

Teaching and Examination Regulations (OER)

(under Articles 7.13 and 7.59 of the Higher Education and Research Act)

The Dean of the Faculty of Behavioural, Management and Social sciences (BMS) and the Dean of the Faculty of Electrical Engineering, Mathematics and Computer Science (EEMCS),

in view of the Articles 9.5, 9.15, paragraph 1 under a, 7.13 paragraph 1 and 2, 9.38, under b, and 9.18 paragraph 1 under a, and 7.59 of the Higher Education and Research Act (WHW), and

in due consideration of the recommendations of the programme committees, as well as the approval by, or advice of, both Faculty Councils, pertaining to the programme-specific appendix of the programme in question¹,

hereby authorizes

the **Teaching and Examination Regulations 2014 / 2015**

of the **UT Master of Science (MSc) degree programme:**
Business Information Technology

¹ The right of recommendation pertains to Article 7.13, parts a through g, of the WHW. The right of consent refers to the other parts of Article 7.13.

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Preamble – Applicability

1. Each Master's programme has its own programme-specific appendix.
2. For each programme, the common elements and the programme-specific appendix together form the Teaching and Examination Regulations for the applicable Master's programme.
3. The common elements and the programme-specific appendix of the Teaching and Examination Regulations are authorized by the Dean.
4. The Teaching and Examination Regulations (OER) apply to all students registered with the applicable programme.
5. A programme's Examination Board sets down the Examination Board Regulations for the execution of its tasks and powers in accordance with art. 7.12b of the WHW. These regulations are laid down in the Rules & Regulations of the Examination Boards.
6. The jurisdiction of the Examination Board of a program extends to all units of study that are part of the programme that the student is registered with.
7. The stipulations in this general section of the Teaching and Examination Regulations, in the programme-specific appendix of the Teaching and Examination Regulations and in the rules and regulations of the programme's Examination Board also apply to units of study taught by lecturers from other programmes or institutions.
8. Please read all qualifications such as him, her, he and she as gender neutral.

Section 1 - General

Article 1 – Terms and definitions

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

Academic year:	The term that starts on 1 September and ends on 31 August the following year. The academic year is 60 ECs or 1680 hours
Act:	The Higher Education and Scientific Research Act (WHW), in the Dutch Bulletin of Acts, Orders and Decrees, number 593, and as amended since
Authorized proof of result	A list or other written document initialled by or on behalf of an Examiner, or a result published via the Student Information System (SIS)
BMS	Faculty of Behavioural, Management and Social sciences
BOZ:	The Educational Affairs Office
Blackboard:	The electronic learning environment of the University of Twente
Cohort:	Generation or group of students who started the same academic programme in the same year
Dean:	Head of the Faculty (Article 9.12, WHW)
Degree programme	The applicable curriculum of the programme as recorded in the programme-specific appendix
EB	Executive Board of the University of Twente
EC:	European Credit (EC), a credit point of 28 hours as described in the WHW and in accordance with the European Credits Transfer System: European agreements on a system for expressing student study load; the study load of an academic year is 60 European Credit points, or 1680 hours (see Article 7.4 of the WHW)
EEMCS:	The Faculty of Electrical Engineering, Mathematics and Computer Science
Exam:	An evaluation of the knowledge, insights and skills of the student, as well as the assessment of the results of that evaluation. An exam may consist of multiple components
Examination:	An examination is deemed successfully completed if the exams required for the units of study of a programme have been successfully taken
Examination Board:	The programme's Examination Board is appointed by the Dean in accordance with Article 7.12 of the WHW
Examination programme:	The specific combination of units of study that an individual student is to

	complete during the course of a programme, inclusive of any optional (elective) programme components, as recorded in the Student Information System (SIS).
Examiner:	The individual who has been appointed by the Examination Board to hold exams and determine the results thereof in accordance with Article 7.12c of the WHW
Institution:	University of Twente
MSc:	Master of Science; degree granted to a person successfully completing a Master's programme with an "of Science" attachment (WHW, Article 7.19a).
OER:	Onderwijs- en Examenregeling; this is the Dutch name of the Teaching and Examination Regulations (TER)
OLC:	The programme committee (Article 9.18, WHW)
OSIRIS:	The Student Information System (SIS) of the University of Twente
Programme:	The Master's programme as described in the programme-specific appendix to the Teaching and Examination Regulations. A programme is a cohesive set of units of study focused on the achievement of clearly described objectives in terms of knowledge, comprehension and skills that the person completing the programme must possess (Article 7.3, paragraph 2, WHW)
Programme committee:	Committee (with both teaching staff members and student members) that advises a programme director on the OER and all academic matters (Article 9.18, WHW, and article 13, faculty regulations)
Programme director:	Person appointed by the Dean to manage the degree programme
Programme management:	The body appointed by the Dean to manage the degree programme. This may be one person, who then will be referred to as programme director programme (Article 9.17, par. 1 WHW)
Practical exercise:	A practical exercise, as described in Article 7.13, paragraph 2d of the WHW is a unit of study or part of a unit of study, whereby the emphasis is placed on the student's activities, such as: <ol style="list-style-type: none"> 1. carrying out literature research, an assignment or a preliminary design, writing a thesis, article or 'position paper', or giving a presentation in public; 2. carrying out a design or research assignment, doing tests and experiments, participating in practical sessions, practicing skills; 3. following an internship, taking part in fieldwork or an excursion; 4. participating in other educational activities deemed as necessary and aimed at achieving the required skills
R&R:	The rules and regulations of the Examination Board (WHW, Article 7.12, paragraph 4)
Student:	Anyone registered with a programme in accordance with Article 7.34 and 7.37 of the WHW
Student Information System (SIS):	Application authorized by the Board of the university for registration and for providing information on all relevant data on the students and the university, as described in the WHW
Study adviser:	Person appointed by the Dean who acts as contact between the student and the university, and in this role represents the interests of the students, as well as fulfilling an advisory role
Student counsellor:	Person appointed by the Board of the University who acts as contact between the student and the university as described in Article 7.34, paragraph 1d of the WHW
Study rate:	Number of ECs achieved in a certain period divided by the number of ECs that can nominally be achieved in the period
Unit of study:	A unit of study in a programme as described in Article 7.3, paragraphs 2 and 3 of the WHW. Each unit of study is concluded with an exam. The units of study from which a programme is composed (also referred to as 'courses') are listed in the programme-specific appendix for that programme.
UT:	University of Twente
WHW:	The "Wet op het Hoger onderwijs en Wetenschappelijk onderzoek, in this

document also called the “Act” (see above)
Working day: Any days from Monday to Friday with the exception of official holidays and the pre-arranged ‘bridging days’ (brugdagen) on which the staff are free

Article 2 – Programme content

1 The items as described in Article 7.13, paragraph 2, a to e, j, l, s and t of the WHW are laid out in the specific appendix of each programme. They include:

- a. the content of the programme and its examination (WHW, Article 7.13, paragraph 2a)
- b. content of the specializations (WHW, Article 7.13 paragraph 2b)
- c. the qualifications as for the knowledge, insight and skills that a student must have acquired after having finished the programme (Article 7.13, paragraph 2c of the WHW)
- d. content of practical exercises (Article 7.13, paragraph 2d of the WHW)
- e. study load of the programme and of all study units that comprise the programme (article 7.13 paragraph 2e of the WHW)
- f. number and sequence of exams and practical exercises (Article 7.13, paragraph 2h of the WHW)
- g. programme format: full-time, part-time, sandwich, according to the CROHO registration (Central Register of Higher Education Study Programmes) (Article 7.13 paragraph 2i of the WHW)
- h. format of the exams: oral, written, individual, group etc. (Article 7.13, paragraph 2l of the WHW)
- i. required sequence of exams: whether or not passing certain exams is a condition for admission to participation in teaching activities or other exams; admission standards and participation requirements for practical exercises (Article 7.13 paragraph 2s, t of the WHW)

In addition the programme-specific appendix also includes descriptions of the following:

- j. requirements related to electives and students' individual choices
- k. transitional arrangements, as referred to in Article 24 of the OER
- l. language to be used for teaching and exams (Article 7.2 of the WHW)

Article 3 – Final attainment targets of the programme (WHW, Article 7.13 par. 2c)

The goals and final attainment targets (Article 7.13 paragraph 2 sub c of the WHW) are described in the specific programme appendices.

The final attainment targets of the Master's programme either fit the internationally recognised level descriptions of the so-called Dublin Descriptors, or are in accordance with the equivalent Criteria for Academic Bachelor and Master Programmes agreed upon by the 3TU.

The *Dublin Descriptors* are:

- | | |
|---|--------------------|
| a. Knowledge and insight | d. Communications |
| b. Application of knowledge and comprehension | e. Learning skills |
| c. Critical thinking | |

The *3TU Criteria for Academic Bachelor and Master Programmes* are:

- | | |
|--|--|
| 1. Expertise in one or more academic disciplines | 5. Basic intellectual skills |
| 2. Research competence | 6. Competence in cooperation and communication |
| 3. Design competence | 7. Awareness of temporal and social context |
| 4. A scientific approach | |

Article 4 - Admission to the programme

1. Admission requirements for the Master's programme are set out in the programme-specific appendices. Admission to a Master of Science degree programme is granted if one of the prior education requirements for admission to university education, in accordance with Articles 7.30 a, b and c of the WHW is met.
2. The rules for the furnishing of proof of admission (in accordance with Article 7.30 a of the WHW) are set out by the Dean in Article 21 of the Faculty Regulations (see WHW, Article 9.15, paragraph 1h).

Article 4a - Language

1. Master's programmes at BMS and EEMCS are taught and examined in English (including papers and other assignments written by students), in accordance with the Code of Conduct Languages of Instruction of the University of Twente.
2. The final thesis is written and defended in English. Students are free to make a translation or summary in Dutch once this is necessary for the dissemination of the research results, but the final grade will be based on the original version in English.
- 2a In case writing the final thesis in English is infeasible or impracticable considering the research subject or the organization under research, the examination board may allow for a deviation of this rule. Permission to write the thesis in Dutch will only be granted on the condition that the student also writes a short version of the report in English of 4500-5500 words, based on the thesis and the thesis work. To establish the final grade, both the thesis and the short version in English will be subject to assessment.
3. In specific cases related to the nature of the programme, the examination board may decide that a complete programme or track can be taught and examined in Dutch.
4. Programme-specific additions to this article, as well as the way the programme guarantees that the conditions as stated in article 3 of the Code of Conduct Languages of Instruction will be satisfied, are described in the programme-specific appendix.

Section 2 – Student guidance

(Article 5 – this article has been abolished)

Article 6 – Student guidance (Article 7.13 paragraph 2u of the WHW)

1. The Dean is responsible for student guidance, among others to inform the student of study opportunities within and without the programme. The Dean has given a mandate to the Programme Director of the programme to execute the tasks of student guidance.
2. Each student is appointed a study adviser.
3. The study adviser supervises the student and offers advice on study-related matters, as well as personal problems if the student so desires.
4. (not applicable)
5. (not applicable)
6. If a student wishes to make use of his/her right to specific guidance or facilities, they must contact the study adviser. The study adviser records the agreements with the student, from which agreements rights may be derived.

The following applies to special facilities:

- a. Students who fall behind in their studies through demonstrable circumstances beyond their control or personal circumstances have the right to special agreements on guidance.
- b. The right to the aforementioned agreements concerns the right to additional individual student guidance. This includes dispensation from participation in programme components and/or the use of special facilities, if necessary and possible. Such dispensation and special facilities can only be granted by the Examination Board.

Article 7 - Studying with a disability (Article 7.13, paragraph m of the WHW)

1. A disability is a protracted physical, sensory or other functional disorder that might limit the student's academic progress.
2. The extra facilities considered most effective for the student in question are discussed in an interview with the study adviser. The extra facilities are intended to safeguard the student's achievement of the final attainment targets.
3. On the basis of the interview described in paragraph 2, the student submits a written application for the facilities in consultation with the study adviser.
4. The application is submitted to the Dean of the faculty, preferably three months before the student is to participate in classes, exams and practical exercises for which the facilities are required.
5. The application is supported by documents that can reasonably be requested in support of the application (such as a doctor's or psychologist's letter or, in case of dyslexia for example, a report by a testing bureau registered with BIF, NIB or NVO).
6. The Dean of the faculty makes a decision, within 20 working days of receipt of the application, or as earlier as the urgency of the application necessitates it, on the validity of the application as described in paragraph 3, and informs the student and the study adviser of his/her informed decision.
7. The study Adviser ensures that the relevant parties are notified in due time of the facilities granted to the student with a disability.
8. Should the Dean of the faculty turn down the application in full or in part, the Dean will inform the student of the justification for this rejection and the possibilities for making an objection and an appeal. An objection must be submitted in writing to the Student Services' [Complaints Desk](#) within six weeks of notice of the decision.
9. Should extra facilities be granted, it will be stated for what period this grant will apply. The applicant and the study adviser will evaluate the facilities before the end of this period. During this evaluation parties will discuss the effectiveness of the facilities provided and whether they should be continued.
10. The dean has charged the processing of the applications in paragraphs 2 to 8 to the programme director.

Section 3 - Exams

Article 8 – Frequency, periods, registration and withdrawing registration (Article 7.13, paragraph 2j of the WHW)

1. There will be an opportunity at least twice a year to sit written or oral exams. Practical exercises can be completed at least once per year.
- 1a Study units offered more than once per academic year may offer more than two exam opportunities per year. In these cases, too, the student is authorized to sit a maximum of two exam sessions.
2. There is in any case at least one opportunity to sit an exam at the end of the period in which the applicable unit of study had been taught.
3. (cancelled)
4. (not applicable)
5. In contradiction with that determined in paragraph 1 of this article, an opportunity to take an exam for a unit of study that is part of the degree programme, but which was not taught during that particular academic year, shall be offered at least once per academic year.
6. Exceptionally the Examination Board can deviate from the number of times and the manner in which exams can be taken.
- 6a. In individual cases, the Examination Board will always consult a study adviser on this decision.
7. At least one month before the start of the semester the exam timetable for that semester is published with the dates and times of the exams. The exam timetable is recorded in the SIS (Osiris) and can a.o. be consulted through the [Student Portal](#), under 'UT – course test schedule'.
8. An exam can only be moved to another time slot than indicated in the exam timetable with the permission of the Programme Director. Students will be informed of the change. The Programme

Director must inform the Examination Board at the first meeting of the Board taking place after his decision to move the exam.

9. The student is required to register for written exams via the SIS. The exam timetable provides information about the registration opening and closing dates for written exams and tests.
10. Should the student fail to register before the close of registration, he will lose the right to take that particular exam.
11. The student can deregister for an exam no later than the day prior to the exam in question².
12. Should a student fail to appear for an exam for which he registered via the SIS, and for which he failed to deregister on time, in accordance with par. 11, this is recorded in the SIS as equal to a 'fail'.

Article 8a – Types of exams and information about the exams

1. A unit of study is completed with an exam. An exam can comprise one of the following types:
 - a written test
 - an oral test
 - a series of tests
 - the assessment of practical exercises as meant in Article 1 (Glossary)
 - a combination of the above.
2. No later than two weeks before the start of the teaching period of a unit of study the responsible examiner will publish the following details about the exam:
 - the exam requirements (in any case which course material is to be tested)
 - further information concerning the method of examination
 - in case of a series of tests or a combination of exam types as referred to in par. 1, the weight to be attributed to each of the constituent elements in determining the exam's final result.
3. The information referred to in par. 2 is in any case published in the electronic learning environment (the Blackboard site) of the unit of study in question.
4. The student has the right to view model exam questions or practice exams or representative past exams including the corresponding model answers and assessment standard.

Article 8b – Master's project

1. The Master's project (or thesis) constitutes a special form of practical exercise as meant in art. 1 (Glossary). Its duration is formally limited by the number of ECs reserved for the project in the respective Master's programme, translated into a corresponding number of weeks (1 EC= 28 hours). At the end of the period thus established, the project is evaluated using a special Master's thesis evaluation form. The project is concluded by a colloquium, where the student presents and defends the results.
2. At the start of the project the student draws up a time schedule for his individual project, based on the maximum duration as indicated in par. 1. This schedule has to be approved by the primary supervisor (and examiner) of the project. The start of the project is indicated on the registration form of the project in the university's Student Mobility System (SMS).
3. In case of major problems or unsatisfactory performance by the student or the supervisors during the project, the programme director will decide on the continuation of the project. The student can contest the programme director's decision by lodging an objection with the Examination Board.
4. Should the student, in spite of a demonstrably adequate level and quality of the supervision received, not succeed in completing the final thesis within the agreed period of time, he will be granted extra time to do so. The extra time to be granted will be bound by a limit of 50% of the maximum duration of the project as indicated in par.1. The project's supervisors will give clear indications of the elements of the student's work that need to be remediated and the lines along which this may be done.
5. The programme director will terminate the Master's project if, after the extra time conceded, the student has not yet successfully completed the final thesis or no 'green light' has been given by the supervisors for the colloquium that rounds off the project.

² i.e., until midnight (24:00) of the day before the day of the exam

6. After termination of the project as meant in par. 5, the student must file a motivated request to the Examination Board if he wants to start a new Master's project.

Article 9 - Oral exams (Article 7.13 paragraph 2n of the WHW)

1. Oral exams are taken in public, unless the Examination Board decides otherwise due to extraordinary circumstances.
2. A student or examiner who wishes third parties to be present during an oral exam, must inform the Examination Board at least 10 working days prior to this exam.
- 2a. Master's colloquia are exempted from this rule.
3. If the Examination Board has determined that members of the Examination Board or an observer representing the Examination Board is to be present during an oral exam, the examiner and the student will be informed by the Examination Board at least one working day prior to the exam.

Article 10 - Validity of exams (Article 7.13 paragraph 2k of the WHW)

1. A successfully completed unit of study is valid for a term of 4 years.
2. The student can submit a request to the Examination Board to have the validity of a result as meant in paragraph 1 extended.
3. If an exam is composed of a series or combination of tests or formats, the validity of test results of the individual components does not exceed the academic year in which they are achieved. The examiner of the unit of study may determine an alternative arrangement. In this case the examiner will inform the Examination Board. The alternative arrangement must be made known via the electronic learning environment (the Blackboard site) of the unit of study in question.

Article 11 – Confirmation and publication of the results (Article 7.13 paragraph 2o of the WHW)

1. The result of a written exam or practical exercise is published via the SIS within 20 working days. The publication will be done by BOZ (Office of Educational Affairs).
 - 1a The examiner will determine the result of a written exam within 15 working days after the exam and notify BOZ of the result.
 - 1b No rights can be derived from exam results that have been published via Blackboard or any other medium not being the SIS.
2. The result of an oral exam is made known to the student within one working day in the form of an authorized proof of result provided by the examiner.
3. The provisions of paragraph 2 do not apply if the oral exam is part of a series of oral exams of the same study unit, which take place on more than one day. In that case, the examiner determines the result within one working day after conclusion of the series of oral exams.
4. If the result for a unit of study is based on the completion of one or more assignments, or on writing a paper or thesis, then the date of submission of the final assignment, paper or thesis will count as the exam date.
5. Should the examiner not be able to meet the term as described in paragraphs 1 and 2 due to extraordinary circumstances, he/she reports this with reasons to the Examination Board. The student is informed of the delay as soon as possible by the Examination Board, whereby the new term within which the result will be made known is also communicated. If the Examination Board is of the opinion that the examiner has not met his/her obligations, it may appoint another examiner to ascertain the result of the exam.
6. If a second exam is planned shortly after the first, the results of the first exam will be published at least ten working days prior to the second exam.
7. The student can request a certified study progress overview from the Student Services desk in the Vrijhof if required.
8. If a student receives more than one authorized result for one and the same unit of study, the highest result will apply.

Article 12 - Right of inspection and justification (Article 7.13 paragraph 2p of the WHW)

1. The student has the right to hear a justification of the results of an exam from the examiner at a post-hoc discussion. If no collective discussion is held, the student may submit a request for an individual discussion to the examiner within 10 working days of publication of the exam results. This discussion, or a collective discussion, must be held within five weeks of publication of the exam results, by the examiner or a substitute mandated by him.
2. The examiner responsible for the assessment of a student's written exam is also responsible for ensuring that this work is kept on file in the administration of the relevant chair or department for two years following publication of the results. The student has the right of inspection of his work during this term.
3. The Examination Board may permit deviations from the provisions of paragraphs 1 and 2.

Article 13 – Administrative errors

If, following the publication of an exam result, a marks sheet, or an overview of a student's progress, an alleged error is discovered, the discoverer, be it the university or the student, is required to make this known to the other party immediately upon finding the error and to cooperate with rectification of the error.

Article 14 – Exemption from an exam or practical exercise (Article 7.13 paragraph 2 r+t of the WHW)

1. The Examination Board can, at a student's request, grant that student exemption from an exam or practical exercise. If applicable, the examiner in question may be consulted first.
2. The grounds under which the Examination Board can grant exemption from a specific exam pertain solely to the level, content and quality of exams or tests previously taken by the student, or knowledge, insight and skills acquired by the student outside of the sphere of university education.
3. Students may also be exempted from assignments or practical exercises by the Examination Board if they can demonstrate that a specific assignment or practical exercise, or the execution of such assignment or exercise, will likely place them before a moral dilemma. In such a case the Examination Board decides whether the practical exercise or assignment can be carried out in another manner, to be determined by the Board.
4. The rules enforced by the Examination Board for granting exemptions are set out in article 12 of the R&R (part C, students' charter).

Section 4 - Examinations

Article 15 - Flexible programme (Article 7.3 d of the WHW)

The Examination Board of the programme decides on requests for permission to take a flexible programme as described in article 7.3d of the WHW. The Examination Board assesses whether a flexible programme is appropriate and consistent within the domain of the programme and whether the level is high enough in light of the final attainment targets of the programme (see also article 13 of the R&R).

Article 16 – Programme examinations (Articles 7.10 and 7.13 paragraph 2a of the WHW)

1. The programme has a Master's examination.
2. The last unit for this Master programme is the Master's project (or 'Master's assignment' or 'Master's thesis'). A colloquium is part of the final exam.
3. The result of the evaluation of the last study unit, the Master's project, will not be confirmed until all other units contributing to the master examination have been passed successfully.

Article 17 – Periods, frequency of examinations and issuing of certificates and statements (Article 7.13 paragraph 2j of the WHW)

1. In accordance with Article 7.10 paragraph 2 of the WHW, the Master's examination is deemed successfully completed if the exams in the Master's phase have been taken successfully.
2. The Examination Board declares the student to have successfully completed the Master's examination if he meets the examination requirements, and invites the student to accept the relevant certificate and marks sheet or supplement. The date recorded on the certificate - the examination date - is the date on which the student successfully completed the last remaining unit of study.
3. The student may submit a motivated request in writing to the Examination Board to postpone declaring the examination as 'successfully completed' and also to postpone the presentation of the certificate. The student must indicate the length of postponement he desires in this request.
4. The Examination Board will include the details of the stipulation in paragraph 3 in the Rules and Regulations of the Examination Boards.
5. If the student has requested postponement on the basis of paragraph 3, the examination date will be the date following postponement on which the Examination Board has decided to declare the student to have successfully completed the examination.
6. A student who has successfully completed more than one exam and to whom a certificate as referred to in paragraph 2 cannot be issued may, upon request, be given a statement to be issued by the Examination Board in which, at a minimum, the successfully completed exams are listed.

Article 18 – Degree (Article 7.19 of the WHW)

Participants who have successfully met all requirements of this Master programme are awarded a Master of Science (MSc) degree.

Section 5 - Appeal and objections

Article 19 - Individual appeals and objections (Article 7.61 of the WHW)

An appeal against a decision made by the Examination Board or an examiner, and objections to decisions made by the Dean on the basis of these regulations, must be submitted in writing to the Student Services' [Complaints Desk](#), within six weeks of notice of the decision .

Section 6 - Conflicts, amendments and implementation

Article 20 - Conflict with the regulations

If other additional regulations and/or provisions pertaining to teaching and/or examinations conflict with these Teaching and Examination Regulations, the present Teaching and Examination Regulations take precedence.

Article 21 - Amendments to the regulations

1. Amendments to these Teaching and Examination Regulations are determined, in principle, by the Dean in a separate decree.

2. In principle, amendments to these regulations do not apply to the current academic year. Amendments to these regulations may apply to the current academic year if the interests of the students' are not prejudiced within reasonable bounds, or in situations of force majeure.
3. Amendments to these regulations have no effect on earlier decisions of the Examination Board.

Article 22 - Transitional arrangements

1. In case of amendment of the Teaching and Examination Regulations, the Dean may decide on a transitional arrangement with a predetermined term of validity.
2. The transitional arrangement will be published on the applicable programme's website.
3. Points of departure for a transitional arrangement if a degree programme is changed:
 - a) changes to a study programme are published before the start of the academic year in which they are to apply
 - b) no guarantee can be given that all the units of study of a programme, as these were defined upon a student's registration with the programme, will actually be taught in the degree programme. The degree programme as most recently authorized by the Dean is taken as the basis for establishing the results of the Master's examination.
4. The transitional arrangements shall at all events include:
 - a. which lapsed units of study are equivalent to which units of study, or part thereof, in the changed degree programme as recorded in the programme-specific appendix;
 - b. that if a unit of study that does not involve a practical exercise is deleted from a programme, then students are to be given at least two opportunities in the following academic year to take the relevant exam, either orally or in writing, or to undergo another form of assessment;
 - c. that if a unit of study that involves practical exercises is deleted from a programme, and during that academic year no opportunities are offered to carry out these practical exercises, at least one unit of study is designated to replace the lapsed unit of study;
 - d. the term of validity of the transitional arrangements.
5. The stipulations in paragraph 4 of a transitional arrangement must be approved by the Examination Board
6. In exceptional cases, and if this is to the student's advantage, the Examination Board may allow a deviation from the number of times and the way in which exams for a lapsed unit of study may be taken.

Article 22a - Review of the Teaching and Examination Regulations

1. The Dean is responsible for the regular review of the Teaching and Examination Regulations and takes into account the resultant study load for the students to enable this to be monitored and adjusted if necessary.
2. In accordance with article 9.18 of the WHW, the Programme Committee is responsible for issuing an advice on the Teaching and Examination Regulations as well as the annual assessment of the manner in which the Teaching and Examination Regulations are executed.

Article 23 - Publication

The Teaching and Examination Regulations (OER) and the rules and regulations of the Examination Boards are published via the website of the programme in question.

Article 25 – Date of commencement

The date of commencement of these regulations is 1 September 2014

B: Programme-specific appendix to the OER 2014-2015

For the Master of Science programme of

Business Information Technology (MBI)

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1. Objectives

1a. Profile of the programme

1. The primary goal of the Masters programme is to provide graduates with a combination of academic and professional skills and specialized technical knowledge that will enable them to analyse, design, validate and implement advanced ICT systems in their usage context. The students are trained to participate in and contribute to research in the field and international developments in and related to the field in scientifically, ethically and socially sound ways.

The Masters programme offers a stimulating and challenging research-oriented environment in which the following secondary goals are achieved:

- Students acquire comprehensive knowledge and insight and develop their professional and academic skills based on initiative and personal responsibility for the learning process.
- Students develop an investigative and reflective attitude.
- Students acquire an understanding of and gain experience in methods and techniques to be able to model and describe systems and their properties.
- Students acquire knowledge of, insight into and experience with requirements identification, design, validation and implementation of ICT systems. They learn to use this knowledge, insight and experience in their search for meaningful and promising alternatives and for making well-considered choices.
- Students acquire knowledge of, insight into and experience with requirements identification, design, validation and implementation of business networks. They learn to use this knowledge, insight and experience in their search for meaningful and promising alternatives and for making well-considered choices.
- Students develop an attitude that promotes constructive criticism whereby choices are substantiated and discussed.
- Students work in a team and contribute to the application and/or development of theory, methods, technologies and tools for the development of ICT systems taking into account their usage context.
- Students gain experience to function in complex dynamic situations in which the relevant information is not always immediately and fully available.

To further activate their education (with cases, research assignments and discussion of the research, developments and literature in the field), students are encouraged to follow developments in the field and can directly and independently coordinate their personal progress towards these developments. The goal of the Masters programme is to enable the graduates with the aptitude and proven talent for academic research to continue their education with doctoral research.

2. The Masters programme in Business Information Technology has a particular emphasis on innovative developments and the integration and optimisation of business processes and ICT. The programme focuses on acquiring comprehensive knowledge and insight, as well as gaining experience in the integrated development of organisations and their business processes and ICT systems, and related theories and concepts. Methods and technologies, as well as the analysis, evaluation and modelling of both functional and qualitative properties, are important aspects of the programme. Based on solid knowledge and an understanding of the life cycle of ICT systems in their business context, the Master students develop the skills and insight required to manage innovative development processes in an architectural framework and in an environment of internationally-oriented business networks. Insight into current research in this area is promoted in a number of different ways. Students of the Masters programme develop a constructive critical and reflective attitude by analysing research and design activities, both their own and of others.

1b. Final attainment targets of the programme

The Master of Science programme on Business Information Technology prepares students to occupy a leading position in the field of Information Systems (IS). Knowledge in the field of management and IT is the very core of their preparation. Students are capable of integrating and applying this knowledge in the broad context of organisational practice. Also, the MSc specialists in Information Systems have at their disposal well-developed skills in communication, interpersonal relations and group work. Finally, the Master graduates have at their disposition the special skills needed for a successful career future, for example, knowledge of IT and organizations, a critical attitude and a disposition towards lifelong learning and innovation.

Table 1 shows the final attainment targets of the programme. The third column shows the relation of each to the secondary goals, which are mentioned above.

Table 1: Final attainment targets of the MBI programme

<i>Nr</i>	<i>Final attainment target</i>	<i>Match with sec. goals</i>	<i>Match with Dublin Descr.</i>
1	The graduate has comprehensive knowledge of and insight into the field as specified in the programme-specific final attainment targets, which are described under 1a, 1b, etc. below.	a	1
1a	The graduate is capable of making connections between areas such as business strategy and business processes on the one hand and the architecture of ICT systems and IT infrastructure on the other, based on comprehensive knowledge and understanding of the life cycle of ICT systems in an organisational context. The graduate is also able to utilise and further these connections.	d	2, 3
1b	The graduate is capable of understanding and developing the business strategy, business information system strategy and the operationalisation in an architectural framework. He/she understands their short and long-term impact, and their impact on both the effectiveness and the efficiency of technology and the changes in business processes.	g,h	3
1c	The graduate is capable of contributing to the integrated development of business processes and business information systems, and assessing, conducting and managing the process underlying this development, including aspects such as requirements analysis, resource management & planning, architectural design, implementation and administration.	g,h	3
1d	The graduate has a sound knowledge of, an insight into and experience with the process and available methods and technologies to be able to plan, manage and carry out system development and change processes for business information systems and business processes.	c	2
1e	The graduate is capable of applying methods and technologies for integrated development of business processes and business information systems, by making a reasoned selection, by communicating the principles and by contributing to the further development.	c,d,e,	2
1f	The graduate has knowledge and understanding of a range of aspects of business information systems, such as user-friendliness, adaptability, security and administration, and the graduate is able to apply this knowledge.	d,h	1, 2
1g	The graduate has knowledge of and insight into developments within the field and the concept of innovation, as well as the interaction between technological innovations and innovations in business processes and business organization.	i	1
1h	The graduate has knowledge and understanding of the opportunities	d,h	1

	and threats to cooperation and relations management transgressing the organizational boundaries, as well as the role of information systems herein.		
1i	The graduate is capable of overseeing and optimising the impact of developments within the field and their effect on multiple parties, such as in business networks.	c, e, h	1, 2, 3
1j	The graduate has specialized knowledge in a sub-area of the field of business information technology. He/she has gained experience in academic research, and is able to contribute to the body of research in the field and apply the results in an organisational context.	a, b, d, i	1, 4
2	The graduate is capable of making a contribution to scientific research and is able to independently design and perform a research project of limited scope and present the results	b, g	2
3	The graduate is capable of making an original contribution to the development and/or application of the field.	g	3
4	The graduate is capable of analysing complex problems and change issues in the field, and knows how to acquire the knowledge and information required for this analysis.	i	1, 2, 3
5	The graduate is capable of designing, validating and implementing solutions/systems for their use in the environment, and is able to select and utilise advanced disciplinary knowledge, methods and techniques when doing so.	c,d	2
6	The graduate is capable of evaluating the features and problem-solving potential of solutions/systems and implementations, even when confronted with a new and/or unfamiliar situation and with incomplete information or uncertain properties. Graduates can also make and defend choices based on these evaluations.	d, f	1, 2, 3, 4
7	The graduate has insight into ethical, social, cultural and societal aspects of problems and solutions in the field and can use these insights in their functioning as an academic at the international level.	b, f	3
8	The graduate is capable of working in a team, and can occupy a leadership position in that team. He knows how to manage and plan a development process and is capable of documenting a development or research process.	g	4
9	The graduate is capable of justifying and presenting (both orally and in writing) research results, designs and implementations, and can analyse and debate on the presented justification.	b,f	4
10	The graduate is capable of independently assimilating new knowledge and skills and on reflection can organize and coordinate his/her personal development towards developments in the field.	a,b	5
11	The graduate is capable of involving other disciplines in his work where necessary.	e	3
12	The graduate is capable of critically reading, using and debating on international academic literature in the field.	i	4

The word 'original' in final attainment level #3 is used in the narrow sense of 'attesting to an individual creative contribution,' rather than in the broader sense of 'pioneering.'

1c. Level of the programme

Table 1 shows in the fourth column that the final attainment targets of the Master BIT programme are comparable and compatible with the Dublin Descriptors for Masters programmes.

2. Composition of the programme

The Masters programme on Business Information Technology consists of six core courses, three alternative specialisations with four courses each, elective courses and a final project.

2a. Core courses

The choice of core courses followed from the conviction that all BIT Masters should understand the principles of IT strategy, business process management, enterprise architecture and business case development. Furthermore, all BIT Masters should understand and be able to apply the methods and techniques of design science, and should understand the principles of (computer-supported) cooperative work.

The core courses of the BIT Masters programme are the following:

Term	Code	Name	EC
M1-Q1	192350200	E-Strategizing	5
M1-Q1	192376500	Business Process Integration Lab	5
M1-Q3	201400277	Enterprise Architecture	5
M1-Q2	192320820	Design Science Methodology	5
M1-Q2	192340070	Computer Support Cooperative Work	5
M1-Q4	192376000	Business Case Development for IT-Projects	5

2b. Enterprise architecture (EA) specialisation

In this specialisation courses on information systems and services have been selected. The courses on Foundation of Information Systems and Specification of Information Systems are quite methodological, while the courses on Information Services and Architecture of Information Systems are more systems-oriented. These courses complement each other and cover the main techniques and systems for enterprise architectures.

Term	Code	Name	EC
M1-Q2	192330301	Specification of Information Systems	5
M1-Q2	201100051	Information Services	5
M1-Q4	192320111	Architecture of Information Systems	5
M1-Q1	191863960	Foundation of Information Systems	5

2c. IT Management and Innovation (ITMI) specialisation

In this specialisation courses related to the application and management of ICT in organisations have been selected, with the exception of the course on Software Management, which is oriented towards the software development process and software quality. The course on E-commerce contributes to the innovation aspect of this specialisation. In this specialisation the students learn techniques that are applicable in (large) IT and software development projects.

Term	Code	Name	EC
M1-Q3	192360021	ICT Management	5
M1-Q3	192340101	Implementation of IT in Organizations	5
M1-Q4	192320501	Electronic Commerce	5
M1-Q4	192340041	Software Management	5

2d. Business Analytics (BA) specialisation

In this specialisation courses have been selected to cover the methods and techniques necessary to prepare the students to perform business analysis by exploring and reasoning on large amounts of data. The course on Data Science is going to be offered for the first time in 2014-2015, and is a combination of the courses on Data Warehousing and Data Mining and XML & Databases 1 that were available in 2013-2014.

Term	Code	Name	EC
M1-Q2	201200044	Managing Big Data	5
M1-Q2	191800770	Empirical Research & Data Analysis	5
M1-Q1	191820210	Simulation	5
M2-Q2	201400174	Data Science	5

2e. Final Project

The Final Project is scheduled in the second semester of the second year of the Masters programme. The student may start the final project at any given time during the academic year, under the condition that he or she meets the requirement of having finished at least 80 EC of compulsory and elective courses.

Term	Code	Name	EC
ALL YEAR	192399979	Final Project BIT	30

The academic programme 2014-2015 is depicted in the tables above, showing the course code, course name, quartile, study load in EC and exam formats of each course.

Exam formats

- S written exam
- A Assignment

More details are available via OSIRIS and/or are made known in a timely manner by the examiner in accordance with the provisions of **article 4, "Rules & Regulations of the Examination Board" (section C of this Charter).**

3. Coherence and didactic concept

3a. Coherence

Within this Masters programme, the life cycle terminology of the Enterprise Unified Process (EUP) is applied. Once the strategy has been established, an idea is worked out in the inception phase, and expanded further in the elaboration phase. The relative importance of the construction phase, which had previously received most of the attention, has diminished. The transitional phase on the other hand, receives both in the Masters programme and in the relevant field of work ever increasing attention. Professional experience has taught us the importance of the transition of the old situation to the new situation, presenting a big challenge that is only recently receiving the attention it deserves in scientific research. Interesting developments can also be distinguished in the production and retirement phases.

Inter-Organisational Enterprise Disciplines are of increasing importance. Off-shoring and globalization processes put an increasing emphasis on the relations with customers and providers. Dynamic markets, short product lifecycles and far-reaching specialisation call for a close cooperation and integration in business networks at the process and system levels.

As an academic Masters programme, this programme prepares the students for the junior researcher level by familiarizing them with the “design sciences paradigm”. In the words of Hevner, March, Park & Ram¹ this is a scientific paradigm that aims at increasing human and organisational capabilities through the creation of new and innovative artefacts. Within this paradigm, the building and application of the newly designed artefacts creates knowledge and understanding of the problem domain as well as of the ways of solving problems.

3b. Didactic concept

The didactic concept of the MBI programme is based on the three "O's" that characterise the University of Twente's academic programmes: Research ('Onderzoeken'), Design ('Ontwerpen') and Organisation ('Organiseren'). The University of Twente also encourages a multidisciplinary approach and provides ample room for internationalization. An entrepreneurial attitude and an emphasis on designing solutions for complex problems complete our university's profile. As a consequence, the didactic concept that lies at the heart of this Masters programme can be characterised as being a mixture of (1) knowledge development in the classical sense, (2) integration of this knowledge in project-based courses and (3) the weaving of several lines of learning between individual courses (see Section 3a)

¹ Hevner, A., March, S., Park, J., & Ram, S. (2004). Design science in information systems research, *MIS Quarterly*, 28(1), 75-105.

4. Electives and final project

4a. Requirements related to electives and student's individual choices

In addition to the 50 EC that are determined by the core and the specialisation courses, the students spend 40 EC on elective courses, including the Research topics or Seminar Digital 2020, from which the students must choose one. We strongly advise the students to take one of these courses to get acquainted with a research area as a preparation for the Master final project. A student can also choose to take up an internship of 20 EC as an elective course.

Term	Code	Name	EC	Exam format
Choose one out of the two following options				
ALL YEAR	201300058	Research Topics BIT	10	
Q1	201200180	Seminar Digital Society in 2020	5	

Term	Code	Name	EC	Exam format
Choose the remaining electives from the list below				
ALL YEAR	201300059	Internship BIT	20	
Q1	191863960	Foundations of Information Systems	5	
Q1	192111332	Design of Software Architectures	5	
Q1	192135450	ADSA: Model Driven Engineering	5	
Q1	192320601	Multi agent systems	5	
Q1	194108040	Business Development in Network Perspective	5	
Q1	195810200	Supply Chain Management & ICT	5	
Q1	201200180	Seminar Digital Society in 2020	5	
S1	192320220	Advanced Architecture of Information Systems	10	
S1	191820210	Simulation	5	
Q2	191612680	Computer Ethics	5	
Q2	191800770	Empirical Research & Data Analysis	5	
Q2	192330301	Specification of Information Systems	5	
Q2	201100051	Information Services	5	
Q2	201200044	Managing Big Data	5	
Q2	201400174	Data Science	5	
Q2 or Q3	201300075	Management of Organizations, Operations and Technological Innovation	5	
Q2 or Q4	201100052	Global Project Management	5	
Q2 or Q4	201200010	Global Strategy & Marketing	5	
Q3	192340101	Implementation of IT in Organizations	5	
Q3	192360021	ICT Management	5	
Q3	194111500	Innovation & Technology Dynamics	5	
Q3	194120130	Transformation of HR function with IT	5	
Q3	201100163	Management of Technology for PLM	5	
Q3	201200008	Accounting & Financial Management	5	
Q4	192320111	Architecture of Information Systems	5	
Q4	192320501	Electronic Commerce	5	
Q4	192320850	Advanced Requirements Engineering	5	
Q4	192340041	Software Management	5	
Q4	192360501	E-health strategies	5	
Q4	193140040	Design of Work Systems & Employment Relations	5	
Q4	194105070	Information Systems for the Financial Services Industry	5	
Q4	201200153	Capita Selecta Requirements Engineering	10	

If a student would like to select a course that is not in the list of elective courses above, he/she needs to ask the permission of the Examination Board.

4b. Final project

The final project is a 30-credit study activity to be completed over a half-year period, which rounds off

the Masters programme. The final project is a research and/or development exercise. The final project may be developed and implemented internally (within the UT), but it may also involve a commissioned assignment from a company or another higher education institution. Some projects are performed abroad.

The final project can be seen as an individual 'Masters assessment test'. After successfully completing the project, the student demonstrates that he/she merits the Master of Science qualification. In the final project, the student's competence in the integrated application of knowledge, comprehension and skills covered in the earlier study units is assessed. While the substance of the assignment focuses on a specified field of study, the project is assessed on the basis of a number of well-defined generic criteria.

To conclude the project, the student submits a written report (the 'Master thesis') and delivers an oral presentation about the project, addressing both its implementation and the results generated. The Examination Board prescribes an assessment form final project to help ensure the quality of the assessment.

The final project committee consists of at least two supervisors: one from the EEMCS faculty and one from the SMG faculty.

Further information on the final project can be found in the Final Project Manual.

5. General information

5a. Admission to the programme

A request to be admitted to the programme is assessed by the Admission Committee.

In addition to the general criteria, the MBI Admission Committee distinguishes two types of (inter)national education:

1. Research Universities (primarily responsible for research-oriented programmes);
2. Universities of Applied Sciences (prepares students particularly for more practical professions).

The assessment of all applicants' skills is based on their academic background. The Admission Committee has specific requirements depending on the degree of the applicants. Whenever a pre-masters programme is needed to repair certain knowledge gaps, the Admission Committee determines the duration and content of the pre-masters programme.

The regulations for the different educational backgrounds are:

Dutch Research University Degree

1. A Bachelor degree in Business Information Technology or Information Sciences awarded by a Dutch university.
Applicants with a Bachelor degree in Business Information Technology or Information Sciences awarded by a Dutch university are directly admitted to the programme. Concerning English proficiency, the Admission Committee decides for each applicant whether additional requirements should be set or a proficiency test should be taken.
2. A Bachelor degree awarded by a Dutch university.
Applicants with a Bachelor degree other than Business Information Technology or Information Sciences in a related field awarded by a Dutch university are admitted after completion of a pre-Masters programme (1 EC corresponds to 28 hours).
3. A Bachelor's degree awarded by the University of Twente:
 - a. Students who have completed a Computer Science (TI) or Industrial Engineering & Management (TBK) are admitted to the programme after completion of their bachelor programme and a pre-masters programme of respectively 15 EC and 30 EC;
 - b. Applicants with a Bachelor's degree other than BIT, TI or TBK, awarded by *the University of Twente* may be admitted to the programme after completion of their bachelor and a pre-masters programme.

Degree from a University of Applied Sciences (HBO)

Students with a Bachelor's degree in a related field awarded by a HBO may be admitted to the programme after completion of their bachelor and a pre-masters programme.

The Admission Committee determines whether or not a pre-masters is awarded, based on:

- Academic record;
 - Content of the Bachelor programme;
 - Proficiency in Mathematics B at pre-university education level (*Dutch: VWO*);
 - Proficiency in English at pre-university level (*Dutch: VWO*);
- CGPA of at least 70%;
- Curriculum Vitae;
- Letter of motivation;
- Two references.

The following degrees are currently considered to be degrees in a related field:

- Information Technology ('Informatica');
- Business IT & Management ('Bedrijfskundige Informatica').

Non-Dutch University Degree

The admissions committee assesses international applicants with a Bachelor's degree awarded by a foreign Research University or University of Applied Science on an individual basis. The assessment of the applicant's competences is based on:

- Academic record;
 - NUFFIC credential evaluation;
 - Content of the degree (field related);
- Quality of level of bachelor programme;
- CGPA of at least 70% (3.2 on a 4-scale);
- English proficiency test report;
 - IELTS score with an overall band score of 6.5 or higher, or a
 - TOEFL internet-based (TOEFL-iBT) score of at least 90;
- Letter of motivation;
- Two references;
- Any additional information required by the Admission Committee.

5b. Language of teaching and exams

The courses and the exams in the Masters programme are all in English.

Teachers are required to attain the University Teaching Qualification (BKO). Next to this qualification, the teachers' English proficiency is assessed on a regular basis.

5c. International cooperation

The research groups that contribute to the MBI courses have contacts with foreign universities and research institutions. Students interested in studying abroad can make use of these contacts. For more information on studying abroad, see:

http://www.utwente.nl/ewi/en/education/external_training/

5d. Programme Committee (OLC) and Examination Board

The Dean of the EEMCS faculty (EEMCS faculty regulations article 17) appoints members of the Examination Board and the Programme Committee (BITOC). The most up-to-date composition of these boards can be viewed on the website of the programme.

<http://www.utwente.nl/mbit/organisation/>