

**Faculty of Science, Leiden University**  
**and**  
**Faculty of Applied Sciences, TU Delft**

**1 September 2011 to 31 August 2012**

**Course and Examination Regulations**  
**Master's Programme**

**Industrial Ecology**

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These Course and Examination Regulations have been drawn up in accordance with Section 7.13 of the Higher Education and Research Act. The faculty board will evaluate these Regulations on a regular basis, as laid down in Section 7.14 of said Act. Section 9.18 of said Act describes how the Regulations are to be implemented and the faculty board shall act in accordance therewith.

## **Section 1 – General provisions**

### **Article 1.1 – Applicability of the regulations**

These Regulations apply to the teaching and degree audits in relation to the Industrial Ecology Master's programme that is provided by the Faculty of Science at Leiden University and the Faculty of Applied Science at TU Delft, referred to hereinafter as 'the faculties'. The Faculty of Science at Leiden University is responsible for coordinating the joint programme.

### **Article 1.2 – Definitions**

The definitions used in these Regulations are the same as those used in the Higher Education and Research Act, insofar as said definitions appear in said Act.

In these Regulations, the following definitions shall apply:

- a. Board of Examiners: the board of examiners of a programme, appointed in accordance with Article 7.12a of the Act;
- b. the Act: the Higher Education and Research Act, and as amended since its introduction;
- c. the programme: the Master's programme as meant in Article 7.13a, paragraph 1 sub b of the Act;
- d. student: anyone who is enrolled at Leiden University and TU Delft for the purpose of studying and/or for taking examinations and degree audits for the Industrial Ecology interfaculty programme;
- e. components: a study unit or course in the programme, as meant in the Act;
- f. curriculum: the entirety of study units that make up the study programme for a degree audit;
- g. laboratory course: a practical exercise as meant in Article 7.13 of the Act, in one of the following forms:
  - making a Thesis Research Report;
  - giving a lecture or oral presentation;
  - writing a thesis;
  - performing an assignment, a test design or a programming assignment;
  - performing a research assignment;
  - conducting a literature study;
  - doing an internship;
  - taking part in field work or an excursion;
  - conducting tests and experiments;
  - taking part in any other educational activity that is aimed at attaining particular skills;
- h. examination or test: an examination or test of the knowledge, understanding and skills of the student in relation to a particular study unit, as well as the assessment of said examination or test by at least one examiner designated for the purpose by the Board of Examiners;
- i. degree audit: the Master's degree audit;

- j. examiner: the person designated by the Board of Examiners to administer examinations, in accordance with Article 7.12 of the Act;
- k. the Leiden University Register of Study Programmes: the register of programmes provided by the university, under the responsibility of the Executive Board;
- l. the TU Delft Register of Study Programmes: the register of programmes provided by the university, under the responsibility of the Executive Board;
- m. ECTS: credits in accordance with the European Credit Transfer System, where an ECTS credit is worth 28 hours' of study;
- n. appendices: the Board of Examiners' Implementation Regulations and Rules and Guidelines that go with the Course and Examination Regulations;
- o. prospectus: the prospectus for the programme mentioned in Article 1.1., containing specific information for the Master's programme, including the curriculum, as laid down by the Board of Examiners for students commencing the Master's programme in the academic year to which the prospectus applies;
- p. institutions: Leiden University and TU Delft;
- q. faculty board: the faculty boards of the Faculty of Science of Leiden University and the Faculty of Applied Sciences of TU Delft take joint decisions on the structuring of the programme, and for the purpose of the programme are considered as one faculty board;
- r. Implementation Regulations: Implementation Regulations of the Industrial Ecology Master's programme;
- s. Rules and Guidelines: Rules and Guidelines of the Board of Examiners;

## **Section 2 – Description of the programme**

### **Article 2.1 – Purpose of the programme**

To enable graduates to be able to operate independently in the professional field, and to make them eligible for admission to a PhD programme. The programme meets the requirements in terms of structure, achievement levels and other quality aspects as laid down in the Leiden University Register of Study Programmes and the TU Delft Register of Study Programmes. The Master's programme is intended to enable students:

1. to acquire scientific knowledge, understanding and methodological, technical and communication skills in the programme field;
2. to acquire an academic mindset, with a critical, scientific and creative way of thinking, awareness of ethical and social aspects in relation to their own research, and an understanding of the professional field and of the consequences of their own actions in that field;
3. to prepare for an academic career and further education, in particular a PhD programme;
4. to prepare for a career in society.

### **Article 2.2 – Final achievement levels.**

The Master of Science has:

1. such theoretical and practical skills in more than one of the areas of the industrial ecology interdisciplinary field that he or she is able to carry out scientific research under general supervision;
2. the ability to independently analyse scientific problems and relevant literature, to formulate verifiable hypotheses, to set up and conduct research and to critically reflect on his or her own work and that of others;
3. the ability to translate societal problems in relation to sustainability and the environment into how scientific issues are addressed in the field of industrial ecology;
4. the ability to generate and design solutions for said societal problems in the field of industrial ecology and to test and evaluate them in scientific research in order to gain an insight into their potential effects, both direct and indirect;
5. the ability to interlink and integrate the different disciplines that contribute to the field of industrial ecology;
6. the ability to clearly present, both orally and in writing, his or her own research results, the skill to communicate with others in the field, and to present his or her research results as a contribution to a conference or as part of a scientific publication;
7. sufficient understanding of the social role of industrial ecology in order to be able to reflect on it, thereby forming an ethically responsible attitude and corresponding approach in professional practice.

### **Article 2.3 – Type of programme**

This is a full-time programme.

### **Article 2.4 – Study load**

The study load of the programme is 120 ECTS.

**Article 2.5 – Start of the programme**

The programme starts twice a year, on 1 September and 1 February. Any student wishing to start the programme at any other time may only do so with the permission of the Board of Examiners.

**Article 2.6 – Language**

In accordance with the university code of conduct (foreign languages), the programme is given in the English language.

**Article 2.7 – Rules and Guidelines relating to the degree audit**

The requirements set by the Board of Examiners in relation to the degree audit are laid down in separate regulations, hereinafter referred to as the Rules and Guidelines of the Board of Examiners of the Industrial Ecology Master's programme.

**Article 2.8 - Quality**

The programme has been accredited by the Accreditation Organisation of the Netherlands and Flanders and meets the national and international quality requirements and quality standards laid down in relation to teaching in the Leiden University Register of Study Programmes and the TU Delft Register of Study Programmes.

## **Section 3 – Teaching**

### **Article 3.1 – Study programme**

The Master's study programme consists of compulsory and optional components. The study programmes for every specialisation/profile proposed by the Board of Examiners and confirmed by the faculty board are given in the Implementation Regulations.

### **Article 3.2 – Scope**

The scope of every component of the programme is stated in terms of its study load, consisting of at least one whole ECTS, or a multiple of one.

### **Article 3.3 – Level**

The level of every compulsory component of the programme is given in the Implementation Regulations; the method by which this is determined is the one used by the Leiden University Register of Study Programmes.

### **Article 3.4 – Optional components**

For the optional components as meant in Article 3.1, the following shall apply:

1. the choice of optional components must be approved by the Board of Examiners;
2. such approval should be given before the student begins the optional component in question.

The optional components shall be taken at the institution where the programme is given, or at another university in or outside the Netherlands.

### **Article 3.5 – Prior knowledge**

If participation in any component of the curriculum is allowed only in the event that the student has successfully completed certain other components, this is stated in the Implementation Regulations.

### **Article 3.6 – Participation in a study component**

If there is a limited number of places for any study component, priority shall be given to students in the order in which they enrolled for it, although students for whom participation in the component is compulsory in their programme shall be guaranteed a place. If attendance at any study component is compulsory, this is stated in the Implementation Regulations

### **Articles 3.7 – Laboratory courses**

Laboratory courses in the sense of Article 1.2, paragraph g of these regulations that form part of the programme curriculum are described in greater detail in the Implementation Regulations. Completing a laboratory course to a satisfactory level is the equivalent of passing an examination in the sense of Article 7.10 of the Act.

## **Section 4 – Testing**

### **Article 4.1 – Test moments**

Students shall be given at least two opportunities in every academic year to take examinations. As far as laboratory courses are concerned, this article shall apply only if such can reasonably be expected of the programme. If a student requires an extra opportunity, a request for an exception may be submitted to the Board of Examiners.

### **Article 4.2 – Compulsory sequence**

Examinations for some components (stated in the Implementation Regulations) may only be sat if certain other components have been successfully completed.

### **Article 4.3 – Testing**

1. The prospectus states whether examinations are to be written, oral or taken with the help of an aptitude test. Where this information is not given in the prospectus, students shall be notified of the type of examination for the component in question no later than the start of the said component.
2. In exceptional cases the Board of Examiners may give its permission, at a student's request, for an examination to be taken in a way other than that previously laid down.
3. Students with a functional disorder shall be given the opportunity, as much as possible, to take examinations in an amended form that takes account of their individual handicap. The Board of Examiners shall make a decision to this effect after acquainting itself with the expert advice of the central student counsellor or one of the institutions.
4. Students shall be assessed individually in the case of presentations, research, reports or other study activities that are performed as part of a group.

### **Article 4.4 – Oral examinations**

1. Oral examinations shall be held with one person at a time, unless the Board of Examiners has determined otherwise.
2. Oral examinations shall not be public, unless the Board of Examiners or examiner in question has decided otherwise (in special cases) or unless the student objects thereto.

### **Article 4.5 – Assessing examinations**

1. The result of a study component shall be expressed in terms of a figure, to the nearest half number, of between 1 and 10 inclusive. The result may not be expressed in terms of a number between 5 and 6.
2. The examiner shall make his or her assessment of an oral examination known immediately after the end of said examination and give the student a written statement of the result.
3. The examiner shall make his or her assessment of a written or other form of examination known within fifteen working days after the date on which said examination was taken, and shall provide the programme administration with the information needed for giving the student concerned the written confirmation of the assessment.

4. The examiner shall confirm his or her assessment of a laboratory course in the sense of Article 1.2, paragraph g of these regulations within twenty working days after the day on which the student took part in the final component or submitted a report of his or her work to the examiner.
5. Students shall be informed of their right of inspection, as meant in Article 4.8, and of the objections procedure in relation to the written or electronic announcement of the assessment of an examination.
6. A written confirmation of an assessment will be sent to students on request.

**Article 4.6 – Assessment of Master's Thesis Research Report**

Master's Thesis Research Projects are always assessed by a primary and secondary examiner, both of whom shall be connected to one of the institutions. The primary examiner shall be directly involved with the day-to-day supervision of the student, and the secondary examiner shall be from a different faculty to that of the first examiner and shall not be directly involved with the day-to-day supervision of the student. Master's Thesis Research Reports are generally public. Oral presentations of Master's Thesis Research Reports are also public, as a rule, and shall be conducted in accordance with the usual practices of the research group of the first examiner.

**Article 4.7 – Duration of validity**

The Board of Examiners may determine that a student must take an additional or new examination in the event that more than five years have elapsed since the original examination was taken.

**Article 4.8 – Right to inspection and follow-up interview**

1. Students are entitled to view their work that has been assessed for at least thirty days after the announcement of the result of the written examination in question. Copies of said work will also be made available at cost price on request.
2. During the period referred to in the first paragraph, the questions and assignments of the examination in question, as well as the norms on which they were assessed (if possible), are available to any interested party.
3. A follow-up interview may be arranged at the student's request; this option shall be made available at the time of the announcement of the examination results.
4. Follow-up interviews shall be held at a time and place determined on behalf of the Board of Examiners.
5. If the student concerned can demonstrate that he or she is or was unable to attend due to circumstances beyond his or her control, he or she shall be offered another opportunity.

**Article 4.9 – Exemptions**

The Board of Examiners may exempt a student at his or her request, and in consultation with the examiner concerned, from an examination, if the student:

1. has either completed a similar programme component, in terms of content and level;

2. or is able to demonstrate possession of sufficient knowledge and skills in relation to the component in question as a result of work or professional experience.

**Article 4.10** – Degree audit

1. The Board of Examiners shall confirm the result of the degree audit as soon as the student has submitted sufficient documentation in relation to the examinations he or she has passed and if the student possesses a Bachelor's degree as meant in Article 5.1 or has obtained an exemption therefrom based on the provisions of Article 5.2.
2. Before confirming the result of the degree audit, the Board of Examiners may instigate an investigation to determine whether the student has met the final achievement levels of the programme.

**Article 4.11** – Degree

1. Students who have successfully completed the degree audit shall be awarded a Master's degree.
2. Students who are enrolled and who have paid a fee to Leiden University for the Industrial Ecology programme shall receive a degree certificate from Leiden University.
3. In the case of Leiden University, a supplement making explicit reference to the partnership with TU Delft shall be added to the degree certificate, in accordance with the guidelines of the Leiden University Register of Study Programmes.
4. Those who have successfully completed the degree audit shall be granted the title 'Master of Science (MSc) in Industrial Ecology' by the programme.
5. The degree awarded shall be registered on the certificate.

## **Section 5 – Admission**

### **Article 5.1 – Admission requirements**

Possession of a Bachelor's degree is required for admission to the programme, as stated in the Implementation Regulations.

### **Article 5.2 – Admissions committee**

The faculty boards shall appoint a two-member admissions committee, one from each faculty. Every registration shall bear a recommendation from the programme admissions committee, which will be passed on to the relevant responsible body of the institution to which the registration applies, as stated in Article 5.3.

### **Article 5.3 – Admissions procedure**

The faculty board shall admit students to the programme who fulfil the requirements in Article 5.1 and for whom the admissions committee has issued a positive recommendation. The faculty board shall issue a document to the student stating whether or not he or she has been admitted to the programme.

1. The Board of Examiners may issue a conditional admissions document for the programme to any student who has completed a programme that is at least equivalent to the Bachelor's programme as meant in Article 5.1, but only if the admissions committee has issued a positive recommendation for the student in question.
2. The Board of Examiners shall lay down the programme admission requirements as stated in Article 5.1 and the relevant admissions procedure.
3. At the request of a student, and in consultation with the relevant examiner, the Board of Examiners may grant the student an exemption from components of the requirements given in paragraph 2 if the student:
  - has either completed a similar programme component, in terms of content and level;
  - or is able to demonstrate possession of sufficient knowledge and skills in relation to the component in question as a result of work or professional experience.
4. The admissions document as meant in the first paragraph is valid until the date stated on the document.

## **Section 6 – Supervision**

### **Article 6.1 – Study progress administration**

1. Students' study results are registered by the student administration of the programme, under the responsibility of the coordinating faculty.
2. The student administration shall provide students with an overview of the results they have achieved so far on request, at any time.
3. If, in the view of the programme department, any student has fallen significantly behind schedule in his or her studies, the department shall alert the student of the possibility of seeking support in drawing up a study schedule.

### **Article 6.2 – Supervision**

The department shall arrange the supervision of the students and their introduction to their supervisors.

**Article 6.3** – Supervision in the Master's Thesis Research Project.

Together with the Master's Thesis Research Project first examiner, students shall draw up a timetable for conducting research and writing their Master's Thesis Research Report. The timetable shall be based on the study load that has been laid down for this component in the Implementation Regulations. The timetable shall also include the frequency of the supervision and what form the supervision is to take.

**Article 6.4** – Top-level sport

Any student who takes part in top-level sports shall be given the opportunity as much as possible to adapt their studies to the requirements of their sporting activities. For the purpose of determining which students fall into this category, the programme uses the guidelines of the Executive Board of Leiden University.

**Article 6.5** – Other cultural or public activities

The programme schedule of any student who contributes towards cultural or public activities which, in the view of the faculty board are of similar value to the activities mentioned in Article 6.4, shall also be modified as much as possible to accommodate the requirements of said activities.

**Article 6.6** – Long-term functional disability

Any student with a handicap or chronic illness shall be given the opportunity as much as possible to adapt their studies in order to accommodate the limitations inherent to their condition. The Board of Examiners shall make a decision on this matter after acquainting itself with the expert advice of the central student counsellor of Leiden University.

**Article 6.7** – Spending time abroad; internships

Any student who decides to spend time abroad to study (for an internship, for example) must apply to the Board of Examiners for approval in advance. If he or she falls behind schedule in his or her studies while on an approved stay abroad as a result of circumstances beyond their control, the Board of Examiners shall draw up special arrangements.

## **Section 7 – Final provisions**

### **Article 7.1 – Amendments**

1. Amendments to these regulations shall be confirmed by both faculty boards, as mentioned in Article 1.1, following approval by both faculty councils meeting separately, in accordance with the provisions in Article 9.38 subsection b. of the Act.
2. Amendments to these regulations that apply to a particular academic year must be in place and be published in the set manner before the start of said academic year. Any deviations herefrom shall be permitted only if a rapid introduction of such an amendment is strictly necessary and provided the interests of the students cannot reasonably be said to be harmed.
3. No amendment may influence to the detriment of students any decision taken by the Board of Examiners within the meaning of these Regulations with regard to students.

### **Article 7.2 – Publication**

1. The programme department shall ensure due publication of these Regulations, their Implementation Regulations, and Rules and Guidelines that have been laid down by the faculty board, and of any amendments to these documents.
2. Copies of the documents referred to in the first paragraph are available from the Student Administration, and on the internet.

### **Article 7.3 – Entering into force**

These Regulations shall enter into force on 1 September 2011.