

TEACHING AND EXAMINATION REGULATIONS

MASTER'S DEGREE PROGRAMME AEROSPACE ENGINEERING

DELFT UNIVERSITY OF TECHNOLOGY

2013-2014

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Section 1 - General

Article 1 – Scope of applicability

1. These regulations apply to the teaching and the examinations related to the Master's degree programme in Aerospace Engineering, hereafter to be referred to as the programme.
2. The teaching and organisation of the programme is the responsibility of the Faculty of Aerospace Engineering at Delft University of Technology, hereafter to be referred to as the faculty.
3. The programme is governed by Implementation Regulations (this comprises the study programmes and course descriptions in the digital study guide) which constitute part of these Teaching and Examination Regulations.

Article 2 – Definitions of terms used

The terms used in these regulations should be interpreted as meaning the same as in the Higher Education and Scientific Research Act, insofar as they are defined in that Act.

The following terms are to be defined thus:

- a. the Act: the Higher Education and Scientific Research Act (in Dutch, the WHW), in the Dutch Bulletin of Acts, Orders and Decrees, number 593 and as amended since;
- b. the programme: the Master's degree programme as denoted in Article 7.3a subsection 1, paragraph b of the Act;
- c. student: anyone enrolled at Delft University of Technology as a student or extraneous student for the purpose of benefiting from education and/or for the purpose of sitting the examinations and undergoing the degree audit which form part of the programme;
- d. cohort: the group of students who have registered for a degree programme for the first time in a given academic year;
- e. teaching period: half a semester;
- f. subject: a teaching unit within the programme as intended in Article 7.3, subsection 2 and 3 of the Act;
- g. practical: a practical exercise as intended in Article 7.13, subsection 2, paragraph d of the Act, taking one of the following forms:
 - writing a thesis;
 - conducting a project or experimental design;
 - completing a design or research assignment;
 - conducting a literature review;
 - completing an internship;
 - participating in fieldwork or an excursion;
 - conducting tests and experiments;
 - participating in other educational activities aimed at enabling participants to attain certain skills.
- h. interim examination: an assessment of the knowledge, insight and skills of a student in relation to a component within a subject, as well as the marking of that assessment by at least one examiner, appointed for that purpose by the Board of Examiners;
- i. degree audit: an assessment by which the Board of Examiners, in accordance with Article 7.10 of the Act, establishes whether all interim examinations in the various subjects that constitute the programme have been successfully completed;

j. Board of Examiners:	the programme's Board of Examiners, which has been installed in accordance with Article 7.12 of the Act;
k. examiner:	the individual who, in line with Article 7.12, paragraph 3 of the Act, has been appointed to set the examinations;
l. Implementation Regulations:	the Implementation Regulations which form part of these Teaching and Examination Regulations; The implementation Regulations comprise the course descriptions and study programmes as laid down in the current study guide;
m. credit:	a credit awarded in line with the European Credit Transfer System (ECTS); one credit denotes a study load of 28 hours;
n. working day:	Monday to Friday with the exception of recognised national public holidays;
o. study guide:	a digital guide to the programme containing specific information pertaining to the various subjects;
p. university:	Delft University of Technology;
q. Blackboard:	the electronic system designed for the exchanging of teaching information;
r. disability:	all conditions which are (at least for the period in question) chronic or lasting in nature and which form a structural limitation for the student in receiving education and/or sitting examinations or taking part in practicals.

Article 3 – The programme objective

The programme aims to educate students to become a Master of Science in Aerospace Engineering, whereby the final attainment levels described in Article 4 must be achieved.

Article 4 – The programme's final attainment levels¹

1. The MSc graduate is familiar with existing scientific knowledge, and has the competence to increase and develop this through study.
2. The MSc graduate has the competence to acquire new scientific knowledge through research. For this purpose, research means: the development of new knowledge and new insights in a purposeful and methodical way.
3. The MSc graduate is familiar with the principles of design. Designing is a synthetic activity aimed at the realization of new or modified artefacts or systems with the intention of creating value in accordance with predefined requirements and desires (e.g. mobility, health).
4. The MSc graduate has a systematic approach characterized by the development and use of theories, models and coherent interpretations, has a critical attitude, and has insight into the nature of science and technology.
5. The MSc graduate is competent in reasoning, reflecting, and forming a judgment. These are skills which are learned or sharpened in the context of a discipline, and which are generically applicable from then on.
6. The MSc graduate has the competence of being able to work with and for others. This requires not only adequate interaction, a sense of responsibility, and leadership, but also good communication with colleagues and non-colleagues. He or she is also able to participate in a scientific or public debate.
7. Science and technology are not isolated, and always have a temporal and social context. Beliefs and methods have their origins; decisions have social consequences in time. A university graduate is aware of this, and has the competence to integrate these insights into his or her scientific work.

¹ For the detailed MSc Final Qualifications see the separate document 'MSc Final Qualifications TU Delft Aerospace Engineering', February 2006.

Article 5 – Admission to the programme (including the Double Degree programme with IST Lisbon)

- 1a. All students possessing a certificate proving that they have successfully completed their Bachelor of Science studies in Aerospace Engineering (TU Delft), Mechanical Engineering, Marine Technology, Electrical Engineering, Civil Engineering or Applied Physics of one of the three technical universities in the Netherlands or Applied Physics of the Rijksuniversiteit Groningen will be admitted to the programme.
- 1b. All students possessing a certificate proving that they have successfully completed the pre-master programme (schakelprogramma) in Aerospace Engineering will be admitted to the programme.
- 1c. Students who have a Bachelor of Engineering degree in Aeronautics from Hogeschool INHOLLAND or the Aviation Programme from Hogeschool Amsterdam and who have successfully finished the bridging programme in Aerospace Engineering as a minor will be admitted to the programme.
- 1d. Students who have a completed degree in Military Systems and Technology, specialisation Aviation Technology (Luchtvaarttechniek) or Weapons Systems (Wapensystemen) from the Netherlands Defence Academy (Nederlandse Defensie Academie) can be admitted to the programme.
2. Students who do not possess one of the degrees mentioned in paragraph 1 are required to obtain proof of admission to the programme from the Dean, who will seek the advice of the Board of Examiners on this matter.
3. In order to obtain proof of admission, the student must meet or, as the case may be, possess:
 - a. the general relevant criteria set by the Executive Board, laid down in Section 2 of the Student Charter (central part);
 - b. a certificate, together with the accompanying list of marks, proving that he/she possesses knowledge of a sufficiently high level and broad scope to successfully complete the programme within the allotted period.
4. Students possessing a relevant foreign BSc degree will only be admitted to the degree programme if they have a grade point average of at least 75% of the maximum grade point average, unless the BSc degree is of sufficient quality and at the required level.

Article 6 – Taking the programme on a full-time or part-time basis

This programme is taught only on a full-time basis.

Article 7 – Language

1. Classes are taught and examinations and degree audits take place in English.
2. Notwithstanding the provisions of paragraph 1, the Dean can give permission for classes, examinations and degree audits to be taught in Dutch if the particular nature of the subject, the organisation, the quality of the education or the origin of the students gives cause for this.
3. Should a student request permission to complete one or more parts of the examination or the degree audit in a language other than English, this will be subject to the stipulations of the Board of Examiners in this regard, as laid down in the Rules and Guidelines of the Board of Examiners.

Section 2 - Composition of the study programme and the degree audit

Article 8 – Composition of the study programme and the degree audit

1. The composition of the study programme and the relevant transitional regulations are laid down in the Implementation Regulations.
2. The Master's degree audit forms part of the programme. The programme has a total study load of 120 credits. When a student follows two Master's degree programmes at TU Delft at the same time, he must obtain at least 60 extra unique credits besides a complete Master's degree programme of 120 credits.
3. It is not permitted for any subject in the study programme to have been part of the Bachelor's degree programme on the basis of which the student was admitted to the programme. If a compulsory subject in the study programme was already completed in the aforementioned Bachelor's degree programme, the Board of examiners will designate an alternative subject in its place. If an elective subject in the study programme was already completed in the aforementioned Bachelor's degree programme the student will choose an alternative elective subject.

Article 8a – Honours Programme Master

1. Students who meet the criteria referred to in the Implementation Regulations will be invited to register for the TU Delft Honours Programme Master for outstanding Master's students.
2. Based on the criteria referred to in the Implementation Regulations, students will be selected and admitted to the Honours Programme Master by the director of studies or an Honours Class committee established by the director of studies.
3. The Honours Programme Master will comprise 30 credits:
 - a. At least 5 credits must be completed in the TU Delft-wide component of the Honours Programme Master, which consists of the following parts:
 - the subject "Critical Reflection on Technology" WM0355HT
 - playing an active role within the Honours Programme Master community
 - b. A maximum of 25 credits may be completed in the faculty component of the Honours Programme Master, the composition of which (including its content and options) is described in the Implementation Regulations.
4. Any student selected for participation in the Honours Programme Master must submit his or her options for the faculty component to the director of studies or the Honours committee for approval.
5. The board of examiners will be responsible for assessing whether all the requirements of the Honours Programme Master have been met.
6. Any student who has successfully completed the Honours Programme Master will be awarded a certificate signed by the chair of the board of examiners and the director of the Honours Programme Delft.

Section 3 – Interim Examinations

Article 9 – Number, times and frequency of interim examinations

1. There are two opportunities in each academic year for sitting examinations:
 - the first opportunity is at the end of the teaching period for the subject to which the exam in question relates,
 - the second opportunity is at the end of the next teaching period, or else during the resit period in August.

2. The frequency of interim examinations is laid down in the Implementation Regulations. A timetable of all the opportunities for sitting written interim examinations is drawn up on and distributed before the start of the semester.
3. If there is no indication as to the number of times a particular interim examination can be taken in any one academic year because it relates to a subject not taught by the Faculty of Aerospace Engineering, the relevant stipulations in the Teaching and Examination Regulations of the other programme will apply. The Board of Examiners reserves the right to make decisions that deviate from the norm regarding this matter.
4. Notwithstanding the provisions of paragraph 1, there will be at least one chance in a year to sit interim examinations relating to subjects not taught in a given academic year.
5. In exceptional cases, the Board of Examiners may permit a deviation from the standard number of times that certain interim examinations can be taken.

Article 10 – Sequence of interim examinations

1. The sequence in which students are required to sit interim examinations and participate in practicals is laid down in the Implementation Regulations.
2. In exceptional circumstances, the dean may permit a student to take part in one or more examinations and/or practicals, prior to passing the Bachelor's audit and/or, if applicable, prior to completing the transition programme. This permission is valid for a maximum of one year.

Article 11 – Validity of interim examinations

The result of an examination is valid for an unlimited period. However, in cases where the examination result dates from over four years ago, the Board of Examiners may impose an additional or substitute interim examination.

Article 12 – The form of interim examination and method of assessment

1. Interim examinations are set as described in the Implementation Regulations or the manual.
2. If there is no indication as to the way an interim examination is to be set because it relates to a subject not taught by the programme itself, the relevant stipulations in the Teaching and Examination Regulations or the manual of the other programme will apply.
3. The Board of Examiners may, if it so wishes, deviate from the provisions of paragraphs 1 and 2, in favour of the student.

Article 13 – Oral examinations

1. Only one student at a time will sit an oral examination, unless the examiner in question specifies otherwise.
2. Oral examinations will be held in public, unless determined otherwise by the Board of Examiners in a special case or unless the student has formally objected to the public nature of the examination.
3. Prior to an oral examination, the examiner must ask the student to provide proof of identity.

Article 14 – Determining and announcing the results

1. The examiner is required to determine the result of an oral examination as soon as it is finished and to supply the student with a written statement of the result.

2. In the case of written interim examinations, the examiner is required to determine the result as soon as possible after the interim examination but within 15 working days at most. The examiner forwards the necessary details to the student administration. Taking due account of the student's right to privacy, the student administration then ensures that the results are registered and published within 20 working days of the interim examination date. If the examiner is not able to meet these requirements due to exceptional circumstances, he or she must inform the Board of Examiners, stating the reasons for the delay. The student administration will then pass this information on to the students.
3. Regarding any interim examinations that are not taken orally or in writing, the Board of Examiners will determine beforehand precisely how and within what period of time the student will be notified of the results.
4. When receiving the result of an interim examination, the student will be made aware of his or her right to inspect the results as referred to in Article 15, as well as the opportunity to lodge an appeal with the Examination Appeals Board.
5. Registration of the results of interim examinations and practicals will only take place if the student has registered for the examination concerned in the Examination Registration System in time (please refer to art. 10 of the Rules and Guidelines).
6. Interim Examination results will be dated on the date on which the interim examination was conducted.
7. The examiner shall determine the result of a practical or project as soon as possible, but the results will be made public no later than at the last day of the period (including the interim examinations) following the period in which the practical took place. For practicals or projects in the fourth period the results will be made public no later than at the last day of the interim examination period in August.
8. Results for exercises or practicals will be dated on the day on which the final report is submitted or the oral final presentation is held, or, if there is no report or final presentation, the date on which the practical ends.
9. Examiners may set deadlines for delivery of reports, depending on the practical.
10. If a grade for a practical or project is a fail grade, the lecturer decides whether or not the report can be amended and a pass grade can be obtained. If so, the student and lecturer determine a reasonable term for adding to and correcting the paper. The length of this term will not exceed one teaching period.

Article 15 – The right to inspect the results

1. For a period of at least 20 working days after notification of the results of any written interim examination, the student has the right to inspect his or her marked work, on request. If a student intends to lodge an appeal regarding the marking of his or her work, he or she will be supplied with a copy of the marked work at cost price.
2. During the period referred to in paragraph 1, all interested individuals may acquaint themselves with the questions and assignments set in the interim examination, as well as with the criteria used for marking.
3. The Board of Examiners may determine that the right to inspection or perusal referred to in paragraphs 1 and 2 will take place at a location specified beforehand. If the student can prove that he/she is or was unable to be present at the location at the set time due to circumstances beyond his or her control, then

another opportunity will be provided, if possible within the period stated in paragraph 1. The location and times mentioned in the first sentence will be announced well in advance.

Article 16 – Discussing the examination results

1. As soon as possible after the results of an oral examination have been announced, an opportunity can be arranged for the examiner to discuss the results with the student, either at the student's request or at the instigation of the examiner. At this meeting, the reasons behind the marks awarded will be explained.
2. For a period of 20 working days after the results have been announced, students who have taken a written interim examination may submit a request to discuss the results with the relevant examiner. The discussion will take place within a reasonable time span and at a place and time determined by the examiner.
3. In cases where a collective discussion is organised by or on the instructions of the Board of Examiners, a student may only submit a request, as described in the preceding paragraph, if he/she was present at the collective discussion and if he/she provides a good reason for the request or if, due to circumstances beyond his/her control, he/she was unable to attend the collective discussion.
4. The provisions of paragraph 3 are similarly applicable if either the Board of Examiners or the examiner first gives the student the opportunity to compare his/her answers with model answers.
5. The Board of Examiners may permit departures from the provisions of paragraph 2 and 3.

Section 4 - Studying with a disability

Article 17 – Adaptations to help students with a disability

1. Students who have a physical or sensory disability are entitled to adaptations in teaching, interim examinations and practicals, on written request. These changes will be geared as much as possible to a student's individual needs, but they must not affect the quality or the degree of difficulty of a subject or an examination programme. The facilities provided to this end may involve adapting the form or duration of interim examinations and/or practicals to the student's individual situation or making practical aids available.
2. The request referred to in paragraph 1 should be accompanied by a recent medical certificate from a doctor or a psychologist. If there is evidence of dyslexia, the request should be accompanied by a document issued by a recognised dyslexia-testing bureau (i.e. registered with BIG, NIB, or NVO). If possible, this certificate should also estimate the extent to which the disability forms an obstacle to study progress.
3. Requests for the adaptation of teaching facilities will be decided upon by the Dean or by the director of studies acting on the Dean's behalf. The Board of Examiners will decide on requests for adaptations to interim examinations.
4. Adjustments to the assessment procedure, including examinations and other forms of assessment, may concern the following matters, among others:
 - the course material (making available course material that is more easily accessible, for example);
 - the form of assessment (e.g. replacing a written examination by an oral one, or vice versa, testing knowledge of the studied material by way of interim examinations, or granting an exemption from attendance);
 - time-related matters (such as granting more time during examinations, spreading out examinations over the examination period, granting exemptions from admission requirements, or extending the period within which a component must be completed);
 - the resources that candidates are allowed to use during examinations (such as an English-Dutch dictionary for candidates with dyslexia);
 - the location (taking examinations in a separate distraction-free room).

5. Adjustments to the educational facilities may concern the following matters, among others:
 - making modified furniture available in the classrooms and examination rooms;
 - making special equipment available (such as magnifying or Braille equipment for blind or partially sighted students, or audio induction loops and solo equipment for students who are deaf or hard of hearing);
 - making more easily accessible course material available;
 - making special computer facilities available (such as voice recognition or speech synthesis software);
 - making a separate distraction-free room available for a student to take an examination;
 - making a quiet room available.

Section 5 - Exemptions

Article 18 – Exemption from interim examinations or practicals

1. After having been advised by the relevant examiner, the Board of Examiners may decide to exempt students from an interim examination or practical on the grounds of:
 - a. an interim examination, degree audit or practical successfully completed within the Dutch higher education system or elsewhere which, as regards content and study load, corresponds with the subject for which exemption is sought, or;
 - b. knowledge and/or skills acquired outside the higher education system.
2. Students seeking to receive credit for extra-curricular student projects in the MSc programme who seek to receive an exemption based on participation in extra-curricular student projects can only submit their request prior to the start of the project. The request should clearly state how the learning objectives of the course for which the exemption is requested are met. No exemptions will be granted for requests submitted after the start of the extra-curricular student project.
3. No exemption will be granted for the MSc graduation project.

Section 6 - Degree audit

Article 19 – The times and frequency of the degree audit

At least two times a year there is an opportunity to undergo the Master's degree audit. The dates set by the Board of Examiners are published before the start of the academic year.

Section 7 - Study progress checks

Article 20 – Study progress checks

The student administration is responsible for ensuring that each student is able to see and check his/her own results via Osiris.

Section 8 - Contravention, changes and implementation

Article 21 – Contravening the regulations

If the manual and/or any other regulations relating to the study programme and/or the examination programme prove to contravene these Teaching and Examination Regulations and the accompanying

Implementation Regulations, precedence will be given to the provisions of these Teaching and Examination Regulations in combination with the Implementation Regulations.

Article 22 – Changes to the regulations

1. Any changes made to these regulations will be made by special resolution of the Dean.
2. No changes made will affect the current academic year unless it is reasonable to suppose that the interests of students will not be adversely affected.
3. None of the changes may, to the detriment of the student, influence any decisions concerning a student that are made by the Board of Examiners on the basis of these regulations.

Article 23 – Transitional regulations

1. If the composition of the study programme undergoes intrinsic changes or if these regulations are amended, the Dean will draw up transitional regulations that will be incorporated into the Implementation Regulations.
2. Such transitional regulations are required to include:
 - a. a provision concerning the exemptions that can be given on the basis of the interim examinations already passed;
 - b. a provision specifying the period of validity of the transitional regulations.
3. If a subject is removed from the study programme, three opportunities to sit an interim examination in this subject will be granted after the last classes have been taught: a regular interim examination following the class, a resit in the same academic year, and at least one resit in the subsequent academic year.
4. For one additional subsequent academic year, students who were registered as Pre-Master's students on 31 August 2012, will have the opportunity to undertake Master's subjects. After 1 September 2013, students must have passed the Bachelor's degree, on which his/her admission was based, and/or completed the transition programme that he/she had to complete in addition to the Master's degree course, prior to studying further on this degree programme.

Article 24 – Publication of the regulations

1. The Dean is responsible for finding a suitable way of publicising these regulations and the relevant Implementation Regulations, as well as any changes to the regulations.
2. The Teaching and Examination Regulations, together with the accompanying Implementation Regulations, will always be published on the programme's website.

Article 25 – Effective date

These regulations will go into effect on 1 September 2013.

Drawn up by the Dean of the Faculty on 31 August 2013.