

Implementation Regulations, supplementing LS&T Teaching and Examination Regulations (Delft Master's degree programme) 2012-2013

**DRAFT**

**Faculty of Applied Sciences at Delft University of Technology**

**Implementation Regulations relating to  
the Teaching and Examination Regulations for the Master's degree programme**

**Life Science & Technology, Delft**

**2012-2013**

Implementation Regulations, supplementing LS&T Teaching and Examination Regulations (Delft Master's degree programme) 2012-2013

**Amendments to Implementation Regulations for the Master's degree programme in LS&T, 2009-2010**

<p><b>Section 1</b></p> <p><b>Article 3</b> has been changed into</p>	<p><b>Article 3</b> The levels and subjects for assessing previous education referred to in Article 2, paragraphs 3 and 4 are: a sufficient level in the following knowledge areas:</p> <ol style="list-style-type: none"> <li>1. Mathematics (differential equations, linear algebra)</li> <li>2. Chemistry (organic, inorganic, analytic, physical)</li> <li>3. 'Bio' (i.e. biochemistry, molecular genetics, microbiology)</li> <li>4. (Bio) chemical Technology (including transport phenomena).</li> </ol>
<p><b>Section 2</b></p> <p><b>New article 1:</b></p> <p><b>New article 5:</b></p> <p><b>New article 8:</b></p> <p><b>New article 9:</b></p> <p><b>New article 11:</b></p>	<p><b>Article 1</b> The study load for the Master's degree programme is 120 credits. None of the components of the programme have formed part of the Bachelor's degree programme.</p> <p><b>Article 5</b> If students participate in iGEM (LM3691 - 18 EC), they can apply for an exemption for the Design project (LM3822) 12 EC. The remaining 6 EC are extracurricular.</p> <p><b>Article 8 Double degree</b> Students who opt for a <b>double degree</b> programme should obtain permission of the Programme Director MSc-LS&amp;T and sub-Board of Examiners MSc-LST. Double degree programmes combining MSc-LST with other MSc programmes, are always subject to the restrictions imposed by the university and comprises at least 180 EC; a <b>double degree</b> programme has at least two identifiable final project reports for both degree programmes. Formal permission from the deans of the faculties is required.</p> <p><b>Article 9 Honours programme</b> Students who opt for an <b>honours programme</b>, should obtain permission of the Board of Examiners after approval of the Programme Director MSc-LS&amp;T. The honours programme is a challenging additional programme for students with higher than average performance (&gt;7.5 weighted average). The honours programme consists of 30 EC on top of the regular MSc programme of 120 EC: an individual part of 25 EC and a collective part of 5 EC (WM0355HT Critical Reflection on Technology, 5 EC). For the individual part the iGEM competition (LM3691, 18EC) or Unitech Programme can be considered. The honours programme should be finished according to schedule.</p> <p><b>Article 11 Deviations from the programme</b> Only in exceptional cases a deviation from the programme is possible. Such deviations need prior approval by the Board of Examiners; for this reason a student should send a legitimate request to the Board of Examiners after consultation with the profile coordinator.</p>

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**Section 1            General**

**Article 1            Division into semesters**

The course year is divided into two semesters. A semester is divided into two teaching periods (quarters).

**Article 2            Admission to the programme**

1. In order to gain admission to the Master's degree programme, the student must be in possession of one of the following certificates:
  - a. a Bachelor's degree certificate in Life Science & Technology or Molecular Sciences & Technology from the University of Leiden or Delft University of Technology
  - b. a Bachelor's degree certificate from another relevant, university programme in the Netherlands
  - c. a certificate in a relevant specialisation from a Dutch Institute of Higher Professional Education/University of Applied Sciences (HBO)
  - d. a certificate from a university programme outside the Netherlands comparable to that referred to in b.

The certificate referred to in paragraph 1(a) provides unconditional access to all graduation profiles in the LS&T Master's degree programme.

2. The certificate referred to in paragraph 1(b) provides conditional access to the Master's degree programme. The Bachelor's degree programme followed will be assessed by or on behalf of the Examination Board in order to compare its level to that of the LS&T Bachelor's degree programme, based on a number of subjects in the LS&T Bachelor's degree programme. With regard to the choice of profile, an assessment will also be made of the previous education followed in the relevant subject area, by comparing it with eligible subjects in the LS&T Bachelor's degree programme.
3. The certificate referred to in paragraph 1(c) provides conditional access to the Master's degree programme. The HBO programme followed will be assessed by or on behalf of the Examination Board in order to compare its level to that of the LS&T Bachelor's degree programme, based on a number of subjects in the LS&T Bachelor's degree programme. With regard to the choice of profile, an assessment will also be made of the previous education followed in the relevant subject area, by comparing it with eligible subjects in the LS&T Bachelor's degree programme.

In addition, the following requirements apply:

- The HBO certificate must be obtained within the nominal duration of the HBO programme,
- with a grade weighed average of 75% for all components of the HBO programme.
- Entrance exams in mathematics and English should be obtained before the start of the programme.

It is possible to invoke the hardship clause.

4. Any deficiencies will be identified by means of the programme and level comparison referred to in paragraphs 2 and 3. If the deficiencies involve 15 ECTS or less, admission may be granted on the understanding that the deficiencies must be rectified within the space provided by the awarding of exemption from the Business Internship (*Bedrijfsstage*) examination component (HBO students or students with long-term work experience). For all other students, these deficiencies must be rectified before the start of the degree programme.
5. The certificate referred to in paragraph 1 (d) will be assessed in a similar way (paragraph 3). In addition, a number of supplementary conditions apply for foreign students, as determined by the Faculty.

**Article 3            Assessment subjects**

1. The levels and subjects for assessing previous education referred to in Article 2, paragraphs 3 and 4 are: a sufficient level in the following knowledge areas:
  5. Mathematics (differential equations, linear algebra)
  6. Chemistry (organic, inorganic, analytic, physical)
  7. 'Bio' (i.e. biochemistry, molecular genetics, microbiology)
  8. (Bio) chemical technology (including transport phenomena).

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## **Section 2      The Master's study programme**

### **Article 1**

The study load for the Master's degree programme is 120 credits. None of the components of the programme have formed part of the Bachelor's degree programme.

### **Article 2      Compulsory study components (45 ECTS)**

The following components are compulsory for all LS&T Master's students

LM3561	Ethical, Legal and Social issues in Biotechnology	3 ECTS
LM3452	Bioprocess Integration	6 ECTS
LM3432	Analysis of Metabolic Networks	6 ECTS
LM3822	Design Project	12 ECTS
LM3801	Industrial Internship	18 ECTS

### **Article 3      Compulsory study components for the chosen profiles (63 ECTS)**

#### **Profile: Biochemical Engineering**

LM3741	Fermentation Technology & Environmental Biotechnology	6 ECTS
LM3751	Transport & Separation	6 ECTS
LM3761	Numerical Methods, Modeling & Simulation Techniques	6 ECTS
LM3901	Master thesis Research project	45 ECTS

#### **Profile: Biocatalysis**

LM3701	Advanced Enzymology	6 ECTS
LM3711	Proteomics 1	3 ECTS
LM3721	Proteomics 2	3 ECTS
LM3731	Biocatalysis	6 ECTS
LM3901	Master thesis Research project	45 ECTS

#### **Profile: Cell Factory**

LM3442	Metabolic Reprogramming	6 ECTS
LM3601	Molecular Biotechnology & Genomics	6 ECTS
LM3611	Microbial Community Engineering	6 ECTS
LM3901	Master thesis Research project	45 ECTS

### **Article 4      Electives (12 ECTS)**

The profile coordinator must approve the preferred electives. Courses chosen from the other LS&T profiles, are automatically approved as an elective.

### **Article 5**

If students participate in iGEM (LM3691 - 18 EC), they can apply for an exemption for the Design project (LM3822) 12 EC. The remaining 6 EC are extracurricular.

### **Article 6      Specialisations**

Students are allowed to substitute 30 EC of the above mentioned programme (12 EC electives + 18 EC internship) by the following *specialisations*

- Annotation in Entrepreneurship/Science Based Business
- Science Education & Science Communication
- Sustainability in Technology
- Study abroad

These *specialisations* must be approved by the profile coordinator.

**Article 7 Education/Communication track.**

Part of the above-mentioned Master's degree programme can also be followed within the Master's degree programme in Science Education & Communication (AS), in which 60 ECTS are devoted to MSc SEC subjects and 60 ECTS to MSc LS&T Delft subjects.

**Article 8 Double degree**

Students who opt for a **double degree** programme should obtain permission of the Programme Director MSc-LS&T and sub-Board of Examiners MSc-LST. Double degree programmes combining MSc-LST with other MSc programmes, are always subject to the restrictions imposed by the university and comprises at least 180 EC; a **double degree** programme has at least two identifiable final project reports for both degree programmes. Formal permission from the deans of the faculties is required.

**Article 9 Honours programme**

Students who opt for an **honours programme**, should obtain permission of the Board of Examiners after approval of the Programme Director MSc-LS&T. The honours programme is a challenging additional programme for students with higher than average performance (>7.5 weighted average). The honours programme consists of 30 EC on top of the regular MSc programme of 120 EC: an individual part of 25 EC and a collective part of 5 EC (WM0355HT Critical Reflection on Technology, 5 EC). For the individual part the iGEM competition (LM3691, 18EC) or Unitech Programme can be considered. The honours programme should be finished according to schedule.

**Article 10 Explanation of programme components.**

Every year, the prospectus includes a description of the various programme components, along with the criteria for assessing these components if assessment is different from that applied for interim examinations (reports, presentations, etc).

**Article 11 Deviations from the programme**

Only in exceptional cases a deviation from the programme is possible. Such deviations need prior approval by the Board of Examiners; for this reason a student should send a legitimate request to the Board of Examiners after consultation with the profile coordinator.

Delft, August 22, 2012



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