programme with tests.

5.4.4 If a student is admitted to the programme under paragraph 5.4.1, tests that are taken in order to meet the admission requirements cannot be part of the curriculum of the master's programme.

7. The Regulation for Admission to Master's Programmes [*Regeling toelating masteropleidingen Universiteit Leiden*] was adopted by the Executive Board on 27 April 2005 and reviewed on 20 December 2005 and 6 March 2007; it can be found at www.reglementen.leidenuniv.nl

Article 5.5 Bridging Programmes

5.5.1 The department can compile an individual bridging programme in order to make up deficiencies in the prior education of the candidate.

5.5.2 If a student is admitted to the programme under paragraph 5.4.1, tests that are taken in order to meet the admission requirements cannot be part of the curriculum of the master's programme.

Chapter 6 Student Counselling and Study Advice

Article 6.1 Student Progress Report

6.1.1 The Graduate School Office of the Faculty keeps records of the results of individual students.

6.1.2 The Graduate School Office provides each student with a electronic copy of the results obtained at any time. An authorised copy of the results can be obtained – on request – at the Graduate School Office.

6.1.3 If the department concludes that a student is experiencing a significant delay in comparison to the nominal study progress, it shall inform the student of the support available for drawing up an individual study plan.

Article 6.2 Introduction and Student Counselling

The department takes care of the student's introduction to the programme and student counselling.

Article 6.3 Supervision of the Master's Thesis

6.3.1 The student draws up a graduation plan together with the supervisor referred to in paragraph 3.3.2. This plan is based on the study load laid down in the appendix referred to in paragraph 3.3.2.

6.3.2 The plan referred to in 6.3.1 includes details on the frequency of sessions with the thesis supervisor and the manner of supervision.

Article 6.4 Professional Sports and other cultural or social activities

6.4.1 Students who play sports at a professional level are offered the opportunity to adjust their study programmes to their sporting activities wherever possible. The department follows the guidelines drawn up by the Executive Board to determine who fits into this category.

6.4.2 Students who contribute to cultural or social activities which in the opinion of the faculty board are similar to the activities as referred to in 6.4.1, are offered the opportunity to adjust their study programmes to their activities wherever possible.

Article 6.5 Permanent Disabilities

Where possible, students with a disability or chronic illness are offered the opportunity to adjust their study programmes in accordance with the limitations resulting from their disability or illness.

Article 6.6 Residence abroad and traineeship

For students who experience a demonstrable delay in comparison to the normal study progress as a result of study residence abroad approved by the board of examiners or an approved traineeship, arrangements are made to minimize the delay.

Chapter 7 Transitional Provisions

Article 7.1 Provisions concerning Students Previously Enrolled in the Programme

7.1.1 For students who were newly enrolled in the programme no longer than three years prior to the date these Regulations came into force, Chapter 3 of the Course and Examination Regulations remains applicable as they were formulated at the time of first enrolment.

7.1.2 (not applicable)

7.1.3 In case components as referred to in paragraph 3.1.1 and Article 3.2 of the Course and Examination Regulations applicable pursuant to 7.1.1 are no longer on offer, the board of examiners will indicate components to replace them. If necessary, components may be indicated that are offered by another institution.

Chapter 8 Final Provisions

Article 8.1 Amendments

8.1.1 Amendments to these regulations are implemented by a separate order of the faculty board with the prior consent of the faculty council.

8.1.2 Amendments to these regulations which also apply to a particular academic year shall be implemented before the beginning of that year and published in the prescribed manner, unless earlier implementation of an amendment to the regulations is strictly necessary and in all reasonableness does not harm students' interests.

8.1.3 Furthermore, amendments to the regulations may not adversely affect any prior decision pertaining to students taken by the board of examiners on the basis of these regulations.

Article 8.2 Publication

The department takes care of the appropriate publication of these regulations, of the rules and guidelines set by the board of examiners, and of any amendment to these articles.

Article 8.3 Entry into Force

These regulations will enter into force on 1 September 2010.