

ACADEMIC SECTION OF THE

Students' charter 2012/2013

including the Teaching and Examination Regulations ('OER') and the Rules and Regulations of the Examination Boards (R&R)

for the **Master's programmes**
of the School of Management and Governance

The Dean of the School of Management and Governance has resolved to, on behalf of the Executive Board of the University of Twente, adopt the programme-specific students' charter, for the following Master's programmes:

Master of Science (MSc) degree programmes:

- Business Administration (BA)
- Business Information Technology (MBI)
- European Studies (ES)
- Health Sciences (HS)
- Industrial Management & Engineering (IEM)
- Public Administration (PA)

PHO¹ Master's programmes:

- MSc Environmental and Energy Management (MEEM)
- Master Public Management (MPM)
- MSc Risico Management (MRM)

Ref: MB12.0562

Date: 16 July 2012

¹ Post-Hoger Onderwijs, i.e. postgraduate continuing education

Foreword

In accordance with the Higher Education and Research Act (section 7.59), the University of Twente maintains a students' charter. The students' charter consists of two parts:

- the institutional section (ISS)
- the academic section (FSS)

Within the School of Management and Governance, the same academic section applies to all Master's programmes offered. The following MG academic section, with accompanying appendices, is the students' charter for the following Master's programmes:

the Master of Science (MSc) degree programmes:

- Business Administration (BA)
- Business Information Technology (MBI)
- European Studies (ES)
- Health Sciences (HS)
- Industrial Management & Engineering (IEM)
- Public Administration (PA)

the PHO Master's programmes:

- MSc Environmental and Energy Management (MEEM)
- Master's in Public Management (MPM)
- MSc Risk Management (MRM).

The academic section of the students' charter (FSS) of the School of MG consists of 4 parts:

- A) A description of the programme structure and the supporting facilities that the institution offers students, including but not limited to:
 - information on the structure, organization and realization of the teaching
 - student services
 - academic support facilities
- B) The Teaching and Examination Regulations, as adopted (in accordance with section 7.13 of the Higher Education and Research Act) and in this document referred to as 'OER':
 - the elements that are common to all MG Master's programmes (B1)
 - the programme-specific appendices (B2)
- C) The Rules and Regulations of the Examination Board
- D) A description of the rules and procedures governing the programmes and which supplement the measures for the protection of the rights (of the students) enacted by the Executive Board (see institution-specific section of students' charter).

Both sections of the students' charter (the institutional section and the SMG academic section) can be viewed at the Educational Affairs Office of the School of Management & Governance (SMG), and are also available on the SMG website:

<http://www.utwente.nl/mb/onderwijs/onderwijsaanbod/master/>.

References in this students' charter to the male gender should also be understood to include the female gender.

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Glossary

The following terms and definitions apply to this Student's charter²:

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 Acs, Orders and Decrees, number 593, and as amended since
authorized proof of result	an authorized proof of result is a list or other written document initialled by or on behalf of an Examiner, or a result published via the Student Information System (SIS)
BA:	the one-year Master's programme in Business Administration (MSc)
BIT:	the Bachelor's programme in business information technology
BK:	the Bachelor's programme in business administration
BOZ:	the Educational Affairs Office of the School of MG
BSK:	the Bachelor's programme in public administration
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
credit:	unit of study load, expressed in ECs (European Credit) in accordance with the European Credit Transfer System
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
ECTS:	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)
ES:	the one-year Master's programme in European Studies (MSc)
exam:	an evaluation of the knowledge, insights and skills of the student, as well as the assessment of the results of that evaluation
examination:	an examination is deemed successfully completed if the exams required for the units of study of a programme or the propedeutic phase 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 contents of units of study recorded in the Student Information System (SIS) that an individual student is to complete during the course of a programme, inclusive of any optional (elective) programme components.
examiner:	the individual who has been appointed by the Examination Board to hold the exams in accordance with Article 7.12c of the WHW
FSS:	faculty students' charter. This refers to the programme-specific section of the students' charter (as defined in Article 7.59 of the

² Terms printed in **bold** are terms and definitions defined by the Executive Board as used in the UT Teaching and Examination Regulations. These terms and definitions should be interpreted as meaning the same as in the Higher Education and Research Act (hereinafter 'the WHW'), insofar as they are defined in that Act. All other terms are school-specific definitions of terms used in this charter (including Teaching and Examination Regulations and the Rules & Guidelines of the Examination Board).

GZW:	WHW) for the Master's programmes of the School of MG
HS:	the Bachelor's programme in health sciences
IEM:	the one-year Master's programme in Health Sciences (MSc)
	the two-year Master's programme in Industrial Engineering and Management (MSc)
institution:	University of Twente
MG:	the School of Management and Governance
MBI:	the two-year Master's programme in Business Information Technology (MSc)
MEEM:	the post-graduate Master of Science programme in Environmental and Energy Management (MSc)
MPM:	the post-graduate Master's programme in Public Management
MRM:	the post-graduate Master of Science programme in Risk Management
MSc:	Master of Science; degree granted to a person successfully completing the Master's examination in the programmes BA, MBI, ES, HS, IEM, PA or MEEM (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)
OLD:	the programme director
OSIRIS:	the Student Information System (SIS) of the University of Twente
PA:	the one-year Master's programme in Public Administration (MSc)
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 instructor 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 (Article 9.17, WHW, and articles 10 and 11, faculty regulations)
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 practicals, 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 plan:	a plan prepared by the students describing their degree programme itinerary
study rate:	number of ECs achieved in a certain period divided by the number of ECs that can nominally be achieved in the period
TBK:	the Bachelor's programme in industrial engineering and management
unit of study:	a unit of study in a programme as described in Article 7.3, paragraphs 2 and 3 of the WHW. The units of study from which a programme is composed (also referred to as 'courses') are listed in the programme-specific annex 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

A: Description of the academic structure and facilities

A1a) Structure, organization and realization of the Master of Science programmes

Structure

All Master of Science degree programmes offered by the School of Management and Governance are offered as full-time programmes only.

The programmes Business Administration (BA), European Studies (ES), Health Sciences (HS), and Public Administration (PA) have a weight of 60 EC (1 academic year; 1680 hours).

The programmes Business Information Technology (BIT) and Industrial Engineering & Management (IEM) have a weight of 180 EC (2 academic years; 3360 hours).

Every programme has a Master's examination. The degree of Master of Science (MSc) is conferred on persons who pass the examination. A brief description of the content of each Master's programme in the School of MG is found in the [study guide](#). A description of the final qualifications (final attainment targets) of the programmes is provided in the programme-specific appendices (section B2 of this students' charter).

The academic timetable for the Master's programmes consists of two semesters per academic year, each semester consisting of two quartiles or 'blocks' of ten weeks each. Most programmes schedule three subjects of 5 EC (3 x 140 hours) each quartile. Each quartile/block concludes with two exam weeks. Further information on the academic timetable and the examination schedule can be consulted on the StudentPortal (tab "[for you](#)").

One-year programmes (BA, ES, HS)

	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile
year 1	3 courses of 5 EC	3 courses of 5 EC	1 vak van 5 EC 10 EC masterthesis	15 EC masterthesis

Or (PA)

	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile
year 1	3 courses of 5 EC	researchmethods + thesis (15 EC)	3 courses of 5 EC	researchmethods+ thesis (15 EC)

Two-year programmes

	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile
year 1	3 courses of 5 EC			
year 2	3 courses of 5 EC	3 courses of 5 EC	30 EC masterthesis	

Courses are scheduled with the object of spreading the study load (including essays, projects, participation in practical exercises, etc.) as evenly over the year as possible, so as to allow students to reasonably meet the standards of academic progress (see also section 7.4, second paragraph, Higher Education and Research Act).

Courses and exams

Every academic unit, also referred to as 'course', concludes with an exam. An exam may consist of multiple components. Information on the exam format and the required knowledge is found in the programme-specific appendices (part B2 of this students' charter).

To enable students to take the exams (of the relevant programme), an exam session will be scheduled twice per academic year for each course not being a practical exercise. The first session follows immediately after the academic period in which the course was taught. The second follows in the period thereafter or at such date and time as to allow a reasonable interval between the two successive exam opportunities.

An exam schedule is available from the StudentPortal (tab "[for you](#)"). Check Blackboard for the deadlines for assignments, projects, etc.

For a description of the content of the study units, see the information on OSIRIS (for general information) and on Blackboard (two weeks before the start of the programme for current updates). Both systems can be accessed via the internet.

Cohesion and prerequisites

Master's programmes follow a certain structure. An instructor of one course will build on what the students have learned in a previous course. This means that courses may have prerequisites. Prerequisites may be required and obligatory prerequisite knowledge.

- required: the prerequisite knowledge is judged indispensable for successful participation in the course and the course exam
- obligatory: students who do not have the prerequisite requirements will not be admitted. Take this into account when planning your studies! Information on the prerequisites is found in the programme-specific appendices (part B2 of this students' charter).

Advanced options: graduating with distinction

All programmes allow students to graduate with distinction. For more information, see the OER (part B1 of this students' charter).

Contribution of students to their programme: course evaluations and programme committee

Course evaluations

The faculty considers student input an important part of improving the curriculum. All courses are evaluated by the students upon conclusion of the course.

Programme committee

Pursuant to section 9.18 of the WHW, every programme has a programme committee. Article 13 of the SMG Faculty Regulations dictates the composition of the committee and the process of appointing its members. The committee's main tasks are:

- to make recommendations on the OER
- to annually evaluate the implementation of the OER
- to give solicited or unsolicited recommendations to the programme director (and the Dean) on all academic matters relating to the programme

If you are interested in participating in the programme committee, please notify the Dean's office (☎ (053) 489 3520).

General and practical information

Information on student associations (including reduced-price course materials), studying abroad, and many other subjects can be found in the [study guide](#).

A1b) structure and organization of the PHO Master's programmes

Structure

The School offers the following PHO (post-graduate continuing education) Master's programmes:

- the Master's in Public Management (MPM), part-time, given in Utrecht, in Dutch.
- the MSc in Environmental and Energy Management (MEEM), full-time, given in Leeuwarden, in English.
- the MSc in Risk Management (MRM), part-time, given in Twente, in Dutch.

Every PHO post-graduate Master's programme has a Master's examination. The degree of Master is conferred on persons who pass the examination. Students completing the Master's in Environmental and Energy Management (MEEM) and the Master's in Risk Management earn the MSc title.

The PHO post-graduate Master's programmes consist of courses (or 'modules'). Students are examined in each of the courses/modules. The exams may consist of multiple components. In all cases, testing involves an individual component. Information on all programmes can be obtained from the Professional Learning & Development department.

Every Master's programme has a programme committee. Every PHO post-graduate Master's programme has a programme leader and a programme manager. The programmes are supported by the department of Professional Learning & Development.

All programmes utilize Blackboard.

A2) student facilities

The University of Twente makes use of an electronic learning environment. Both internet and the university's intranet are used to provide information about its academic programmes and administrative procedures.

The university provides a number of student services and facilities like lecture halls and tutorial rooms, project rooms, a library, accommodations for supervised and independent study, and research facilities for educational purposes. The university has a limited number of publicly accessible computers.

The facilities of the School of Management and Governance are listed in the [study guide](#).

Information on MEEM is found in the programme's Study Guide and General Information Guide.

The School of Management and Governance offers in house accommodation for the study associations Sirius (for students Public Administration, including European Studies, and Health Sciences) and Stress (for students (International) Business Administration and Industrial Engineering and Management), to carry out their activities.

A3) academic support services

The faculty has a number of study advisers. They advise students on problems relating to studying in general and their examination programme in particular. They can be called upon to discuss the student's study experiences, complaints, the fitness of a programme choice, study plans and planning, study delay, the regulations on education and examinations, and affairs of legal status and position. If deemed appropriate or necessary, they refer to more specialist supporting departments within or outside the university.

Appointments can be made via the academic secretariat (☎(053) 489 3200/ (053) 489 3987). Further information can be found on the [study advisers' webpage](#).

B: Teaching and Examination Regulations (OER)

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

The Dean of the School of Management and Governance,

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, the Faculty Council, pertaining to the programme-specific appendix of the programme in question³,

hereby authorizes

the **Teaching and Examination Regulations 2012 / 2013**

of the **UT Master of Science (MSc) degree programmes:**

- **Business Administration (BA)**
- **Business Information Technology (MBI)**
- **European Studies (ES)**
- **Health Sciences (HS)**
- **Industrial Engineering & Management (IEM)**
- **Public Administration (PA)**

and the **PHO Master's programmes:**

- **MSc Environmental and Energy Management (MEEM)**
- **Master Public Management (MPM)**
- **MSc Risico Management (MRM)**

N.B.:

- the passages in **bold** apply to all UT Bachelor's programmes, which the School of MG has accepted as equally important for its Master's programmes
- all other passages are supplementary additions and apply to the Master's programmes offered by the School of MG

³ 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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B1 Common Elements

Preamble – Applicability

1. Each 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. For the School of MG this refers to the Master of Science degree programmes BA, MBI, ES, HS, IEM and PA and the PHO Master's programmes MEEM (MSc), MPM and MRM.
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. At the School of MG these regulations are laid down in the Rules & Regulations of the Examination Boards (see part C of this charter).
6. The jurisdiction of a the Examination Board of a program extends to all units of study that are part of a student's programme.
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 provided 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.

For a full, alphabetical list of terms and definitions, please see the glossary on page 4 of the Students' charter (FSS).

Article 2 – Programme content

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

The School of Management and Governance has chosen to bundle the descriptions of the common elements of the WHW's paragraphs mentioned above (part B1 of this OER). The descriptions of the remaining paragraphs are offered in the programme-specific appendices (part B2). The programme-specific appendices include descriptions of the following:

- 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)
- j. requirements related to electives and students' individual choices
- k. transitional system, 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 paragraph 2c)

The goals and final attainment targets (Article 7.13 paragraph 2 sub c of the WHW) are described in the specific programme appendices (part B2).

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

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

- 1. expertise in one or more academic disciplines
- 2. research competence
- 3. design competence
- 4. a scientific approach
- 5. basic intellectual skills
- 6. competence in cooperation and communication
- 7. awareness of temporal and social context

Article 4 - Admission to the programme

- 1. Admission to the Master of Science degree programmes BA, MBI, ES, HS, IEM and PA 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.
Further information is provided in the programme-specific appendices.
- 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).
- 3. Admission requirements for the post-graduate Master's programmes MEEM, MPM and MRM are set out in the programme-specific appendices.

Article 4a - Language

- 1. Master's programmes at the School of Management & Governance 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 unfeasible or impracticable considering the research subject or the organisation 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.

Article 4b – Advanced options: graduating with distinction

1. The school has a regulation for graduating with distinction for the MSc programmes. If upon sitting the Master's examination, the student has given evidence of exceptional capability, 'cum laude'(with distinction") will be recorded on the degree certificate.
2. A student is considered to have exceptional capability if each of the following conditions is met:
 - a. the average mark awarded for the study units of the master examination is at least 8;
 - b. in the determination of this average, the units that were not evaluated with a numerical mark or for which an exemption was granted are not considered
 - c. no study unit was evaluated as not passing, and no more than one unit was evaluated with a mark of 6;
 - d. the mark for the final unit (Master's project or Master's thesis) is at least a 9
 - e. for the MSc degree programmes, a one-year Master's programme must have been completed within 15 months and a two-year Master's programme must have been completed within 30 months. For the PHO Master's programmes MEEM and MRM, all study units must have been completed within a period of time which does not exceed the nominal duration of the respective programme by more than 25%. In special cases, the Examination Board may, at its discretion, permit an excess of this time period. Special cases explicitly include (but are not limited to) the circumstances recognized for the allocation of graduation support
3. In exceptional cases the Examination Board may grant the designation of 'cum laude' if the conditions mentioned in paragraph 2 above have not been fully met. The rules applied by the Examination Board can be found in the Rules & Regulations of the Examination Board (part C, article 10).

Section 2 – Student guidance

Article 5 - Study plan (Monitoring of academic progress: Article 7.13 paragraph 2u of the WHW)

(this article is not applicable for Master's and Master of Science programmes)

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

1. **The Dean is responsible for student supervision, 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 supervision.**
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. The study adviser also advises the student on facilities for specialized supervision inside and outside the university.
4. (not applicable)
5. (not applicable)
6. If a student wishes to make use of his/her right to specific supervision or facilities, they must contact the study adviser. The study adviser records the agreements with the student in the SIS, 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 request extra supervision or facilities.
 - b. The right to the aforementioned supervision or facilities concerns the right to additional individual student supervision. 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 effectivity 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.**
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.**
- 2a 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.
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. **In certain cases 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.
- 9a Students of the postgraduate Master's programmes are not obliged to register for the exams of their programme.
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 question⁴.**
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 study unit the responsible examiner will publish the following details about the exam:**
 - the exam requirements (in any case which material is to be tested)
 - further information concerning the method of examination

⁴ i.e., until midnight (24:00) of the day before the day of the exam

- 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.
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.
7. For students who started their Master's project before 1 September 2012, a transitional arrangement is in place. Paragraphs 3 to 5 (included) still hold, but these students may draw up a revised time schedule. This schedule must, counting from 1 September 2012, respect the limits imposed on the maximum duration of the project as meant in par. 1 and/or the limit on extra time to be conceded for finishing the project as meant in par. 4. This schedule has to be approved by the primary supervisor (and examiner) of the 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 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. The Examination Board may not refuse this request without a valid reason. The Examination Board will provide a written justification if it turns down the request.
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 study unit 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 two weeks of publication of the exam results. This discussion, or a collective discussion, must be held within five weeks of publication of the exam results. After this term of five weeks the student will no longer have the right to a post-hoc discussion of his exam work and a justification of the assessment by the examiner.**

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 at least two years following publication of the results. The student has the right of inspection of his work during this term.**
 - 2a. The School of MG adheres to a term of 2 years.
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 all MG Master's programmes is the Master's project (or 'Master's assignment' or 'Master's thesis'). For all programmes (with the exception of MEEM) 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 for the Master's examination of one of the degree programmes BA, MBI, ES, HS, IEM, PA, or the PHO master's programmes MEEM and MRM, 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.

For the purposes of international cooperation with higher education institutions abroad, the arrangements made between the School of Management and Governance and foreign institutions may differ from the regulations of this OER. Arrangements made with foreign institutions that

differ from the arrangements in this OER will be announced as quickly as possible and set out in the programme-specific appendix (part B2).

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

The Programme Director, under mandate by 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. 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 2012

B2 Programme-specific Appendices

B2a: Programme-specific appendix to the OER 2012-2013

For the Master of Science programme

Business Administration

1. *Objectives (subject 1 NVAO accreditation system)*
 - 1a Profile of the programme
 - 1b Final attainment targets of the programme (OER, art. 3)
 - 1c Level of the programme (facet 2 NVAO accreditation system; OER, art. 3)
2. *Composition of the programme*
 - The content of the programme and its associated examination (OER, article 2.1a)
 - Nature of the programme (OER, Article 2.1g)
 - Study load of the programme and of each of the study units making up the programme (OER, article 2.1e)
 - The exam formats (OER, article 2.1h)
 - Number and sequence of exams and practical exercises (OER, article 2.1f)
 - Required sequence of exams (OER, article 2.1i)
3. *Coherence and didactic concept (facet 6 NVAO accreditation system)*
(not yet included)
4. *Electives and practical exercises*
 - 4a Content of the specializations (OER, Article 2.1b)
 - 4b Requirements related to electives and student's individual choices (OER, 2.1j)
 - 4c Content of practical exercises (OER, article 2.1d)
5. *General information*
 - 5a Admission to the programme (OER Article 4)
 - 5b Language of teaching and exams (OER article 2.1l)
 - 5c International cooperation
 - 5d Programme Committee (OLC) and Examination Board
6. *Transitional arrangements (OER, article 2.1k; OER, article 22)*

1. Objectives

1a. Profile of the programme

The Master of Science in Business Administration programme is an academic graduate programme at master's level, which offers the student the opportunity to further their general business administration knowledge, as well as to develop scientific expertise in one of the following areas of specialisation: Financial Management; Human Resource Management; Information Management; Innovation & Entrepreneurship; International Management; and, Service Management.

The MSc BA programme aims to provide the student with qualifications for a position appropriate to a master's degree-holder within the practice of business administration. Additionally, the programme also provides its graduates with sufficient qualifications for scientific research in business studies and/or for further study in a research master and/or a PhD.

The profile of the Master's of Science in Business Administration programme can be characterised with the following keywords: scientifically formulated and academically sound; problem-orientated; multi-disciplinary; orientated to the organizational environment; innovative and entrepreneurial; internationally-orientated; and, socially-responsible business practices.

1b. final attainment targets of the programme

Table 1: Final attainment targets of the MSc programme in Business Administration

Aims <ul style="list-style-type: none">- to provide a broad and in-depth education in business and management that has high academic standards and exposure to real-life business practice;- to deliver students with the state-of-the-art knowledge, skills and attitude in business administration as well as in one of the specialisation areas;- to deliver students with qualifications for a senior executive level position in a company and/or for further study in a Research Master or PhD.
Intended Learning Outcomes <p>1. <u>Core knowledge</u></p> <p>On completion of the MSc programme, our graduates will be able to demonstrate mastery to the forefront of theoretical and practical knowledge and understanding of:</p> <p>1.1 advanced issues related to business administration and one specialisation area.</p>
<p>2. <u>Academic competences</u></p> <p>On completion of the MSc programme, our graduates will be able to:</p> <p>2.1 independently and critically describe, structure and analyse complex organisational problems and processes within the area of specialisation;</p> <p>2.2 independently apply and/or test current theories, models and methods in the analysis of complex organisational problems and processes within the area of specialisation;</p> <p>2.3 independently draw and support reasoned conclusions and recommend solutions of complex organisational problems and processes within the area of specialisation;</p> <p>2.4 independently set up and manage complex projects and processes within the area of specialisation.</p>

3. Generic competences

On completion of the MSc programme, our graduates will be able to:

- 3.1 identify and evaluate all relevant external interactions with organisational decisions;
- 3.2 systematically collect, assess and analyse information from all relevant sources using advanced means;
- 3.3 demonstrate all relevant effective individual and inter-personal skills;
- 3.4 give a structured presentation, both orally and in writing, on a topic in business administration to both specialist and non-specialist audiences.

1c. Level of the programme

(not yet included)

2. Composition of the programme

The Master's programme consists of 60 EC (1 year, 1680 hours) (see also section 7.4a, paragraph 1, Higher Education and Research Act).

The following specialization tracks within the Business Administration programme are offered:

- Innovation & Entrepreneurship (INN&ENT);
- International Management (INT);
- Service & Change Management (SCM);
- Human Resource Management (HRM);
- Financial Management (FM);
- Information Management (INF).

Table 2 shows the study units (courses) making up the programme and the study load in EC (1 EC = 28 hours) per unit. The table also shows the exam format for the academic unit and any applicable prerequisites.

Obligatory prior knowledge prerequisite:

Students who have not successfully completed academic unit 'a' will not be admitted to academic unit 'b'.

Recommended prior knowledge prerequisite:

To complete successfully academic unit 'b', it is to the student's advantage to have acquired the knowledge, comprehension and skills from academic unit 'a'.

Key to exam formats:

- S written exam
- PS practical exercise(s) with written report
- PSA practical exercise(s) with written report and oral discussion
- SPSA written exam and practical exercise(s) with written report and oral discussion
- PSS practical exercises or assignments, written and/or oral evaluation thereof, written exams. The examination may only be sat if the practical exercises have been performed and the report of the practical exercises has been evaluated as passing.
- PSM as PSS, but generally with oral exam.

Table 2 Curriculum 2012-2013, MSc in Business Administration

Start Master Business Administration per September 2012				
		EC	exam format	prior knowledge
Q1				
Compulsory Courses		10		
201200008	Accounting & Financial Management ¹	(5)	PSS	
201200009	Managing Change & Human Resources ¹	(5)	PSA	
Recommended Electives ²		5		
201000087	Entrepreneurial Finance	(5)	SPSA	
194120140	HRM, Innovation and Entrepreneurship	(5)	PS	
192350200	E-strategizing	(5)	PS	
194108040	Business Development in Network Perspective (BDNP)	(5)	SPSA	
191880710	International Management	(5)	S	
193190000	Managing Service Organizations	(5)	PS	
Q2				
Compulsory Courses		10		
201200010	Global Strategy & Marketing ¹	(5)	PSS	
201000088	Organization, Technology and Innovation Mgmt. (OTIM)	(5)	SPSA	
Recommended Electives ²		5		
194110070	Corporate Finance (for BA)	(5)	PS	
194120090	Managing Human Resource Flows	(5)	SPS	
201200051	Information Services	(5)	PSS	
194108030	Principles of Entrepreneurship	(5)	PSA	
201100054	Supply Chain Management and Innovation	(5)	PSS	
191880720	Management in Emerging Economies	(5)	SPSA	
194115030	Professional Service Provision	(5)	PS	
Q3				
	Master class	5		Recommended: 2 track courses + 20 EC
194110080	Master class Financial Management	(5)	PSA	
194115060	Master class Human Resource Management	(5)	PSA	
194105060	Master class Information Management	(5)	PSA	
194120120	Master class Innovation & Entrepreneurship	(5)	PSA	
191880750	Master class International Management	(5)	PSA	
194119050	Master class Service Management	(5)	PSA	
194100040	Master's thesis	10		Obligatory: 20 EC
Q4				
194100040	Master's thesis	15		
Total EC		60		

¹ The resit exam of compulsory courses will take place with the next available main exam, not in the following quartile.

² Choose one electives from the electives listed under your track in the Business Administration study guide.

Start Master Business Administration per September 2012 – TU Berlin Students				
		EC	exam format	prior knowledge
Q1				
201200008	Accounting & Financial Management ¹	5	PSS	
201200009	Managing Change & Human Resources ¹	5	PSA	
194108040	Business Development in Network Perspective (BDNP)	5	SPSA	
Q2				
194108030	Principles of Entrepreneurship	5	PSA	
201100054	Supply Chain Management and Innovation	5	PSS	
201100062	Advanced Technology Venturing Group Project	5	PSS	
Q3				
194120120	Master class Innovation & Entrepreneurship	5	PSA	Recommended: 2 track courses + 20 EC
194100040	Master's thesis	10		Obligatory: 20 EC
Q4				
194100040	Master's thesis	15		
Total EC		60		

¹ The resit exam of compulsory courses will take place with the next available main exam, not in the following quartile.

Start Master Business Administration per February 2013				
		EC	exam format	prior knowledge
Q3				
Compulsory Courses		10		
201200008	Accounting & Financial Management ¹	(5)	PSS	
191810840	Mgmt. & Organization of Technological Innovation (MOTI)	(5)	PSA	
Recommended Electives ²		5		
201000234	Risk Management for BA	(5)	SPSA	
194120130	Transformation of the HR Function with IT	(5)	PSA	
192340101	Implementation of IT in Organizations	(5)	PS	
194111500	Innovation and Technology Dynamics	(5)	SPSA	
191880710	International Management	(5)	S	
Q4				
Compulsory Courses		10		
201200010	Global Strategy & Marketing ¹	(5)	PSS	
201200009	Managing Change & Human Resources ¹	(5)	PSA	
Recommended Electives ²		5		
191861641	Financial Accounting	(5)	S	
193140040	Design of Work Systems & Employment Relations	(5)	PS	
194105070	Inform. Systems for the Financial Services Industry	(5)	S	
201000156	International Entrepreneurship	(5)	SPSA	
Q1				
	Master class	5		
194110080	Master class Financial Management	(5)	PSA	Recommended 2 track courses + 20 EC
194115060	Master class Human Resource Management	(5)	PSA	
194105060	Master class Information Management	(5)	PSA	
194120120	Master class Innovation & Entrepreneurship	(5)	PSA	
191880750	Master class International Management **	(5)	PSA	
194119050	Master class Service Management	(5)	PSA	
194100040	Master's thesis	10		Obligatory: 20 EC
Q2				
194100040	Master's thesis	15		
Total		60		

¹ The resit exam of compulsory courses will take place with the next available main exam, not in the following quartile.

² Choose one electives from the electives listed for your track in the Business Administration study guide.

For more information on the content of the study units, consult OSIRIS and Blackboard.

3. Coherence and didactic concept

(not yet included)

4. Electives and practical exercises

4a. Content of the specializations

There are six specialization possibilities within the programme. Students can also set an independent specialisation by means of elective courses and the choice of the Master's thesis (see paragraph 2 above).

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

See the information in paragraph 2 above.

4c. Content of practical exercises

A practical exercise is a study unit or a component of a study unit whereby the emphasis is on the student's activity, such as:

- preparing a literature review, a paper or a design project, thesis, article, or position paper, or delivering a public presentation;
- a design or research assignment, tests and experiments, practical exercises, skills practice;
- work placement, fieldwork or excursions;
- participation in other required learning activities aimed at achieving the desired skills.

Practical exercises are generally part of a study unit for which there is a responsible examiner.

The structure of the practical exercise(s) is described in general terms in OSIRIS, and in more detail on Blackboard at the beginning of the programme.

The Master's assignment (or Master's project or Master's thesis) is not supervised by a single responsible instructor; instead, a Master's committee is assembled for each assignment. The Master's project is an individual project, and is evaluated on an individual basis. The Master's project tests the student's competence in the integrated application of the knowledge, comprehension and skills covered in the study units. The Examination Board prescribes an evaluation checklist to help ensure the quality of the evaluation. More practical information on the Master's assignment is found in the Master's project manual, which can be found through the Blackboard site of the Master's assignment BA.

5. General information

5a. Admission to the programme

A request to be admitted to the programme is assessed by an admission committee that consists of the following programme directors:

- Prof M.R. Kabir PhD (BA)
- Prof R. Hoppe PhD (PA)
- Prof N.S.Groenendijk PhD (ES)
- G.A.C. Wagenaar PhD (HS)
- E.W. Hans PhD MSc (IE&M)
- Prof J. van Hillegersberg PhD (MBI)
- Prof O.A.M. Fisscher PhD MSc (post-academic programmes).

The assessment of all applicant skills is based on academic background. The regulations for the different educational backgrounds are:

- Dutch Research University Degree

- a. *A Bachelor's degree in Business Administration awarded by a Dutch university*
Applicants with a Bachelor's degree in Business Administration awarded by a Dutch research university will be admitted to the programme. With regard to proficiency in English, the admissions committee decides whether additional requirements should be set or a diagnostic test should be taken.
- b. *Another Bachelor's degree awarded by a Dutch university*
Applicants with another Bachelor's degree in a related field awarded by a Dutch research university will be admitted after completion of a Pre-master's programme. The admissions committee determines whether or not a pre-master is awarded and depending on the bachelor programme determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme within 12 months⁵
- c. *Another Bachelor's degree awarded by the University of Twente*
Applicants with a Bachelor's degree other than Business Administration awarded by the University of Twente may be admitted to the programme after completion of a Pre-master's programme. The admissions committee determines the content of the pre-Master's programme, depending on the Bachelor's programme. The applicant must have successfully completed the entire pre-Master's programme. For information concerning the admission go to <http://www.utwente.nl/master/how-to-apply/current-ut-bachelor-students.doc/>.

- Degree from a Dutch college for higher professional education (HBO)

- a. *A Bachelor's degree in a related field awarded by a Dutch University (college) for higher professional education*
Students with a Bachelor's degree in a related field awarded by a Dutch University (college) for higher professional education will be admitted to the Master's programme if:
 - they have successfully completed the pre-Master's programme within a period of twelve months⁶. The admissions committee determines the content of the pre-Master's programme.The admissions committee determines whether or not a pre-Master is awarded, based on:
 - Academic Record;
 - the content of the Bachelor's programme and the institution.
 - Proficiency in Mathematics A1,2 or B1 at pre-university education level (*Dutch: VWO*)
 - a CGPA of at least 7.5 or GMAT test score of at least 500.
 - Curriculum Vitae
 - a letter of motivation;
 - two letters of recommendation
- b. *A different Bachelor's degree awarded by a Dutch University (college) for higher professional education*
Applicants with a degree in a non-related field are assessed on an individual basis.

For more information about the admission criteria for Bachelor's degrees from Dutch universities for higher professional education see <http://www.utwente.nl/master/how-to-apply/hbo/>.

⁵ Per course of the pre-Master's programme no more than two attempts are permitted to sit the corresponding exam. If the student fails to successfully complete the pre-Master's programme on time, he/she will not be admitted to the Master's Programme.

⁶ As note 5.

- Non-Dutch University Degree

The admissions committee will assess Bachelor's degrees awarded by a non-Dutch university on an individual basis. The assessment of the applicant's competencies will be based on:

- Academic record
 - a [NUFFIC credential evaluation](#);
 - content of the degree (field related);
 - Courses in mathematics, statistics and scientific research knowledge
- IELTS overall band score of at least 6.5 www.ielts.org, or a TOEFL internet-based (TOEFL-iBT) score of at least 90
- Curriculum Vitae
- a letter of motivation;
- two letters of recommendation
- a GMAT test score of at least 500.

For more information about the admission criteria for Bachelor's degrees from non-Dutch universities see <http://www.utwente.nl/master/how-to-apply/internationaldegree/> .

5b. Language of teaching and exams

The Master's programmes are taught in English. This means not only that courses are given in English, but the course materials (textbooks, readers, etc.) will be in English, as well as all exams and practical exercises (projects and assignments) and the Master's assignment.

To safeguard the quality of teaching and examination in the English language, MG has taken the following measures:

- An assessment is made of all MG teaching staff and examiners as to their command of the English language. If their IELTS score is slightly below the established minimum level, they will be allowed a remediation period. Failing to meet the standard after this period will lead to exclusion from the English-language programme. Any newcomers will be assessed upon their entry.
- Inclusion of specific demands on their proficiency in the English language in the admission requirements for the MG English language programmes, wherever a sufficient command is not warranted by the candidates' prior education.

5c. International cooperation

A double degree programmes has been developed in cooperation with Technische Universität Berlin from Germany.

- Master [Innovation Management and Entrepreneurship \(2 years\)](#): double degree MSc Business Administration University of Twente (NL) and MSc Technische Universität Berlin (Germany).

5d. Programme committee (OLC) and Examination Board

The members of the educational programme committee (OLC) are appointed by the Dean of the faculty every (two) year(s) (faculty regulations article 13). The most up-to-date composition of the committee can be found at the webpage of the [programme committees](#). Correspondence with the BA Programme Committee goes through m.j.m.tevaarwerk@utwente.nl. For more information contact the administration office on (053 489)3200.

Members of the Examination Board are appointed by the Dean of the faculty every two years (faculty regulations article 12). The most up-to-date composition of the Board can be found at the [webpage of the Examination Boards](#). Correspondence with the Boards goes through mastersgriffie@mb.utwente.nl. For more information contact the administration office on (053

6. Transitional arrangements

193160010 Accounting, Finance and Management (AFM)

Students who were registered for the Business Administration programme prior to the academic year 2012/2013 and did not participate in the course Leadership Accounting, Finance & Management (193160010) or did participate but did not successfully complete the group case work with a sufficient mark needed to pass must take the substitute and similar course Accounting & Financial Management (201200008).

Students who did participate and successfully complete the group case work are given two additional attempts to pass the exam of the former course in Q1 (1st attempt) and Q3 (2nd attempt) in the academic year 2012/2013.

194120100 HRM and Organizational Development (HRM&OD)

Students who were registered for the Business Administration programme prior to the academic year 2012/2013 and did not (actively) participate in the course HRM&OD (194120100) must take the substitute and similar course Managing Change & Human Resources (201200009). Students who did actively participate but did not successfully pass the exam are given two additional attempts for the course HRM&OD (194120100) in Q1 (1st attempt) and Q2 (2nd attempt) in the academic year 2012/2013.

194117020 Innovation and Regulation

Students who were registered for the Business Administration programme prior to the academic year 2012/2013 and did not (actively) participate in the course Innovation & Regulation (194117020) must take one of the other Business Administration electives. Students who did actively participate but did not successfully pass the exam are given two additional attempts in Q1 (1st attempt) and Q2 (2nd attempt) in the academic year 2012/2013.

201000068 Dynamics of Strategy: Organization and Environment (DoS)

Students who were registered for the Business Administration programme prior to the academic year 2012/2013 and did not (actively) participate in the course Dynamics of Strategy (201000068) must take the substitute and similar course Global Strategy & Marketing (201200010). Students who did actively participate but did not successfully pass the exam are given two additional attempts for the course Dynamics of Strategy (201000068) in Q2 (1st attempt) and Q3 (2nd attempt) in the academic year 2012/2013.

201100055 Marketing of Product Innovation and Services (MPIS)

Students who were registered for the Business Administration programme prior to the academic year 2012/2013 and did not (actively) participate in the course Marketing of Product Innovation & Services (201100055) must take the course Global Strategy & Marketing (201200010). Students who did actively participate but did not successfully pass the exam are given two additional attempts for the course Marketing of Product Innovation & Services (201100055) in Q2 (1st attempt) and Q3 (2nd attempt) in the academic year 2012/2013.

194105050 Leadership, Organizational Change and Consultancy (LOCC)

Students who were registered for the Business Administration programme prior to the academic year 2012/2013 and did not participate in the course Leadership Organisational Change & Consultancy (194105050) or did participate but did not successfully complete the group paper with a sufficient mark needed to pass the course, must take the substitute and similar course Management Change & Human Resources (201200009).

B2b: Programme-specific appendix to the OER 2012-2013

For the Master of Science programme of

Business Information Technology (MBI)

1. *Objectives (subject 1 NVAO accreditation system)*
 - 1a Profile of the programme
 - 1b Final attainment targets of the programme (OER, art. 3)
 - 1c Level of the programme (facet 2 NVAO accreditation system; OER, art. 3)
2. *Composition of the programme*
 - The content of the programme and its associated examination (OER, article 2.1a)
 - Nature of the programme (OER, Article 2.1g)
 - Study load of the programme and of each of the study units making up the programme (OER, article 2.1e)
 - The exam formats (OER, article 2.1h)
 - Number and sequence of exams and practical exercises (OER, article 2.1f)
 - Required sequence of exams (OER, article 2.1i)
3. *Coherence and didactic concept (facet 6 NVAO accreditation system)*
 - 3a Coherence
 - 3b Didactic concept
4. *Electives and practical exercises*
 - 4a Content of the specializations (OER, Article 2.1b)
 - 4b Requirements related to electives and student's individual choices (OER, 2.1j)
 - 4c Content of practical exercises (OER, article 2.1d)
5. *General information*
 - 5a Admission to the programme (OER Article 4)
 - 5b Language of teaching and exams (OER article 2.1l)
 - 5c International cooperation
 - 5c Programme committee (OLC) and Examination Board
6. *Transitional arrangements (OER, article 2.1k; OER, article 22)*

1. Objectives

1a. Profile of the programme

1. The primary goal of the Master's programme is to provide graduates with a combination of academic perspectives and specialized technical knowledge that will enable them to analyze, design, validate and implement advanced ICT systems in their context of use. 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 Master's programme offers a stimulating and challenging research-oriented environment in which the following secondary goals are achieved.

- a. Students acquire comprehensive knowledge and insight and develop their professional and academic perspectives based on initiative and personal responsibility for the learning process.
- b. Students develop an investigative and reflective attitude.
- c. Students acquire an understanding of and gain experience in methods and techniques to be able to model and describe systems and their properties.
- d. Students acquire knowledge of, insight into and experience with cataloguing technical requirements, design, validation and the 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.
- e. Students acquire knowledge of, insight into and experience with cataloguing technical requirements, 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.
- f. Students develop an attitude that promotes constructive criticism whereby choices are substantiated and discussed.
- g. Students produce, in cooperation with others, a contribution to the application and/or development of theory, methods, technologies and tools relating to the development of ICT systems in relation to the context of use.
- h. Students gain experience to function in complex dynamic situations in which the relevant information is not always immediately and fully available.
- i. 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 direct and independently coordinate their personal progress towards these developments.

The goal of the Master's programme is to enable the graduates with the aptitude and proven talent for academic research so that they can continue their education with doctoral research.

2. The Master's programme in Business Information Technology has a particular emphasis on innovative developments and the integration and optimization of business processes and ICT. The programme focuses on comprehensive knowledge and insight, as well as gaining experience in the integrated development of organizations and their business processes and ICT-systems, and related theories and concepts. Methods and technologies, as well as the analysis, evaluation and modeling 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's 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 in the Master's programme develop a constructive critical and reflective attitude by analyzing research and design activities, both their own and that of others.

1b. Final attainment targets of the programme

The Master of Science programme Business Information Technology prepares students for 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 organizational practice. Also, the MSc specialist in Information Systems have at their disposal well developed skills in communication, interpersonal relations and group work. Finally, the Master's graduates have at their disposition the special skills needed for a successful career future, for example a knowledge of IT and organizations, a critical attitude and a disposition towards life long learning and innovation.

Table 1 below 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

Nr	Final attainment target	Match with sec. goals	Match with Dublin Descr.
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 will be 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 organizational context. The graduate will also be able to utilize and further these connections.	d	2, 3
1b	The graduate will be capable of understanding and developing the business strategy, business information system strategy and the operationalizations in an architectural framework. He/she will understand 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 will be 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 will have 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 will be 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 will have knowledge and understanding of a range of aspects of business information systems, such as user-friendliness, adaptability, security and administration, and the graduate will be able to apply this knowledge.	d,h	1, 2
1g	The graduate will have 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 will have knowledge and understanding of the opportunities and threats to cooperation and relations	d,h	1

	management transgressing the organizational boundaries, as well as the role of information systems herein.		
1i	The graduate will be capable of overseeing and optimizing 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 of the Master's programme in Business Information Technology will have specialized knowledge in a sub-area of the field of business information technology. He/she will have gained experience in academic research, and will be able to contribute to the body of research in the field and apply the results in an organizational 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 utilize 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 take on 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

As can be seen from table 1 in the fourth column, the final attainment targets of the Master BIT programme are comparable and compatible to the Dublin Descriptors for Master's programmes.

2. Composition of the programme

Table 2 exhibits the academic programme 2012-2013, showing quartile/ course code / course name / study load in EC/ exam format and obligatory prior knowledge respectively. Within each quartile, the sequence of the study units (courses) is according to their course code and therefore is not in chronological order.

The programme below is valid for students who will start their Masters in September 2011 (first part) or February 2012 (second part, on next page).

Table 2: Curriculum 2012-2013 MSc Business Information Technology

Start per September Generation 2012, first year (M1)				
CCode	Course name	EC	Exam format	Prior knowledge
Q 1				
192111332	Design of Software Architecture	5	PSS	
192350200	E-Strategizing	5	PGI	
194108040	Business Development in Network Perspectives*	5	PSS	
Q 2				
192320820	Design Science Methodology	5	PSS	
192330301	Specification of Information Systems	5	PSS	
192340070	Computer Supported Cooperative Work	5	PSM	
Q 3				
192340101	Implementation of IT in Organizations	5	PS	
192360021	ICT Management	5	PSS	
192320501	E-Commerce	5	PSS	
Q 4				
192320111	Architecture of Information Systems	5	S/M	
192376000	Business Case Development for IT-Projects	5	PGI	
192340041	Software Management	5	PSS	
Total		60		

Start per September Generation 2012, second year (M2)				
CCode	Course name	EC	Exam format	Prior knowledge
Q 1				
192376500	Business Process Integration Lab	5	PSS	
	Research Elective	5		
	Elective	5		
Q 2				
	Elective	5		
	Elective	5		
	Elective	5		
S2				
192399979	Final Project	30	BAM	80 EC
Total		60		

Start per February Generation 2012, first year (M1)				
CCode	Course name	EC	Exam	Prior
			format	knowledge
Q 3				
192340101	Implementation of IT in Organizations	5	PS	
192360021	ICT Management	5	PSS	
192320501	E-Commerce	5	PSS	
Q 4				
192320111	Architecture of Information Systems	5	S/M	
192376000	Business Case Development for IT-Projects	5	PGI	
192340041	Software Management	5	PSS	
Q 1				
192111332	Design of Software Architecture	5	PSS	
192350200	E-Strategizing	5	PGI	
192376500	Business Process Integration Lab	5	PSS	
Q 2				
192320820	Design Science Methodology	5	PSS	
192330301	Specification of Information Systems	5	PSS	
192340070	Computer Supported Cooperative Work	5	PSM	
Total		60		

Start per February Generation 2012, second year (M2)				
CCode	Course name	EC	Exam	Prior
			format	knowledge
Q 3				
	Research Elective	5		
	Elective	5		
	Elective	5		
Q 4				
2011100052	Global Project Management*	5	tba	
	Elective	5		
	Elective	5		
S1				
192399979	Final Project	30	BAM	80 EC
Total		60		

*Flexible Option

The course Business Development in Network Perspectives (Q1) may be exchanged for the course Global Project Management (Q4) and vice versa.

Key to exam formats:

- S written exam
- M oral exam
- PGI practical group exercise coupled with a written report of the exercise, and (insofar as possible) an individual assessment of the way in which each student participated in the group
- PS individual practical exercise with a written report

- PSS practical exercises or assignments, with a written and/or an oral report thereof, and a written exam. The exam may only be sat if the practical exercises have been performed and the report of the practical exercises has been evaluated and has been passed.
- PSM as PSS, but generally with an oral exam
- BAM in accordance with the rules as set out in the regulations for the Master's assignment.

More specific details are available via OSIRIS and/or will be 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

Table 3 below shows the distribution of the different courses over the three main focus areas within the curriculum: the systems life cycle, integration in business networks and research.

Table 3: coherence within the MBI-curriculum

	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Jaar 1	Design of Software Architecture	Problem Analysis and Software Requirements	Implementation of IT in Organizations	Architecture of Information Systems
	E-Strategizing	Specification of Information Systems	ICT Management	Business Case Development
	Business Development in Network Perspectives	Computer Supported Cooperative Work	E-Commerce	Software Management
Jaar 2	Business Process Integration Lab	Elective	Final project	Final project
	Research Elective	Elective		
	Elective	Elective		

	Systems lifecycle
	Integration in Business Networks
	Research

Within the MBI curriculum the life cycle terminology of the Enterprise Unified Process (EUP) is applied. Once the strategy has been established, an idea will be 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 MBI Master's 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 which 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 specialization call for a close cooperation and integration in business networks at the process and system levels.

As an academic Master's programme, MBI prepares the students for the junior researcher level by familiarizing them with the "design-sciences paradigm". In the words of Heyner,

March, Park & Ram (March 2004) this is a scientific paradigm which aims at increasing human and organizational capabilities through the creation of new and innovative artefacts. Within this paradigm, the building and application of the newly designed artifacts creates knowledge and understanding of the problem's domain as well as of the ways of solving it.

3b. Didactic concept

The didactic concept of the BSc and MSc programmes in Business Information Technology is based on the three "O's" that are characteristic of the University of Twente's academic programmes: Research ("Onderzoeken"), Design ("Ontwerpen") and Organisation ("Organiseren"). The University of Twente also advocates a multidisciplinary approach and provides ample room for internationalization and horizon-broadening through a Minor program. 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 the BSc and MSc programmes in Business Information Technology can be characterized 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 above, under 'coherence')

4. Electives and practical exercises

4a. Content of the specializations

The Business Information Technology programme does not offer any formal tracks/specializations. Students can set an independent specialization by means of the elective options and the choice of the Master's assignment. The elective options in the tables below show the electives that correspond to the desired career paths.

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

The student must select **at least one** research course from the electives shown in the table below.

Course	Name	SRO	EC	School	Dep	Career track
192399508	Research project		10	EWI/MB	IS/IEBIS	Academia
192320220	Advanced Architectures of Information Systems		10	EWI	IS	Academia
192320850	Advanced Requirements Engineering		5	EWI	IS	Academia
2012xxxxx	Capita Selecta Requirements Engineering		10	EWI	IS	Academia
201100051	Information Services		5	MB	IEBIS	Academia
191863960	Foundations of Information Systems		5	MB	IEBIS	Academia

The elective option may be studied abroad. To do this, the student must submit a proposal to the BIT Examination Board for approval.

The table below shows the *recommended* electives. If the student would like to study an elective that is not on the list, he/she must submit an application to the BIT Examination Board. Please check for the latest version of the list of recommended electives the following [website](#).

Course	Name	SRO	EC	School	Dep	Career track
191612520	Philosophical Methods		5			
191612540	Ethics & Technology 1		5			
191810840	Man. & Organization of Technological Innovation	IE&ICT	5	SMG	BA	IT-cons
191852640	Production & Logistics Information Systems	IE&ICT	5	SMG	IEBIS	IT-cons
191864610	Organisation and Strategy		5	SMG	BA	
192130112	Distributed Systems		5			
192110280	Advanced programming concepts		10	EEMCS		
192110371	Graphics & Virtual Reality	NICE	5	EEMCS		IT-arch
192166310	Speech and language processing 1	NICE	5	EEMCS	HMI	IT-arch
192135400	ADSA: Product Line Engineering		5	EEMCS		IT-arch
192135450	ADSA: Model Driven Engineering		5	EEMCS		IT-arch
192320201	Data warehousing & data mining		5	EEMCS		IT-arch
192320601	Multi agent systems	IE&ICT	5	EEMCS		IT-arch
192360501	E-health Strategies	IE&ICT	5	SMG	BA	
19265400	Network Security		5			
192653000	Management of networked applications	ASSIST	5	EEMCS		IT-arch
192661001	Patterns of Software Development		5			
193140040	Design of Work Systems & Employment Rel.	IE&ICT	5	SMG/ GW	BA	IT-cons
193190000	Managing Service Organizations		5	SMG	BA	
194105070	<i>Inform. Systems for the Financial Services Industry</i>	<i>IE&ICT</i>	5	<i>SMG</i>	<i>IEBIS</i>	IT-cons
194108030	Principles of Entrepreneurship		5	SMG	BA	IT-cons
194120110	Information Technology and Groupwork	IE&ICT	5	SMG	BA/IEBIS	IT-cons
195810200	<i>Supply chain management & ict</i>		5	<i>CTW</i>	IEBIS	IT-cons
201100023	Security and Privacy in Mobile Systems	ISTRICE	5	EEMCS		IT-arch
201100054	Supply Chain Management & Innovation		5			
201200009	Managing Change & Human Resources		5	SMG	BA	IT-cons/ IT-arch

4c. Content of practical exercises

A practical exercise is a study unit or a component of a study unit whereby the emphasis is on the student's activity, such as:

- preparing a literature review, a paper or a design project, thesis, article, or position paper, or delivering a public presentation;
- a design or research assignment, tests and experiments, practical exercises, skills practice;
- work placement, fieldwork or excursions;
- participation in other required learning activities aimed at achieving the desired skills.

Practical exercises are generally part of a study unit for which there is a responsible examiner. The structure of the practical exercise(s) is described in general terms in OSIRIS, and in more detail on Blackboard at the beginning of the programme.

Master's assignment

The Master's assignment (or Master's project or Master's thesis) is not supervised by a single responsible instructor; instead, a Master's committee is assembled for each assignment. The Master's project is an individual project, and is evaluated on an individual basis. The Master's project tests the student's competence in the integrated application of the knowledge, comprehension and skills covered in the study units. The Examination Board prescribes an evaluation checklist to help ensure the quality of the evaluation. Further information on the Master's assignment can be found in the Master's thesis manual, which can be consulted through Blackboard.

5. General information

5a. Admission to the programme

A request to be admitted to the programme is assessed by an admission committee that consists of the following programme directors:

- Prof M.R. Kabir PhD (BA)
- Prof R. Hoppe PhD (PA)
- Prof N.S.Groenendijk PhD (ES)
- G.A.C. Wagenaar PhD (HS)
- E.W. Hans PhD MSc (IE&M)
- Prof J. van Hillegersberg PhD (MBI)
- Prof O.A.M. Fisscher PhD MSc (post-academic programmes).

In addition to the general criteria, Business Information Technology distinguishes two types of (inter)national education;

1. Research Universities (primarily responsible for research-oriented programmes)
2. Universities (colleges) of professional education (prepares students particularly for more practical professions)

The admissions committee has specific requirements depending on the degree.

The assessment of all applicants' skills is based on academic background. The regulations for the different educational backgrounds are:

- Dutch Research University Degree

1. *A Bachelor's degree in Business Information Technology or Information Sciences awarded by a Dutch university*

Applicants with a Bachelor's degree in Business Information Technology or Information Sciences awarded by a Dutch university will be admitted to the program. With regard to proficiency in English, the admissions committee decides whether additional requirements should be set or a diagnostic test should be taken.

2. *A Bachelor's degree awarded by a Dutch university*
Applicants with a Bachelor's degree other than Business Information Technology or Information Sciences in a related field awarded by a Dutch university will be admitted after completion of a pre-Master's programme. The admissions committee determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme within 12 months.⁷
3. *A different Bachelor's degree awarded by the University of Twente*
 - a. Students who have completed a TI or TBK Bachelor's have direct access to the MBI Master's programme with equalization courses.
 - b. Applicants with a Bachelor's degree other than BIT, TI or TBK, awarded by *the University of Twente* may be admitted to the program after completion of a pre-Master's programme. The admissions committee determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's program within 12 months.⁸

For information concerning admission go to <http://www.utwente.nl/master/how-to-apply>.

- Degree from a Dutch College for higher professional education (HBO)

Students with a *Bachelor's degree in a related field* awarded by a Dutch University (college) for higher professional education will be admitted if:

- they have successfully completed the pre-Master's programme within a period of twelve months⁹. The admissions committee determines the content of the pre-Master's programme.

Students who have had a higher professional education (HBO) are assumed to be sufficiently proficient in the English language at the start of the Master's phase¹⁰. It is the responsibility of the student to attain this level of English.

The admissions committee determines whether or not a pre-Master is awarded, based on:

- Academic Record;
 - the content of the Bachelor's programme and the institution.
 - Proficiency in Mathematics B at pre-university education level (*Dutch: VWO*)
- a CGPA of at least 7.0
- Curriculum Vitae
- a letter of motivation;
- two letters of recommendation

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

- Technische Informatica
- Informatica

For more information about the admission criteria for Bachelor's degrees from Dutch universities for higher professional education see <http://www.utwente.nl/master/how-to-apply/hbo/>.

- Non-Dutch University Degree

The admissions committee assesses international applicants with a Bachelor's degree awarded by a non-Dutch Research University or University (college) for higher professional

⁷ Per course of the pre-Master's programme no more than two attempts are permitted to sit the corresponding exam. If the student fails to successfully complete the pre-Master's programme on time, he/she will not be admitted to the Master's Programme.

⁸ Idem (as the previous note)

⁹ Idem (as the previous note)

¹⁰ Their proficiency in the English language is at pre-university education level (*Dutch: VWO*) or at academic IELTS level with an overall band score of 6.5 or higher, or a TOEFL internet based (TOEFL-iBT) score of at least 90.

education on an individual basis. The assessment of the applicant's skills is based on:

- Academic record
 - a [NUFFIC credential evaluation](#);
 - content of the degree (field related)
- Quality of level of bachelor programme
- A cgpa of at least 70% (3.2 on a 4-scale)
- an IELTS score with an overall band score of 6.5 or higher, or a TOEFL internet-based (TOEFL-iBT) score of at least 90
- a letter of motivation;
- two letters of recommendation;
- any additional information required by the admissions committee.

For more information about the admission criteria for Bachelor's degrees from non-Dutch universities see the <http://www.utwente.nl/master/how-to-apply/internationaldegree/> .

5b. Language of teaching and exams

The courses and the exams in the Master's programme are all in English.

To safeguard the quality of teaching and examination in the English language, MG has taken the following measures:

- An assessment is made of all MG teaching staff and examiners as to their command of the English language. If their IELTS score is slightly below the established minimum level, they will be allowed a remediation period. Failing to meet the standard after this period will lead to exclusion from the English-language programme. Any newcomers will be assessed upon their entry.
- Inclusion of specific demands on their proficiency in the English language in the admission requirements for the MG English language programmes, wherever a sufficient command is not warranted by the candidates' prior education.

5c. International cooperation

Many students spend a certain period of time abroad. In 2008, the programme sought options to standardize and facilitate these often individualized internships and graduation initiatives. In their search, the BIT staff visited and consulted WWU Münster regarding an exchange programme with that German university. Comparable initiatives were undertaken with Sabanci University (Turkey), the Helsinki School of Economics (Finland), the University of New South Wales (Australia) and the University of Wellington (New Zealand).

For the latest information, see:

http://www.utwente.nl/mb/onderwijs/onderwijsaanbod/bachelor/bit/studieinformatie/studying_a_broad_bit.doc/

5d. Programme Committee (OLC) and Examination Board

Members of the Examination Board and the Programme Committee (OLC) are appointed by the Dean of the faculty for one or two year terms (faculty regulations article 12 &13). The most up-to-date composition of these boards can be viewed on their respective webpages ([examination boards](#), [programme committees](#)).

Correspondence with the Examination Board goes through mastersgriffie@mb.utwente.nl.

The programme committee can be contacted via i.wilmink@utwente.nl. For more information contact the administration office on (053 489)3200.

6. Transitional arrangements

6a. Transitional arrangement regarding the period of exam validity

For students who were registered for the Bachelor's programme prior to the academic year 2008/2009, the following system applies:

1. Evaluations of exams in the programme are valid for an unlimited period of time, barring the provisions of points 2, 3 and 4 below.
2. The Examination Board may require a student to re-sit an exam if the board is of the opinion that a previously attained result has lost its value due to changes in the field since the result.
3. abolished
4. If the student has to take a number of exams to obtain an evaluation for the academic unit, and these exams are evaluated individually, the examiner will determine the period of validity of any sub-results earned. If no decision on the term of validity of sub-results is recorded, the validity expires upon the start of the following academic year.

6b. Transitional arrangement on graduating with distinction

Students registered between September 2003 and 2008 will obtain a distinction in the Master's programme if they meet the following conditions.

1. The student has passed the examination according to the applicable rules.
2. The exemptions used to pass do not exceed a course load of 20 study credits.
3. The average of the evaluations (for relevant components) in the student's file is 8 or higher. When determining the relevant average, pass evaluations ('G') may be disregarded. Evaluations that are not necessary for the examination requirements may also be disregarded when determining the relevant average.
4. The student must have earned an evaluation of 8 or higher on the thesis.

6c. Transitional arrangement regarding parallel Master's for Bachelor's students

Bachelor's students who were registered on the Bachelor's programme prior to the academic year 2009/2010 may apply to the Examination Board for permission to pursue the Bachelor's in parallel with the Master's as soon as they have completed 135 EC's.

6d. Transitional arrangement regarding flexible option.

For students who were registered prior to the academic year 2011/2012 the following system applies: The course Business Development in Network Perspectives (Q1) may be exchanged for the course Global Project Management (Q4).

6e. Transitional arrangement regarding research electives.

1. Students who were registered prior to the academic year 2011/2012 may take the course 201100051 Information Services as a research elective.

Students who were registered prior to the academic year 2012/2013 may take the course 2012xxxxx Capita Selecta Requirements Engineering Services as a research elective..

B2c: Programme-specific appendix to the Students' charter 2012-2013

For the Master of Science programme

European Studies (ES)

1. *Objectives (subject 1 NVAO accreditation system)*
 - 1a Profile of the programme
 - 1b Final attainment targets of the programme (OER, art. 3)
 - 1c Level of the programme (facet 2 NVAO accreditation system; OER, art. 3)
2. *Composition of the programme*
 - The content of the programme and its associated examination (OER, article 2.1a)
 - Nature of the programme (OER, Article 2.1g)
 - Study load of the programme and of each of the study units making up the programme (OER, article 2.1e)
 - The exam formats (OER, article 2.1h)
 - Number and sequence of exams and practical exercises (OER, article 2.1f)
 - Required sequence of exams (OER, article 2.1i)
3. *Coherence and didactic concept (facet 6 NVAO accreditation system)*
4. *Electives and practical exercises*
 - 4a Content of the specializations (OER, Article 2.1b)
 - 4b Requirements related to electives and student's individual choices (OER, 2.1j)
 - 4c Content of practical exercises (OER, article 2.1d)
5. *General information*
 - 5a Admission to the programme (OER Article 4)
 - 5b Language of teaching and exams (OER article 2.1l)
 - 5c International cooperation
 - 5d Programme committee (OLC) and Examination Board
6. *Transitional arrangements (OER, article 2.1k; OER, article 22)*

1. Objectives

1a. Profile of the programme

The programme of the Master of Science programme in European Studies is characterized by

- its focus on the relationship between public administration and its societal context from a European-level administrative and policy perspective;
- its emphasis on a multidisciplinary approach (i.e. political science, law, economics and sociology in the context of public administration research) and the ability to apply these disciplinary methods and approaches – either individually or together – to European public administration issues;
- a scientific approach;
- its aspiration to achieve outstanding quality;
- its practice-oriented nature.

The referent object of our teaching in European Studies is the multilevel character of European governance. In general, the term multilevel governance expresses the complexity of contemporary policy-making by emphasizing the need to go beyond traditional ways of thinking. 'Multilevel' points at the intertwinement of local, regional, national, continental and global oriented governmental institutions. These institutions and their agents are functioning in an open 'multilevel' structure rather than closed sub-state, state, and interstate structures. In EU Studies, the component 'multilevel' points at the intertwinement of political processes at the regional level ('Europe of the Regions'), the level of the member-states and the level of the EU institutions in (mainly) Brussels.

There is no consensus about the definition of governance. In general, 'governance' refers to the intertwinement of public and private spheres, pulling attention to a new division of labour between them. The debate is to what extent societies are (and should be!) ruled by market forces, state power and/or civil society organizations. Questions of legitimacy, legal order, societal stability, privatization and public responsibility intertwine – and require multidisciplinary approaches.

Multilevel governance is also the overarching theme in our research programmes. While staff members are pioneering at the edges of understanding multilevel governance, teaching focuses on the institutional and the thematic contexts of European governance:

▪ **The *institutional* context:**

- Internally: **How Europe Hits Home.** We like to study and teach the structure and policies of international organisations and their institutions active in Europe in relation to the structure and policies of their (candidate) member-states.
- Externally: **How Europe Fits the World.** We like to analyse and discuss the role of European organisations and their member-states in global international organisations, as well as their relations with regional international organisations and national states.

▪ **The *thematic* context:**

- Internally: **How Europe Hits Home.** We like to study and teach the development of the integration discourse (including the processes of widening and deepening), the social policies in the EU, European Security, the democratic deficit, and European environmental issues.
- Externally: **How Europe Fits the World.** We like to address North-South issues, developments in the world economy, the development of international public law (including the law of international organisations), and the study of violent conflict and of human rights issues.

Both contexts are squared with theoretical and methodological insights and questions from four basic disciplines: economics, law, political science and sociology, as well as their interdisciplinary contexts. European Studies provides *standard* knowledge of and theoretical insight in:

- Related to Economics: the common economic policies of the EU, the EU budget; economic and monetary governance issues, including the functioning of the internal market and the Economic and Monetary Union (EMU); and theories about international economic relations, particularly between the EU and other trading-blocs;
- Related to Law: European Law; international public law; law of international organisations; and legal theory;
- Related to Political Science: the functioning and legitimacy of European international organizations and their institutions; political integration processes and theories; EU foreign policy and international relations theory;
- Related to Sociology: sociological integration theories, specifically in face of the (im)possibilities of an emerging European welfare-‘state’ and European social policies.

Each of the sub-themes forms a specialisation by itself. The strength of the programmes consists of the combination of disciplinary perspectives: a graduated student surveys the width of issue-areas and knows where to find specialised expertise to work out comprehensive policy scenarios. Therefore, he/she can arrive at policy-oriented insights that cannot be expected from specialists in specific sub-fields.

More information

www.MG.utwente.nl

For further information on the content of the different components of the exam we refer to the course programme and Osiris.

1b. Final attainment targets of the programme

The final attainment targets or exit qualifications of the programme are defined as follows:

1. From a student graduated in European Studies is expected that he:
 - can systematically analyze (changes in) socio-administrative problems and structures;
 - can incorporate several relevant disciplines and scientific methods in analyzing socio-administrative problems and structures;
 - is able to establish cohesion between several relevant disciplines and scientific methods;
 - is able to design effective administrative structures on the basis of the skills listed above;
 - can make a well-substantiated contribution to the implementation of structures developed in a democratic, constitutional administrative system.
2. From a student graduated in European Studies is expected that he has at least knowledge and theoretically founded insight in:
 - European law;
 - EU economic policy and international economic relations theory;
 - sociological theories regarding European integration, particularly in terms of developing a ‘welfare state’ and EU social policy;
 - the functioning and legitimacy of European international organizations and their institutions, political integration processes and theories and theories regarding the international system.
3. An effective European Studies graduate has an overall picture of the range of issues involved, knows when and where to acquire more specific expertise and can effectively analyze concrete administrative and policy issues. He can arrive at relevant policy insights which would normally be out of reach of specialists in one of the subfields.

1c. Level of the programme

In accordance with Art. 3 of the OER, the final attainment targets of the programme match those of the general, internationally accepted descriptions of the qualifications of an academic

Master's programme. The table below shows how the final attainment targets of the Master's programme in European Studies are related to the level descriptions of the so-called Dublin Descriptors.

Table 1: The match between final attainment targets and the Dublin Descriptors

Final attainment targets European Studies	Dublin Descriptors
The student is familiar with the existing knowledge base and is able to increase its width and depth through study. The student has the competence to acquire new scientific knowledge through research. For this purpose, research means: the development of new knowledge and new insights and understanding in a purposeful and methodical way.	(1) Knowledge and understanding (2) Applying knowledge and understanding (3) Making judgements
The student has the competence for design. Designing is a synthetic activity aimed at the realisation of new approaches, solutions and the sensible use of measures in the public domain. The student has a systematic approach characterised by the development and use of theories, models and coherent interpretations. They have a critical attitude and insight in the nature of scientific work.	(1) Knowledge and understanding (2) Applying knowledge and understanding (3) Making judgements (5) Learning skills
The student is competent in reasoning, reflection and forming a judgement in the context of the discipline.	(1) Knowledge and understanding (2) Applying knowledge and understanding, (5) learning skills
The student has the competence of being able to work with and for others. This requires adequate interaction, a sense of responsibility, leadership and communication with colleagues and non-colleagues. The student has competences to participate in scientific or public debate.	(2) Applying knowledge and understanding, (3) making judgements (4) communication
Beliefs and methods have their origin and decisions have social consequences in time. The students are aware of the temporal and social context of their work and have the competence to integrate these insights into their work.	(2) Applying knowledge and understanding, (3) making judgements (5) learning skills

2. Composition of the programme

The master programme has a studyload of 60 EC or 1680 hours (see section 1 of article 7.4a of the WHW). The programme is fulltime and has one exam, the master exam after one 1 year. The curriculum of the master programme has two semesters in every academic year with each two quartiles of ten weeks. In general in every quartile 3 courses of 5 EC (3 * 140 hours) are scheduled. Every quartile is closed with two exam weeks. Further information on the education schedule and the exam schedule can be found on the [webpages for ES](#).

In table 2 is indicated the study load of the programme and every single educational unit (section 2e of article 7.13 of the WHW 7.13, article 4 of this charter): see the column "EC" (1 EC = 28 hours). In addition the tables indicate the exam formats and prior knowledge requirements.

- If the successful completion of another exam is a condition for the admission of doing the specific exam. These prior knowledge requirements are mentioned in the column “obligatory prior knowledge” (section 2s of article 7.13 of the WHW);
- If the examiner thinks meeting the final terms of another exam is necessary (not successful completing the exam of the other course does not exclude the student from the specific exam), this is mentioned in the column “necessary prior knowledge”
- If the participation in practical exercises is obligatory in view of doing the specific exam (section 2t of article 7.13 of the WHW 7.13 and article 16 of this charter): see the column “test format”;
- If exams are taken orally, in writing or in another way (section 2l of article 7.13 of the WHW).

For the manner in which the exams are taken in the column “exam format” the following codes apply:

S	=	written exam;
PGI	=	practical exercise as a group; a written report of this exercise by group and (as far as possible) individual assessment of the manner in which the student has participated in the activities as a group;
PS	=	practical exercises and a written report of these practical exercises;
PSS	=	practical exercises or assignments, a written or oral report of these exercises or assignments, written exam. It is only allowed to participate in the exam if the practical exercises have been carried out and the report of these practical exercises has been assessed with a sufficient result.
PSM	=	like PSS, but in principal an oral exam;
BZS	=	supervised self study
BAM	=	in accordance with rules as set out in the regulations on the Master's assignment.

Further details can be found in OSIRIS and/or will be announced in time by the examiner in conformance with what is said in article 4, “Rules and Regulations of the Examination Boards”.

For more information on the content of the educational units we refer to OSIRIS and Blackboard.

A) Master's Programme European Studies (1 year, 60 EC)

The **general programme** of the master's programme European Studies consists of six core courses of 5 EC each, the master class of 5 EC and the master's thesis of 25 EC. Instead of the general programme students can choose a **specific Regulation module** which also consists of six core courses of 5 EC each, the master class of 5 EC and the master's thesis of 25 EC. In the Regulation module three core courses of the general programme are replaced by three specialized courses on regulation.

Table 2: Curriculum of the general MSc programme European Studies and the specific Regulation module European Studies 2012-2013

Code	Course name	General programme	Regulation module	Exam format	Prior knowledge (required or obligatory)
		EC	EC		
Q 1					
191764190	European Institutions	5	5	PSS	
191764160	European Union Law	5	5	PSS	
201100077	Policy Analysis in Public and Technological Domains	5		PSS	
194101150	Theories of regulation		5	PSS	
Q 2					
191763200	European Economic Policies	5	5	PSS	191764190 (required)
191764180	International Relations Theory and EU Foreign Policy	5		PSS	191764190 + 194101150 (required)
191763810	European Social Policies	5		PSS	
194101160	European Regulatory Governance		5	PSS	
194101200	Current Topics in Regulation		5	PS	
Q 3					
194119080	Master class European Studies	5	5	PS	20 EC (obligatory)
194128051	Master's thesis European Studies	10	10	BAM	
Q 4					
194128051	Master's thesis European Studies	15	15	BAM	20 EC (obligatory)
Total		60	60		

B) Master Double Diploma Programme European Studies (1.5 year, 90 EC)

Students can also choose the one and a half year master's programme offered by the University of Twente (The Netherlands) and the Westfälische Wilhelms-Universität Münster (Germany). This programme leads to the double diploma. In this case students follow six additional relevant courses of 5 EC each (30 EC in total) offered by the Westfälische Wilhelms-Universität Münster in the second semester (the German 'Summer Semester'). The specific courses will be made known during the first semester of the academic year.

Students who follow the double diploma programme can choose to start their master's programme in the second semester in Münster or in the first semester in Twente. Therefore from the academic year 2008-2009 on the master class (194119080) and the master's thesis (194128051) are also offered to the students in the first semester (in addition to the second semester).

3. Coherence and didactic concept

The Master's programme in European Studies has a clear structure with the central 1-year programme and two options: (a) the 1.5 year double diploma programme (Twente/Münster), and (b) the regulation module within the 1-year programme. The didactic concept of the MSc-programme reflects the professional and academic master level by demanding high levels of autonomy and integration in both course work and thesis work.

High level of autonomy: The programme aims at increasing students' autonomy to the highest possible level. This is clear from the way acquired knowledge and skills in all courses are being tested: by means of practical exercises or assignments, oral or written reporting of findings and results, and a final written exam and/or essay. The final exam/essay is open to students only if all previous assignments have been completed satisfactorily.

High level of integration: The master European Studies is a training to perform research, but also a test of competences. The aim is that students demonstrate that they are able to integrate theoretical perspectives and research skills in an applied scientific context.

4. Electives and practical exercises

4a. Content of the specializations

As mentioned before the student can choose the general one year master's programme at Twente, the specific one year Regulation module at Twente or the one and a half year double diploma master's programme offered by the University of Twente (The Netherlands) and the Westfälische Wilhelms-Universität Münster (Germany).

4b. Requirements related to electives and student's individual choice

The only extra requirement is admittance by the Westfälische Wilhelms-Universität Münster (Germany) for the one and a half year double diploma master programme.

4c. Content of practical exercises

A practical exercise is a study unit or component of a study unit, in which the emphasis is on the activity of the student himself or herself, such as:

1. Doing a literature study, making an assignment or policy design, writing a thesis, an article or 'position paper' or taking care of a public presentation;
2. Executing a design- or research assignment, participating in practical exercises, exercising skills;
3. Doing an internship, participating in field work or an excursion;
4. Participating in other required learning activities aimed at achieving the desired skills.

Practical exercises are generally part of a study unit for which there is a responsible examiner. The structure of the practical exercise(s) is described in general terms in OSIRIS, and in more detail on Blackboard at the beginning of the programme.

The Master's assignment (or Master's project or Master's thesis) is not supervised by a single responsible instructor; instead, a Master's committee is assembled for each assignment. The Master's committee for the Double Diploma of the University of Twente and the Westfälische Wilhelms-Universität Münster consists of lecturers from both universities (see for more details: Rules & Regulations of the Examination Boards, art. 6 paragraph 6, sub c). The Master's project is an individual project, and is evaluated on an individual basis. The Master's project tests the student's competence in the integrated application of the knowledge, comprehension and skills covered in the study units. The Examination Board

prescribes an evaluation checklist to help ensure the quality of the evaluation. Further information on the Master's assignment can be found in the Master's thesis manual, which can be consulted through Blackboard (course: 194128051 Master's Thesis European Studies).

5. General information

5a. Admission to the programme

A request to be admitted to the programme is assessed by an admission committee that consists of the following programme directors:

- Prof M.R. Kabir PhD (BA)
- Prof R. Hoppe PhD (PA)
- Prof N.S.Groenendijk PhD (ES)
- G.A.C. Wagenaar PhD (HS)
- E.W. Hans PhD MSc (IE&M)
- Prof J. van Hillegersberg PhD (MBI)
- Prof O.A.M. Fisscher PhD MSc (post-academic programmes).

The assessment of all applicants' skills is based on academic background. The regulations for the different educational backgrounds are:

1. Bachelor's or 'doctorandus' degree in Public Administration (BSK) awarded by the University of Twente
Applicants with either a UT BSK Bachelor or a UT BSK 'doctorandus' degree with a specialization in European Studies will be eligible for admission
2. Bachelor's degree awarded by another Dutch university
Applicants with a Bachelor's degree in a related field awarded by another Dutch university will be eligible for admission, provided they completed three of the following subjects as part of the Bachelor's degree course:
 - sociology
 - economics
 - law
 - political scienceApplicants with a Bachelor's degree awarded by another Dutch university and who have a deficiency of more than 20 EC's are judged on an individual basis.
3. Another Bachelor's degree awarded by the University of Twente
Applicants with a Bachelor's degree other than PA awarded by *the University of Twente* may be admitted to the programme after completion of a pre-Master's programme. The admission committee determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme within a period of 12 months¹¹. For information concerning admission see <http://www.utwente.nl/master/how-to-apply/current-ut-bachelor-students.doc/>.
4. Dutch higher professional education undergraduate (HBO-Bachelor) degree in a related field
Students with a HBO-Bachelor's degree in a related field are eligible for admission if:
 - they have successfully completed the 30 EC pre-Master's programme within a period of twelve months¹². The admissions committee determines the content of the pre-Master's programme.

¹¹ Per course of the pre-Master's programme no more than two attempts are permitted to sit the corresponding exam. If the student fails to successfully complete the pre-Master's programme on time, he/she will not be admitted to the Master's Programme.

¹² Idem (as the previous note)

Students with a previous education in higher professional education (HBO) are assumed to have sufficient English language skills¹³ and mathematics skills at the start of the master phase; it is the responsibility of the student to reach this level of English and mathematics.

5. Other HBO-Bachelor's degrees

The admission committee will assess HBO-Bachelor's degrees in a non-related field from another Dutch university on an individual basis.

6. Bachelor's degrees from a non-Dutch university

The admission committee will assess Bachelor's degrees from a non-Dutch university on an individual basis.

The applicant's competences will be assessed on the basis of:

- a credential evaluation prepared by the Netherlands Organisation for International Co-operation in Higher Education (Nuffic)
- a letter of motivation
- an IELTS overall band score of 6.5 or higher, or a TOEFL internet-based (TOEFL-iBT) score of at least 90
- any additional information required by the admission committee.

Other provisions

- In addition to the admission requirements, the applicant must be able to demonstrate to the admission committee that he has a sufficient command of the English language to complete the curriculum and sit exams.
- If necessary, the student must complete the pre-Master's programme before being admitted to the Master's programme.
- With regard to a student's command of the English language, the admission committee will determine whether additional requirements or a diagnostic exam is required.
- Contrary to the above provisions, the administrator may permit an applicant who does not satisfy the admission criteria to follow subjects offered as part of the master's programme.

5b. Language of teaching and exams

The courses and the exams in the Master's programme are all in English. The report of the Master's project will be 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.

To safeguard the quality of teaching and examination in the English language, MG has taken the following measures:

- An assessment is made of all MG teaching staff and examiners as to their command of the English language. If their IELTS score is slightly below the established minimum level, they will be allowed a remediation period. Failing to meet the standard after this period will lead to exclusion from the English-language programme. Any newcomers will be assessed upon their entry.
- Inclusion of specific demands on their proficiency in the English language in the admission requirements for the MG English language programmes, wherever a sufficient command is not warranted by the candidates' prior education.

5c. International cooperation

As indicated above (section 2 and 4) a special, one and a half year double degree programme European Studies is offered by the University of Twente in cooperation with the

¹³ Their proficiency in the English language is at pre-university education level (Dutch: VWO) or at academic IELTS level with overall band score of 6.5 or higher, or a TOEFL internet based (TOEFL-iBT) score of at least 90.

Westfälische Wilhelms-Universität Münster (Germany).

Expression of marks according to the German grade system for the Double Diploma

The assessment in the Master's programme can also be expressed in the form of a mark according to the German grade system (from 1 till 6). These marks are converted in conformance with the table below. The conversion table may be inspected at BOZ.

Dutch grade	ECTS-grade & Description	German grade
9 (10)	A (A+) Excellent (outstanding performance with only minor errors)	1 (sehr gut)
8	B Very good (above the average standard but with some errors)	2 (gut)
7	C Good (generally sound work with a number of notable errors)	3 (befriedigend)
6	D Satisfactory (fair but with significant shortcomings)	4 (ausreichend)
6 (-)	E Sufficient (performance meets the minimum criteria)	4(-) (mangelhaft)
5	FX Fail (some more work required before the credit can be awarded)	5 (ungenügend)
4-1	F Fail (considerable further work is required)	6 (ungenügend)

Explanation:

- In the Dutch assessment system the marks 9 and 10 are seldom awarded.
- The Dutch "9" in general is translated with "A". For a "10" or "A+" some extra information is needed on the very outstanding achievement.
- The Dutch "6" in general is translated with "D". An "E" is given if the teacher indicates that it is a "bad 6" or the achievement only fulfills the minimum requirements.
- The German "4" in general is translated with "D". An "E" is given if the teacher indicates that it is a "bad 4 / 4-" or the achievement only fulfills the minimum requirements.

The translation from and to the Dutch marks is carried out – in consultation with the teacher(s) involved – according to the scheme above by BOZ.

A refinement of 0.3 above or under the marks 1 till 6 is possible (except 4.3 and 5.3).

5d. Program Committee (OLC) and Examination Board

Members of the educational programme committee (OLC) are appointed by the Dean of the faculty every (two) year(s) (faculty regulations article 13). The most up-to-date composition of the committee can be found at the webpage of the [programme committees](#). Correspondence with the Programme committee for ES goes through i.wilmink@utwente.nl. For more information contact the administration office on (053 489)3200.

Members of the Examination Board are appointed by the Dean of the faculty every two years (faculty regulations article 12). The up-to-date composition of the Board can be found at the [webpage of the Examination Boards](#). Correspondence with the Boards goes through mastersgriffie@mb.utwente.nl. For more information contact the administration office on (053 489)3200.

6. Transitional arrangements

There are no transitional arrangements in place.

B2d: Programme-specific appendix to the OER 2012-2013

for the Master of Science programme

Health Sciences

1. *Objectives (subject 1 NVAO accreditation system)*
 - 1a Profile of the programme
 - 1b Final attainment targets of the programme (OER, art. 3)
 - 1c Level of the programme (facet 2 NVAO accreditation system; OER, art. 3)
2. *Composition of the programme*
 - The content of the programme and its associated examination (OER, article 2.1a)
 - Nature of the programme (OER, Article 2.1g)
 - Study load of the programme and of each of the study units making up the programme (OER, article 2.1e)
 - The exam formats (OER, article 2.1h)
 - Number and sequence of exams and practical exercises (OER, article 2.1f)
 - Required sequence of exams (OER, article 2.1i)
3. *Coherence and didactic concept (facet 6 NVAO accreditation system)*
(not yet included)
4. *Electives and practical exercises*
 - 4a Content of the specializations (OER, Article 2.1b)
 - 4b Requirements related to electives and student's individual choices (OER, 2.1j)
 - 4c Content of practical exercises (OER, article 2.1d)
5. *General information*
 - 5a Admission to the programme (OER Article 4)
 - 5b Language of teaching and exams (OER article 2.1l)
 - 5c International cooperation
 - 5c Programme committee (OLC) and Examination Board
6. *Transitional arrangements (OER, article 2.1k; OER, article 22)*

1. Objectives

1a. Profile of the programme

The objectives of the Master of Science in Health Sciences programme are defined as follows:

- the health scientist is capable of analysing and evaluating care processes and the impact of technologies on these processes
- the health scientist is capable of adapting care processes to benefit health care
- the health scientist is capable of adjusting care processes within health care in its societal context, as dictated by the principles of Public Administration and Business Administration
- the health scientist has mastered conventional scientific methods and technologies used in the natural sciences and the social sciences and can use them to conduct research in the health sciences
- the health scientist can communicate and work on a project basis with people in and outside of the health sciences specialization.

Health scientists are trained to acquire knowledge of and insight into multi-agency, sequenced healthcare (meso-level). The Master's programme devotes a great deal of attention to the international comparison of healthcare systems and to a high level of complexity in knowledge and insights.

Health scientists are trained to perform policy, consulting and research functions in which the health scientist can shape his or her profession independently and in more complex positions.

The health scientist is also trained to have skills for independent critical judgement, including in the areas of ethics, standards and values. Building on the foundational skills acquired in the Bachelor's phase, the health scientist will be able to independently expand his or her repertoire of effective and situationally appropriate communicative skills. Additionally, the health scientist will be capable of independent reflection and of augmenting his scientific knowledge and skills.

1b. Final attainment targets of the programme

The final qualifications (attainment targets) of the Master of Science in Health Sciences programme are defined as follows:

SD - Scientific Discipline: Health Sciences

The student can...

- a) apply evidence based research theories in the analysis and evaluation of healthcare and organizational interventions;
- b) apply the principles of Health Technology Assessment and Health Economics to analyse the efficiency of health care interventions or healthcare technologies;
- c) explain how economic principles affect healthcare decision making;
- d) analyse how different health systems compare in terms of efficiency, equity and accessibility.

SR – Scientific research: Health Services Management (HSM) and Health Technology Assessment & Innovation (HTA&I)

The student can...

- a) apply research and statistical methods in healthcare and health sciences research, including evidence based medicine, systematic reviews and health economic evaluation;
- b) deduce a research question from a complex problem, develop a research proposal and select and apply appropriate methodologies to answer the question.

Track specific HSM (depends on individual course selection)

- c) apply (basic) quantitative operations management tools and techniques for analyzing and developing plans for improving healthcare delivery processes;
- d) use business approaches to analyse the efficiency and quality of healthcare institutes;
- e) understand the basics of healthcare financing and the different payment systems and evaluate the consequences for healthcare markets, including hospitals, insurers and patients;
- f) understand and use quality management methods in healthcare, mainly in hospital benchmarking and performance measurement;

Track specific HTA&I (depends on individual course selection)

- g) use different methods (e.g. MCDA and stakeholder analysis and health economics) to support healthcare decision making at individual, institutional and societal level;
- h) evaluate the risks and benefits of medical technologies in the context of human, regulatory, and ethical issues on effective healthcare;
- i) explain how health policies are made through the inter-relationship of context, process and actors;
- j) analyse the typical challenges and behavioral aspects while implementing ehealth strategies to support healthcare delivery.

DES - Design

The student can...

- a) develop a basic HTA&I value dossier for demonstrating clinical and health economic benefits of new medical technologies;
- b) develop healthcare redesign plans to achieve a sustainable and solidary health system.

Track HSM (depends on individual course selection)

- c) design effective and efficient implementation strategies for organizational change to improve the quality & safety of health care delivery processes;
- d) develop strategies for purchasing healthcare products while taking into account the basic financial arrangements that underlie purchasing arrangements between healthcare insurers and hospitals.

Track HTA&I (depends on individual course selection)

- e) design effective and efficient implementation strategies for e-health applications in healthcare settings
- f) design comprehensive analytic framework for analyzing decision problems and providing decision support to individual stakeholders (government, professionals, patients).

SA – Scientific Approach

The student can...

- a) use (different) competing scientific theories (e.g. evidence based medicine and management theories) and select the most appropriate approaches to solve the problems;
- b) analyse the international context of the health care problem, and appraise differences between countries in their attempt to develop a sustainable healthcare system;
- c) identify stakeholders, barriers and facilitators relevant to the healthcare problem to be analysed;
- d) systematically collect and integrate research data from different resources;
- e) write a scientific report/article and present and defend the statements in English.

IC - Intellectual Competencies

The student can...

- a) use logical reasoning in discussion, analysis of problems, written documents and presentations;
- b) reflect on own actions and decisions to improve these when necessary;
- c) work independently;
- d) identify gaps in own knowledge and skills and find ways to close this gap;

C&C – Cooperation and Communication

The student can...

- a) cooperate effectively in a multi-disciplinary team (planning, coordination, team roles) and take responsibility for his own contribution;
- b) communicate on research and problem solutions in writing, both with experts as well as layman;
- c) communicate on research and problem solutions orally, both with experts as well as layman;
- d) use methods and procedures from project management when relevant;
- e) work in an international environment;

TMP - Temporal and Social Context

The student can...

- a) use ethical and legal aspects in the analysis of problems and the making, implementation and evaluation of health care policies;
- b) use scientific, ethical, economic and political aspects of health care interventions in a debate;
- c) describe the most important technological trends in health care (e.g. personalized medicine, genomics/proteomics and nano medicine)
- d) analyse the most important barriers and facilitators to the introduction of new medical or information & communication technology in health care, including the interaction between the different levels of health care (individual, organizational, national, international);
- e) interpret and explain the socio economic, individual and cultural differences of health.

1c. Level of the programme

The final attainment targets of the Health Sciences programme closely follow the internationally accepted indicators of an academic educational programme on a Master's level laid down in the so-called Dublin Descriptors (see article 3 of the OER).

2. Composition of the programme

The Master's programme has a study load of 60 EC (1 year, 1680 hours) (see also section 7.4a, paragraph 1, Higher Education and Research Act).

Table 1 shows the study units (courses) making up the programme and the study load in EC (1 EC = 28 hours) per unit, as well as the specialization that each course belongs to. The table also shows the exam format for the study unit and any applicable prior knowledge prerequisites (see also OER, article 16).

For more information on the content of the study units, consult OSIRIS and Blackboard.

Table 1: MSc. Health Sciences: curriculum 2012-2013

CCode	Course name	HTA EC	HSM EC	Exam format	Prior knowledge
Q 1					
194111220	Clinical Efficacy & Medical Technology Assessment <i>HTA-track: choose 2 out of 3:</i>	5 5 + 5	5	PS	
194112600	E-Health & Quality of Care			PS	
194111210	Medical Decision Making			PSS	
201100077	Policy Analysis in Public and Technological Domains <i>HSM-track: choose 2 out of 3:</i>		5 + 5	PSS	
201000182	Management of Technology in Health Care			PS	
193190000	Managing Service Operations			PSS	
201100002	Health Care Purchasing			nnb	
Q 2					
194112110	Health & Health Systems	5	5	PSS	
201100068	Risk Assessment and Regulation of Health Technologies	5		PS	
201100003	Public Health Policy	5		PSS	
201000066	Quantitative Methods for Operations Management in Healthcare		5	PSS	
194112170	Quality & Safety in Healthcare		5	PSS	
Q 3					
194119090	Masterclass Health Sciences Methodology	5	5	PS	
194100050	Masterthesis	10	10	BAM	Obligatory: 20 EC
Q 4					
194100050	Masterthesis	15	15	BAM	Obligatory: 20 EC
Total		60	60		

Within each quartile, the order of the courses in the table above follows the course code and therefore does not necessarily represent the chronological order.

Key to exam formats:

PS = practical exercise with written report

PSS = practical exercise(s), written or oral report of practical exercise(s) and written exam (exam may only be sat after successful completion of practical exercise(s))

BAM = in accordance with the rules as set out in the regulations on the Master's project (of Master's thesis).

Determining is that the student provides an achievement that can be assessed.

Further details can be found in OSIRIS and/or will be announced in time by the examiner in conformance with what is said in article 4, "Regels & Richtlijnen Examencolleges".

The programme concludes with the Master's thesis (or Master's project of Master's assignment), as part of which the student demonstrates his ability in the integrated application of the knowledge and skills gained from the curriculum of the programme. The Master's assignment represents 25 EC.

The Examination Board of the program establishes the rules governing:

- a. the procedures used to determine a student's eligibility for the Master's project
- b. the manner in which the student's study programme (Master's assignment and courses) is composed and approved
- c. the manner in which the student acquires the Master's assignment
- d. the members of the Master's committee
- e. the manner in which the Master's assignment will be completed, monitored and evaluated.

3. Coherence and didactic concept

(not yet included)

4. Electives and practical exercises

4a. Content of the specializations

The Master's programme HS offers its students 20 EC of elective choices, by choosing one of two tracks: Health Services and Management (HSM) and Health Technology Assessment.

In the first quartile (Q1) the student can choose 2 out of 3 specialization or "track" courses, alongside a third, shared course. In the second quartile (Q2) two courses are track-specific, the third course is a shared course. Table 1 shows the details.

An additional (individual) accent in the programme may result from the student's choice of the subject for his Master's thesis.

4b. Requirements set on selection of electives and individual choices

For the Master's programme of Health Sciences a Master's Thesis Commission has been set up to check Master's assignment proposals. The objective of this check is twofold. Firstly, it focuses on the subject matter of the proposed assignment: does it fit the domain of the Health Sciences' programme? Secondly, the intended supervision of the student's work is looked at: is at least one examiner belonging to the programme's key academic staff involved?

The members of the Master's Thesis Commission are key academic staff members of the Health Sciences programme. Both specializations are represented.

4c. Content of practical exercises

A practical exercise a unit of study or part of a unit of study, whereby the emphasis is on the student's activities, such as:

1. carrying out a literature research, preparing an assignment or a preliminary design, writing a thesis, article or 'position paper', or delivering a public presentation;
2. carrying out a design or research assignment, doing tests and experiments, participating in practicals, practicing skills;
3. following an internship, taking part in fieldwork or an excursion;
4. participating in other required learning activities aimed at achieving the desired skills.

Practical exercises are generally part of a study unit for which there is a responsible examiner. The structure of the practical exercise(s) is described in general terms in OSIRIS, and in more detail on Blackboard at the beginning of the programme.

The Master's assignment (or Master's project or Master's thesis) is not supervised by a single responsible instructor; instead, a Master's committee is assembled for each assignment. The Master's project is an individual project, and is evaluated on an individual basis. The Master's project tests the student's competence in the integrated application of the knowledge, comprehension and skills covered in the study units. The Examination Board prescribes an evaluation checklist to help ensure the quality of the evaluation. Further information on the Master's assignment can be found through the Blackboard site of the Master's assignment HS.

5. General information

5a. Admission to the programme

A request to be admitted to the programme is assessed by an admission committee that consists of the following programme directors:

- Prof M.R. Kabir PhD (BA)
- Prof R. Hoppe PhD (PA)
- Prof N.S.Groenendijk PhD (ES)
- G.A.C. Wagenaar PhD (HS)
- E.W. Hans PhD MSc (IE&M)
- Prof J. van Hillegersberg PhD (MBI)
- Prof O.A.M. Fisscher PhD MSc (post-academic programmes).

In addition to the general criteria, Health Sciences distinguishes two types of (inter)national education:

1. Research Universities (primarily responsible for research-oriented programs)
2. Universities (colleges) for professional education (prepares students particular for more practical professions)

The admissions committee has specific requirements depending on the degree.

The admissions committee assesses international applicants with a Bachelor's degree awarded by a non-Dutch Research University or University (college) for higher professional education on an individual basis.

The assessment of the applicant's skills is based on (1):

- a NUFFIC credential evaluation
- a letter of motivation
- an IELTS score with an overall band score of 6.5 or higher, or a TOEFL internet-based (TOEFL-iBT) score of at least 90
- any additional information required by the admissions committee.

The assessment of all applicant's skills is based on (2) academic background.

For all other applicants the admission requirements are as follows.

A Bachelor's degree in Health Sciences awarded by a Dutch university

Applicants with a Bachelor's degree in Health Sciences awarded by a Dutch university will be admitted to the program. With regard to proficiency in English, the admission committee decides whether additional requirements should be set or a diagnostic test should be taken.

A Bachelor's degree awarded by a Dutch university

Applicants with another Bachelor's degree in a related field awarded by a Dutch university will be admitted after completion of a pre-Master's program. The admissions committee determines the content of the pre-Master's program. The applicant must have successfully completed the entire pre-Master's program within a period of 12 months.¹⁴

¹⁴ Per course of the pre-Master's programme no more than two attempts are permitted to sit the corresponding exam. If the student fails to successfully complete the pre-Master's programme on time,

Another Bachelor's degree awarded by the University of Twente

Applicants with Bachelor's degree other than HS awarded by *the University of Twente* may be admitted to the program after completion of a pre-Master's program. The admissions committee determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme before being admitted to the Master's degree program¹⁵. For information concerning the admission see <http://www.utwente.nl/master/how-to-apply/current-ut-bachelor-students.doc/> .

A Bachelor's degree in a related field awarded by a Dutch University (college) for higher professional education

Students with a Bachelor's degree in a related field awarded by a Dutch University (college) for higher professional education will be admitted if:

- they have successfully completed a pre-Master's programme within a period of twelve months¹⁶. The admissions committee determines the content of the pre-Master's programme.
- their proficiency in Mathematics is at pre-university level (Dutch VWO A1, 2 or HAVO Wiskunde B).

Students who have had a higher professional education (HBO) are assumed to be sufficiently proficient in the English language at the start of the master phase¹⁷. It is the responsibility of the student to attain this level of English.

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

- Physical PhysioTherapy (Dutch: Fysiotherapie) and Medische Beeldvormende en radiotherapeutische Technieken (both pre-Master's programme of 30 EC)
- Nursing (Dutch: Verpleegkunde) (pre-Master's programma of 40 EC)
- Care management (Dutch: Management in de Zorg), Diëtetiek, or Sports and Management (all a pre-Master's programme of 60 EC).

Another Bachelor's degree awarded by a Dutch University (college) for higher professional education

Applicants with a degree in a non-related field are judged on an individual basis. In specific cases and on the recommendation of a track coordinator, the admissions committee may grant exemptions, entirely or partly, from the domain-specific part of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's Program before being admitted to the Master's degree program.

5b. Language of teaching and exams

The courses and the exams in the Master's programme are all in English.

The report of the Master's project will be drafted in English. The report of the Master's project will be 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.

To safeguard the quality of teaching and examination in the English language, MG has taken the following measures:

- An assessment is made of all MG teaching staff and examiners as to their command of the English language. If their IELTS score is slightly below the established minimum level, they will be allowed a remediation period. Failing to meet the standard after this period will lead to exclusion from the English-language programme. Any newcomers will be assessed upon their entry.

he/she will not be admitted to the Master's Programme

¹⁵ Idem (as the previous note)

¹⁶ Idem (as note 15)

¹⁷ Their proficiency in the English language is at pre-university education level (Dutch: VWO) or at academic IELTS level with overall band score of 6.5 or higher, or a TOEFL internet based (TOEFL-iBT) score of at least 90.

- Inclusion of specific demands on their proficiency in the English language in the admission requirements for the MG English language programmes, wherever a sufficient command is not warranted by the candidates' prior education.

5c. International cooperation

(not applicable)

5d. Program Committee (OLC) and Examination Board

Members of the Programme Committee (OLC) are appointed by the Dean of the faculty every (two) year(s) (faculty regulations article 13). The most up-to-date composition of the committee can be found at the webpage of the [programme committees](#). Correspondence with the Program Committee of HS goes through i.wilmink@utwente.nl. For more information contact the administration office on (053 489)3200.

Members of the Examination Board are appointed by the Dean of the faculty every two years (faculty regulations article 12). The up-to-date composition of the Board can be found at the [webpage of the Examination Boards](#). Correspondence with the Boards goes through mastersgriffie@mb.utwente.nl. For more information contact the administration office on (053 489)3200.

6. Transitional arrangements

(none)

B2e: Programme-specific appendix to the OER 2012-2013

For the Master of Science programme

Industrial Engineering and Management (IEM)

1. *Objectives (subject 1 NVAO accreditation system)*
 - 1a Profile of the programme
 - 1b Final attainment targets of the programme (OER, art. 3)
 - 1c Level of the programme (facet 2 NVAO accreditation system; OER, art. 3)

2. *Composition of the programme*
 - The content of the programme and its associated examination (OER, article 2.1a)
 - Nature of the programme (OER, Article 2.1g)
 - Study load of the programme and of each of the study units making up the programme (OER, article 2.1e)
 - The exam formats (OER, article 2.1h)
 - Number and sequence of exams and practical exercises (OER, article 2.1f)
 - Required sequence of exams (OER, article 2.1i)

3. *Coherence and didactic concept (facet 6 NVAO accreditation system)*

4. *Electives and practical exercises*
 - 4a Content of the specializations (OER, Article 2.1b)
 - 4b Requirements related to electives and student's individual choices (OER, 2.1j)
 - 4c Content of practical exercises (OER, article 2.1d)

5. *General information*
 - 5a Admission to the programme (OER Article 4)
 - 5b Language of teaching and exams (OER article 2.1l)
 - 5c International cooperation
 - 5c Programme committee (OLC) and Examination Board

6. *Transitional arrangements (OER, article 2.1k; OER, article 22)*

1. Objectives of the programme

1a. Profile of the programme

The Industrial Engineering and Management programme is aimed at educating students to highly qualified industrial engineers and managers.

Industrial Engineering and Management (IEM)¹⁸ is about improving operational processes, in which multiple (sometimes competing) objectives need to be considered (such as: improve quality and service, manage risks, increase productivity, and reduce costs). Industrial Engineering & Management uses modeling and quantitative analysis, is grounded in an understanding of the technology that is used in processes, considers human behavior (individual and social), and has an open mind for the environment of the organization (for example: competitors, market structures, regulation, or government policies).

IEM is applied in a variety of fields (such as: manufacturing, finance, logistics, telecommunications, healthcare). IEM does not only apply to products, but also to services, processes, and projects. Customers may be consumers or other companies in the private sector. IEM is also relevant for the public sector (such as: health care, taxation and social insurances, defense, water management and financing and project management of infrastructure projects). We respect this broadness of IEM applications by giving students considerable freedom in focusing their program on areas they are specifically interested in.

In the MSc IEM programme, students learn to work on more complex challenges in Industrial Engineering and Management and with less professional guidance compared with the BSc TBK programme. MSc IEM graduates are specialized in a particular field of IEM and are also able to translate domain problems towards scientific questions and vice versa, to undertake scientific research in this domain.

The MSc programme consists of a set of 'core courses', including specialization courses', 'elective courses' and the final assignment. In the *core courses* some topics are covered which every IEM graduate should master, and in depth courses of his specialization. The specialization courses and elective courses provide the opportunity to create a personal profile. This may vary from even more in-depth specialization in a certain scientific domain to a more broad professionalization in e.g. design methodologies, modeling techniques, IEM in health care etc. The elective courses offered may vary, depending on the available staff expertise and the research activities of the various departments. Various clusters and electives are offered. From the available courses and electives, every student makes up a personal IEM examination programme. To guarantee a proper covering of the final qualifications, such an individual programme has to be approved by, or on behalf of, the Examination Board.

1b. Final attainment targets of the programme

The graduates of the MSc IEM programme are able to analyze problems and define required improvements for the design and control of operational processes (the IEM domain) at an academic level. Moreover, they are able to implement such improvements. The MSc graduates are able to perform these activities in complex situation.

The first group of qualifications (A) is related to the professional academic activities of an IEM graduate; the second group (B) reflects the general academic level.

¹⁸ In Dutch: Technische Bedrijfskunde, in German: Wirtschafsingenieur, or Technische Betriebswirtschaft

Table 1: Final qualifications MSc IEM

Professional academic qualifications	
<p>The graduate is able to quickly identify, thoroughly comprehend, critically assess, correctly apply, and creatively integrate existing scientific knowledge that can be used for analyzing problems and designing solutions, in one of the domains of:</p> <ul style="list-style-type: none"> production and logistics; information systems; finance and accounting; health care. <p>This implies the following competencies in the domain chosen</p>	
A1	<p>Has a thorough overview of the <u>structure of research and design processes</u> and is able to</p> <ul style="list-style-type: none"> - identify the various steps in performed research and design - properly break up own research and design activities into sub-processes <p>These processes are intertwined: Research is needed for producing knowledge that is used for designing solutions in a specific context. Such knowledge is produced in a purposeful and methodical way (using scientific research methods). It may or may not be generalizable knowledge</p>
A.2	<p>Has a thorough overview of quantitative and qualitative <u>empirical research methods</u> and is able to</p> <ul style="list-style-type: none"> - critically analyze performed research as to the methodological aspects - select an appropriate method and justify this choice for research to be performed - apply this method in relatively complex cases
A3	<p>Has a thorough overview of quantitative <u>modeling techniques</u> for operational processes in this domain, and is able to</p> <ul style="list-style-type: none"> - critically analyze the results of modeling activities - select appropriate modeling techniques and justify this choice - apply these techniques in relatively complex cases.
A4	<p>Is able to <u>integrate</u> existing knowledge, modeling techniques, and research results for designing, validating, and selecting solutions in relatively complex cases</p> <p>This is challenging, because existing knowledge may not fully apply to a specific situation, models are always stylized, empirical research always has limitations, and some aspects have been left out of scope from the beginning anyway</p>
A5	<p>Has an overview of <u>implementation methods</u> and processes and is able to</p> <ul style="list-style-type: none"> - critically analyze ongoing or finished implementation processes - plan globally an implementation process in a relatively complex case
A6	<p>Has an overview of <u>evaluation methods and techniques</u> and is able to</p> <ul style="list-style-type: none"> - critically analyze the results of performed evaluations - select appropriate evaluation methods and justify this choice - carry out an evaluation in relatively complex cases
A7	<p>In order to be able to meet these competencies, the graduate must have mastered level 3 of a set of core disciplines in the specialization domain.</p>
A8	<p>Is able to contribute to the development of the academic profession by identifying generic consequences and implications from professional cases (for example, general presentations, and write papers about design solutions).</p>
General academic qualifications	
B1	Is able to work autonomously and self-reliant
B2	Is able to work in multidisciplinary teams.
B3	Is able to communicate properly (in oral and written form) with various stakeholders
B4	Is able to conduct a bibliographic search and knows how to reference correctly
B5	Is able to reflect on professional behaviour and ethical and societal aspects of work
B6	Is able to reflect on and direct personal and professional development
B7	Is able to manage and concretize effectively his own learning process in the context of "life long learning"

1c. Level of the programme

Tabel 2: Relationship between Final Qualifications and the Criteria for Academic Bachelor's and Master's Curricula of the 3TU

	Competent in one or more scientific disciplines	Competent in doing research	Competent in designing	A scientific approach	Basic intellectual skills	Competent in co-operating and communicating	Takes account of the temporal and social context
A1		x	x				
A2		x			x		
A3				x	x		
A4			x	x			
A5							
A6			x				
A7	x				x		
A8							
B1						x	
B2						x	
B3						x	
B4				x			
B5							x
B6							x
B7	x						

2. Composition of the programme

The IEM Master's programme represents a study load of 120 EC (2 years, 3360 hours; see also section 7.4a, paragraph 1, Higher Education and Research Act).

The programme consists of three components:

1. A set of obligatory courses: the 'core programme' including a set of 'cluster specialization courses'
2. Additional elective courses to fill up the total study load to 90 EC
3. A final (Master's) assignment of 30 EC.

This structure applies to all IEM students.

The curriculum overview for the Master program includes the following categories:

Quarter / Subject code / Subject name / Study load in ECs / Way of testing / Prior knowledge

The assessment components are sorted by category according to subject code. The overview of assessment components is not presented in chronological order.

Key to exam formats:

- S = written exam
- M = oral exam
- PGI = group practical exercise, including a written group report and (in so far as possible) individual assessment of the manner in which the student participated in the group exercise
- PS = practical exercise(s), including a written report
- PSS = practical exercise(s), including a written and/or oral report, and a written exam; the student may sit the written exam only after satisfactorily completing

	the practical exercises and the written and/or oral report
PSM =	similar to PSS, however, an oral exam will be sat
BZS =	monitored independent study
BAHL=	reviewed in a manner to be determined by the graduate professor
BAM =	reviewed in accordance with the procedures laid down in the regulations applicable to the Master's assignment.

The student's work must be eligible for review. More specific details are available via OSIRIS and/or 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).

Final exam: the Master's assignment

The programme concludes with the Master's assignment (or Master's project or Master's thesis), as part of which the student demonstrates his ability in the integrated application of the knowledge and skills gained from the curriculum of the programme. The Master's assignment represents 30 EC.

The Examination Board of the program establishes the rules governing:

- a. the procedures used to determine a student's eligibility for the Master's project
- b. the manner in which the student's Master's curriculum (Master's assignment and subjects) is developed and approved
- c. the manner in which the student acquires the Master's assignment
- d. the members of the Master's committee
- e. the manner in which the Master's assignment will be completed, monitored and evaluated

An appeal against a decision taken in accordance with these regulations may be lodged to the Examination Board of the program. The provisions of article 19 apply.

The programme starts in September and February.

Table 3: MSc in Industrial Engineering & Management 2012-2013

Study programme Industrial Engineering and Management: September

In order to graduate students' individual study programme must be approved by the specialization coordinator

Legenda:

F = Financial Engineering and Management
 I = Information and Technology Management
 P = Production and Logistic Management
 H = Health Care and Technology Management

generation 2012-2013 first year, September

Quartile/ Code	Course name	Exam	EC	Obligatory courses	recommended courses (electives)	Prior knowledge
1.1, sept						
	equalization course 1 (or elective)				F/I/P/H	
191515603	Introduction to Investment Theory	S	5	F		
191506103	Statistics and probability	S	5	F		
191860651	Micro Economics	S	5		F	
191863960	Foundations of Information Systems	S	5	I		
191852640	Production & Logistic IS	PSS	5	I	P	
192376500	Business Process Integration Lab	PSS	5	I		
191820160	Purchasing	PSS	5	P		
191820200	Discrete Optimization of Business Processes (1)	PSS	2,5	P/H		
191820210	Simulation (1)	PSS	2,5	P/H		
194111220	Clinical efficacy & MTA	PGI	5		H	
1.2, nov						
	equalization course 2				F/I/P/H	
194121110	Introduction to Industrial Engineering and Management	PSS	5	F/I/P/H		
191515201	Mathematical Finance	S	5	F		
201100051	Information Services	PSS	5	I		
191800770	Empirical Research & Data Analysis **	PSS	5		F/I/P/H	
191820210	Simulation (2)	PSS	2,5	P/H		
191820200	Discrete Optimization of Business Processes (2)	PSS	2,5	P/H		
194112110	Health & Health Systems	PSS	5	H		
1.3, febr						
191570350	Financial Econometrics	PSS	5	F		
191860181	Risk management	PSS	5	F		
191570300	Structured Products	S	5	F		
191810840	M & O of Technological Innovation	PSS	5		F/I/P/H	
201100163	Management of Technology for PLM *	PSS	5	P/I		30 EC
192340101	Implementation of IT in organizations	PSS	5	I	H	
192360021	ICT Management	PSS	5		I	
191820190	Supply Chain - & Transport Management	PSS	5	P		
194121020	Optimization of Healthcare Processes	S	5	H	P	
193640070	Clinical Safety and Quality Assurance	PGI	5	H		
1.4, apr						
191861641	Financial accounting	S	5		F	
201000202	Management Control for Financial Institutions	PSS	5		F	
201100162	Management of Technology for FEM *	PSS	5	F		30 EC
201100052	Global Project Management	PSS	5		I	
192376000	Business Case Development for IT Projects	PSS	5	I		
192320501	Electronic Commerce		5		I	
191852620	Advanced Production Planning	S	5	P		
191820120	Warehousing	PSS	5	P	H	
194122030	New Production Concepts	PSS	5		P	
194112060	The Nature of Hospital Work Healthcare Workers	PSS	5		H	
192360501	E-health strategies	S	5	H		

second year						Prior knowlegde
2.1, sept						
	Elective		5		F//P/H	
	Elective		5		F//P	
201200138	Special topics in Financial Engineering	S	2,5		F	
191820210	Simulation (1)	PSS	2,5		F/I	
192350200	E-strategizing	PSS	5		I	
191852630	Reliability Engineering & Maintenance management	S	5		P	
201000182	Management of Technology for Health Care *	PSS	5	H		30 EC
194111210	Medical decision making	PSS	5		H	
2.2, nov						
191864610	Organization & Strategy	S	5		F//P/H	
191800770	Empirical Research & Data Analysis **	PSS	5	F//P/H		
201200127	Preparation thesis PLM	PSS	5	P		
201200128	Preparation thesis FEM	PSS	5	F		
201200129	Preparation thesis ITM	PSS	5	I		
201200130	Preparation thesis HCTM	PSS	5	H		
201200138	Special topics in Financial Engineering	S	2,5			
191820210	Simulation (2)	PSS	2,5		F/I	
191820180	Reverse Logistics & re-manufacturing	PSS	5		P	
194112170	Quality and Safety in Health Care	PSS	5		H	
2.3 + 2.4						
194100060	Master thesis		30	F//P/H		80 EC
*	ITM students can choose one of the Management of Technology courses from other IEM specializations					
**	Empirical Research & Data Analysis as obligatory course can be attained in the first or second year of study					

Study programme Industrial Engineering and Management: February

In order to graduate students' individual study programme must be approved by the specialization coordinator

Legenda:

F = Financial Engineering and Management
 I = Information and Technology Management
 P = Production and Logistic Management
 H = Health Care and Technology Management

generation 2012-2013 first year, February

Quartile/ Code	Coursename	Exam	EC	Obligatory courses	Recommended courses (electives)	Prior knowledge
1.1, febr						
	FIM equalization course (or elective)		5		P	
	SMOM equalization course (or elective)		5		P/H	
	DetModOR equalization course (or elective)		5		H	
	Business Process Mngt equalization course (or elective)		5		I	
	equalization course (or elective)		5		F/I	
	Elective		5		F	
191810840	M & O of Technological Innovation	PSS	5		F//P/H	
1.2, apr						
	equalization course 2 (or elective)				F/I	
	Elective		5		P/H	
	Elective		5		P	
191861641	Financial accounting	S	5		F//H	
201000202	Management Control for Financial Institutions	PSS	5		F	
201100052	Global Project Management	PSS	5		I	
194122030	New Production Concepts	PSS	5		P	
194112060	The Nature of Hospital Work and Healthcare Workers	PSS	5		H	
1.3, sept						
191515603	Introduction to Investment Theory	S	5	F		
191506103	Statistics and probability	S	5	F		
191860651	Micro Economics	S	5		F	
201200138	Special topics in Financial Engineering	S	2,5		F	
191863960	Foundations of Information Systems	S	5	I		
191852640	Production & Logistic IS	PSS	5	I	P	
192376500	Business Process Integration Lab	PSS	5	I		
192350200	E-strategizing	PSS	5		I	
191820160	Purchasing	PSS	5	P		
191820200	Discrete Optimization of Business Processes (1)	PSS	2,5	P/H		
191820210	Simulation (1)	PSS	2,5	P/H	I	
191852630	Reliability engineering & Maintenance management	S	5		P	
201000182	Management of Technology for Health Care *	PSS	5	H		30 EC
194111210	Medical decision making	PSS	5		H	
194111220	Clinical efficacy & MTA	PGI	5		H	
1.4, nov						
194121110	Introduction to Industrial Engineering and Management	PSS	5	F//P/H		
191515201	Mathematical Finance	S	5	F		
193160060	Information Services	PSS	5	I		
201200138	Special topics in Financial Engineering	S	2,5		F	
191800770	Empirical Research & Data Analysis **	PSS	5	F//P/H		
191864610	Organization & Strategy	S	5		F//P/H	
191820210	Simulation (2)	PSS	2,5	P/H	I	
191820200	Discrete Optimization of Business Processes (2)	PSS	2,5	P/H		
191820180	Reverse Logistics & re-manufacturing	PSS	5		P	
194112170	Quality and Safety in Health Care	PSS	5		H	
194112110	Health & Health Systems	PSS	5	H		

second year						Prior knowledge
2.1, febr						
191570350	Financial Econometrics	PSS	5	F		
191860181	Risk management	PSS	5	F		
191570300	Structured Products	S	5	F		
192340101	Implementation of IT in organizations	PSS	5	I	H	
192360021	ICT Management	PSS	5		I	
201100163	Management of Technology for PLM *	PSS	5	P/I		30 EC
191820190	Supply Chain - & Transport Management	PSS	5	P		
194121020	Optimization of Healthcare Processes	S	5	H	P	
193640070	Clinical Safety and Quality Assurance	PGI	5	H		
2.2, apr						
201200127	Preparation thesis PLM	PSS	5	P		
201200128	Preparation thesis FEM	PSS	5	F		
201200129	Preparation thesis ITM	PSS	5	I		
201200130	Preparation thesis HCTM	PSS	5	H		
201100162	Management of Technology for FEM *	PSS	5	F		30 EC
192376000	Business Case Development for IT Projects	PSS	5	I		
192320501	Electronic Commerce	PSS	5		I	
191852620	Advanced Production Planning	S	5	P		
191820120	Warehousing	PSS	5	P	H	
192360501	E-health strategies	S	5	H		
2.3 + 2.4						
194100060	Master thesis		30	F/I/P/H		80 EC
*	ITM students can choose one of the Management of Technology courses from other IEM specialization					
**	Empirical Research & Data Analysis as obligatory course can be attained in the first or second year of study					

3. Coherence and didactical concept

In the MSc IEM programme, students learn to work on more complex challenges in Industrial Engineering and Management. MSc IEM graduates are specialized in a particular field of IEM and are also able to translate domain problems into scientific questions and vice versa, and to undertake scientific research in this domain. The specialization is achieved by following specific tracks.

We have chosen to use a wide variety of teaching methods. Different competences and knowledge domains require diverse teaching and study approaches, and a variation in study activities enhances the motivation of students.

The structure of the first 1.5 year of the MSc programme is focused on teaching and learning activities. For example, students experience lecture classes, tutoring in small groups, individual assignments, and group work on real cases. Students are stimulated to gather new knowledge and to take initiatives to follow their own curiosity and interests. The last semester contains the graduation project of 30 EC. A student spends the complete final semester on research and writing the Master's Graduation Project report. Most often, this work on a real issue has an applied nature: undertaking a project, conducting research, and writing a report in a real company. It is a challenging and difficult project: the student applies his knowledge and skills in an environment with high professional standards. It is also scientific: it is required to make use of scientific knowledge, and to provide well-founded support for solutions and recommendations. The student works as a professional in the environment of the new organization.

4. Electives and practical exercises

4a. Content of the specializations

The Master's programme Industrial Engineering and Management differentiates the following specializations (tracks).

▪ **Production and Logistics Management (PLM)**

This track focuses on the design and management of manufacturing processes and processes in the supply chain, from procurement of the raw materials to delivering the end product to the customer (and back: reverse logistics). The courses explore the theory and practice of these processes, covering topics such as design and planning of manufacturing processes, warehousing, distribution logistics, project management, and maintenance projects, and include the use of software tools for the simulation of business processes. Most courses are based on the application of Operations Research techniques in solving problems in production and logistics. Next to the industrial sector, attention is also paid to application of these methods in solving operational problems in service organizations, with an emphasis on hospitals (in collaboration with the HCTM track). The application of procurement strategies to the public sector is another topic of interest.

▪ **Financial Engineering and Management (FEM)**

The FEM track applies methods taught in the IEM Master's programme to the area of banking, insurance, and pensions. It also introduces concepts from the financial world into more traditional production areas. The increasing complexity of financial contracts, the growing overlap between providers of financial products (such as the merging of banks and insurance companies), and the emerging markets for "new" products (such as electricity, milk quota or emission rights) have resulted in a demand for quantitative instruments for risk management. This track teaches how to analyse and manage financial risks using financial products and modifying business processes.

▪ **Information Technology and Management (ITM)**

Information Technology (IT) is an important instrument used in IEM to structure and control processes within and between companies. There are increasingly important opportunities in the growing markets of information provision services, information processing, and information technology services. The ITM track helps to develop a proper information management strategy and make proper decisions regarding the in-sourcing and out-sourcing of information management services. The ITM track also provides the competencies to conduct business processes in organizational contexts and facilitate their re-design. Moreover, the track also offers insights into the foundations of the discipline of information management and specific methods and techniques for researching information systems.

▪ **Health Care Technology and Management (HCTM)**

The HCTM track focuses on managing organizations in the health care sector. Health care processes are analyzed and optimized in the context of health care organizations, such as a hospital. The track pays explicit attention to the specific health care context of these organizations, including systems for reimbursement and insurance in health care, and new developments in health care technology. The track introduces quantitative and qualitative methods to support health care management in its optimization of health care delivery to patients. These methods facilitate the effective introduction and application of new health care technology, and the efficient planning of health care processes.

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

Students can exchange up to 5 courses (25 EC) in the programme (except the marked 1 courses form the study programme) for other IEM Master's courses, or Master's courses offered by the Faculties CTW, EWI and TNW of the University of Twente. Courses from other (international) universities may also be incorporated in the programme if they are of a sufficient level and technical orientation. Studying abroad for one semester is stimulated.

Students who use this flexibility need to discuss their complete study programme (and personal motivation) with their study adviser or track coordinator.

MSc Industrial Engineering & Management 2011-2012			
Specialisation and recommended elective courses			
Code	Names	EC	Quartile (Sept start)
FEM: obligatory courses			
191515603	Introduction to Investment Theory	5	1
191506103	Statistics and probability	5	1
191515201	Mathematical Finance	5	2
191570350	Financial Econometrics	5	3
191860181	Risk management	5	3
191570300	Structured Products	5	4
201100162	Management of Technology for FEM	5	4
194121110	<i>Introduction to Industrial Engineering and Management</i>	5	2
191800770	<i>Empirical Research & Data Analysis</i>	5	2
201200128	<i>Preparation thesis</i>	5	2
194100060	<i>Master thesis</i>	30	
FEM additional elective courses			
191860651	Micro Economics	5	1
191599850	Special topics in Financial Engineering (2x 2,5 EC)	5	1-2
191861641	Financial accounting	5	4
201000202	Management Control for Financial Institutions	5	4
191820210	Simulation	5	1-2
ITM: obligatory courses			
191863960	Foundation of Information systems	5	1
192376500	Business Process Integration Lab	5	1
193160060	Information Services	5	2
191852640	Production & Logistic IS	5	1
192376000	Business Case Development for IT Projects	5	4
	Management of Technology F/P/H	5	
192340101	Implementation of IT in organizations	5	3
194121110	<i>Introduction to Industrial Engineering and Management</i>	5	2
191800770	<i>Empirical Research & Data Analysis</i>	5	2
201200129	<i>Preparation thesis</i>	5	2
194100060	<i>Master thesis</i>	30	
ITM additional elective courses			
192350200	E-strategizing	5	1
192320501	Electronic commerce	5	3
192360021	ICT Management	5	3
201100052	Global Project Management	5	4
191820210	Simulation	5	1-2

PLM: obligatory courses			
191820160	Purchasing	5	1
191820200	Discrete Optimization of Business Processes	5	1-2
191820210	Simulation	5	1-2
191820190	Supply Chain - & Transport Management	5	3
191852620	Advanced Production Planning	5	4
191820120	Warehousing	5	4
201100163	Management of Technology for PLM	5	3
194121110	<i>Introduction to Industrial Engineering and Management</i>	5	2
191800770	<i>Empirical Research & Data Analysis</i>	5	2
201200127	<i>Preparation thesis</i>	5	2
194100060	<i>Master thesis</i>	30	
PLM additional elective courses			
191852640	Production & Logistic IS	5	1
191820180	Reverse Logistics & re-manufacturing	5	2
194121020	Optimization of Healthcare Processes	5	1
191852630	Reliability engineering & Maintenance management	5	3
194122030	New Production Concepts	5	4
HCTM: obligatory courses			
191820200	Discrete Optimization of Business Processes	5	1-2
191820210	Simulation	5	1-2
194121020	Optimization of Healthcare Processes	5	1
194112110	Health & Health Systems	5	2
193640070	Clinical Safety and Quality Assurance	5	3
192360501	E-health strategies	5	4
201000182	Management of Technology for Health Care	5	1
194121110	<i>Introduction to Industrial Engineering and Management</i>	5	2
191800770	<i>Empirical Research & Data Analysis</i>	5	2
201200130	<i>Preparation thesis</i>	5	2
194100060	<i>Master thesis</i>	30	
HCTM additional elective courses			
194111210	Medical decision making	5	1
194111220	Clinical efficacy & MTA	5	1
194112060	The Nature of Hospital Work Healthcare Workers	5	4
194112170	Quality and Safety in Health Care	5	2
191820120	Warehousing	5	4
192340101	Implementation of IT in organizations	5	3
Extra electives:	Technology Venturing and Innovation Management	25	
191810840	a) Management & Organization of Technology Innovation, or	5	3
201000088	b) Organisation, Technology & Innovation	5	2
194108040	Business Development in Network Perspective	5	1
	<i>Two of the below mentioned courses:</i>		
194111500	a) Innovation & Technology Dynamics or,	5	3
194108030	b) Principles of Entrepreneurship or,	5	2
194120140	c) HRM, Innovation & Entrepreneurship, or	5	1
201000087	d) Entrepreneurial Finance or	5	1
201100054	e) Supply Chain Management & Innovation	5	2
201100062	Advanced Technology Venturing Group Proj	5	2
All specializations			
191810840	M&O of Technological Innovation	5	3
191864610	Organization & Strategy	5	2
	Other courses from IEM		

How to plan and choose:

- step 1: Write down your obligatory track programme with the courses marked '1'
- step 2: Decide whether you want to replace courses out of the remaining courses
- step 3: Complete your IEM study programme up to 120 EC with the remaining track courses or other master courses IEM or master courses from the faculties CTW, EWI, TNW
- step 4: Discuss your complete study programme (and your personal motivation) with your study counselor
- step 5: Get a final approval from your track coordinator (by email with a copy to the office of educational affairs and the study-counselor)

Departure from the above mentioned rules needs approval from the track coordinator and the Examination Board. If you have questions concerning the elective courses, please see your study adviser.

4c. Content of practical exercises

A practical exercise is a unit of study or a component of a unit of study in which the emphasis is on the student's activity, such as:

- preparing a literature review, paper or design project, thesis, article, or position paper, or delivering a public presentation;
- a design or research assignment, tests and experiments, practical exercises, skills practice;
- work placement, fieldwork or excursions;
- participation in other required learning activities aimed at achieving the desired skills.

Practical exercises are generally part of a study unit for which there is a responsible examiner. The structure of the practical exercise(s) is described in general terms in OSIRIS, and in more detail on Blackboard at the beginning of the programme.

Master's assignment

The Master's assignment (or Master's thesis or Master's project) tests the student's competence in the integrated application of the knowledge, comprehension and skills covered in the study units. It represents 30 EC. For each assignment a Master's committee of examiners is composed for the evaluation. The Master's thesis is evaluated on an individual basis. The Examination Board prescribes an evaluation checklist to help ensure the quality of the evaluation. Further information on the Master's assignment can be found in the Master's project manual, which can be consulted through the Blackboard site of the Master's assignment IE&M.

5. General information

5a. Admission to the programme

A request to be admitted to the programme is assessed by an admission committee that consists of the following programme directors:

- Prof M.R. Kabir PhD (BA)
- Prof R. Hoppe PhD (PA)
- Prof N.S.Groenendijk PhD (ES)
- G.A.C. Wagenaar PhD (HS)
- E.W. Hans PhD MSc (IE&M)
- Prof J. van Hillegersberg PhD (MBI)
- Prof O.A.M. Fisscher PhD MSc (post-academic programmes).

In addition to the general criteria, Industrial Engineering & Management distinguishes two types of (inter)national education;

1. Research Universities (primarily responsible for research-oriented programs)
2. Universities (college) for professional education (prepares students particular for more practical professions)

The admission committee has specific requirements depending on the degree.

The regulations for the different educational backgrounds are:

1. Dutch Research University Degree

a. A Bachelor's degree in Industrial Engineering & Management awarded by a Dutch university

Applicants with a Bachelor's degree in Industrial Engineering & Management awarded by a Dutch university will be admitted to the programme. With regard to proficiency in English, the admission committee decides whether additional requirements should be set or a diagnostic test should be taken.

b. A Bachelor's degree awarded by a Dutch university

Applicants with another Bachelor's degree other than Industrial Engineering & Management in a related field awarded by a Dutch university will be admitted after completion of a pre-Master's programme. The admission committee determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme within a period of 12 months¹⁹.

c. Another Bachelor's degree awarded by the University of Twente

Applicants with Bachelor's degree other than IEM awarded by *the University of Twente* may be admitted to the programme after completion of a small pre-Master's programme. The admission committee determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme within a period of 12 months²⁰. For information concerning admission see <http://www.utwente.nl/master/how-to-apply/current-ut-bachelor-students.doc/>.

2. Degree awarded by a Dutch college for higher professional education (HBO)

a. A Bachelor's degree in a related field awarded by a Dutch University (college) for higher professional education

Students with a Bachelor's degree in a related (technical) field awarded by a Dutch University (college) for higher professional education will be admitted to a pre-Master's programme:

- If their prior educational profile is suitable
- If their 'General Personal Average Score' is clearly above average
- If they express a clear motivation in English for the programme and their chosen specialization
- If their English proficiency is at VWO level
- If their mathematics proficiency is at VWO level (Wiskunde B).

The content of the pre-Master's programme is described in the section [Pre-Master](#). The size of this programme is 30-EC maximum and has to be finished successfully within a period of 12 months²¹ from the start. The admissions committee determines the minimum size and content of the specialization-specific part of the pre-Master's programme.

¹⁹ Per course of the pre-Master's programme no more than two attempts are permitted to sit the corresponding exam. If the student fails to successfully complete the pre-Master's programme on time, he/she will not be admitted to the Master's Programme.

²⁰ Idem (as the previous note)

²¹ Idem (as note 20)

Furthermore special arrangements have been made with Saxion and Windesheim. Programmes with a strong technical orientation will be admitted after successfully having completed the 'doorstroomminor'. For more information visit the website www.utwente.nl/doorstroom.

b. Another Bachelor's degree awarded by a Dutch University (college) for higher professional education

Applicants with a degree in a non-related field are judged on an individual basis. In specific cases and on the recommendation of a track coordinator, the admissions committee may grant exemptions, entirely or partly, from the domain-specific part of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's program before being admitted to the Master's degree program.

3. Bachelor's degrees from a non-Dutch university

The admissions committee assesses international applicants with a Bachelor's degree awarded by a non-Dutch Research University or University (college) for higher professional education on an individual basis. The assessment of the applicant's skills is based on:

- a NUFFIC credential evaluation;
- a letter of motivation;
- an academic IELTS overall band score of 6.5 or higher (see also www.ielts.org) or a TOEFL internet-based (TOEFL-iBT) score of at least 90
- any additional information required by the admissions committee.

The assessment of all applicants' skills is based on academic background and the possibility for students to finish the Master's programme in 2 years.

5b. Language of teaching and exams

The courses and the exams in the Master's programme are all in English.

To safeguard the quality of teaching and examination in the English language, MG has taken the following measures:

- An assessment is made of all MG teaching staff and examiners as to their command of the English language. If their IELTS score is slightly below the established minimum level, they will be allowed a remediation period. Failing to meet the standard after this period will lead to exclusion from the English-language programme. Any newcomers will be assessed upon their entry.
- Inclusion of specific demands on their proficiency in the English language in the admission requirements for the MG English language programmes, wherever a sufficient command is not warranted by the candidates' prior education.

5c. international cooperation

Several student are going abroad during there study period. The programme offers students the possibility to achieve specific personal and professional objectives

Students can use our international exchange programme contacts from all over the world, to find their most suitable fit to gain the required knowledge and experiences.

Some examples of exchange universities are: Swinburne University of Technology – Australia, Tecnológico de Monterrey – Mexico, The University of Manchester – UK, Fachhochschule München / Munich University of Applied Sciences, Technische Universität Berlin - Germany, Università degli Studi di Bologna – Italy, Bogazici University – Turkey, etc. For more contacts and/or information see <http://www.utwente.nl/studyabroad/>.

5d. Program Committee (OLC) and Examination Board

Members of the Programme Committee (OLC) are appointed by the Dean of the faculty every (two) year(s) (faculty regulations article 13). The most up-to-date composition of the committee can be found at the webpage of the [programme committees](#). Correspondence with the IEM Programme Committee goes through m.j.m.tevaarwerk@utwente.nl. For more information contact the administration office on (053 489)3200.

Members of the Examination Board are appointed by the Dean of the faculty every two years (faculty regulations article 12). The up-to-date composition of the Board can be found at the [webpage of the Examination Boards](#). Correspondence with the Boards goes through mastersgriffie@mb.utwente.nl. For more information contact the administration office on (053 489)3200.

6. Transitional arrangements

Transitional arrangements 2012-2013

IEM general

Per September 2012 the master programme Industrial Engineering and Management offers a second enrollment per February. In the programme each student has an individual study programme containing:

- Obligatory courses (common courses and specialization in Production and Logistics Management or Financial Engineering and Management or Health Care Technology and Management or Information and Knowledge Management).
- Elective courses (for deepening the cluster knowledge or broadening knowledge by choosing a set of courses from other (inter)national technical Master's programmes
- Thesis in the field of the cluster.

On your diploma supplement your chosen cluster will be listed as 'specialization XXX'.

To facilitate the February enrollment some courses are repositioned.

If your individual study planning is negatively affected because of this rescheduling please contact your specialization coordinator to come to solutions.

IEM individual courses

194121020 Optimization of Health Care Processes

This course was offered in the first quartile and is per 2013-2013 scheduled in the third quartile.

No transitional arrangements are necessary.

194112040 International health strategy and hospital of the future

This course is not offered anymore. Students who failed the exam earlier can contact the lecturer about how to finish the course.

191570300 Structured Products

This course was offered in the fourth quartile and is per 2013-2013 scheduled in the third quartile.

No transitional arrangements are necessary.

201100162 Management of Technology for FEM

This course was offered in the first quartile of the second year and is per 2012-2013 scheduled in the fourth quartile of the first year. No transitional arrangements are necessary.

201100163 Management of Technology for PLM

This course was offered in the first quartile of the second year and is per 2012-2013 scheduled in the third quartile of the first year. No transitional arrangements are necessary.

191852630 Reliability Engineering & Maintenance management

This course was offered in the third quartile of the first year and is per 2012-2013 scheduled in the first quartile of the second year. Therefore this course will not be offered in 2012-2013. Students who failed the exam earlier can contact the lecturer about how to finish the course.

191810840 M & O of Technological Innovation

This is not an obligatory course anymore. No transitional arrangements are necessary

191800770 Empirical Research & Data Analysis

This is an obligatory course instead of 198110840. No transitional arrangements are necessary

201200127 Preparation thesis PLM,**201200128 Preparation thesis FEM,****201200129 Preparation thesis ITM,****201200130 Preparation thesis HCTM.**

For each specialization a thesis preparation course is implemented which will adequately prepare you for starting your Master's thesis project.

The Masters' thesis syllabus (see Blackboard site) offers a description of the Master's project and the relevant assessment criteria, and is intended as a guide for graduate students and supervisors to facilitate a successful and timely completion.

B2f: Programme-specific appendix to the OER 2012-2013

for the Master of Science programme

Public Administration (PA)

1. *Objectives (subject 1 NVAO accreditation system)*
 - 1a Profile of the programme
 - 1b Final attainment targets of the programme (OER, art. 3)
 - 1c Level of the programme (facet 2 NVAO accreditation system; OER, art. 3)
2. *Composition of the programme*
 - The content of the programme and its associated examination (OER, article 2.1a)
 - Nature of the programme (OER, Article 2.1g)
 - Study load of the programme and of each of the study units making up the programme (OER, article 2.1e)
 - The exam formats (OER, article 2.1h)
 - Number and sequence of exams and practical exercises (OER, article 2.1f)
 - Required sequence of exams (OER, article 2.1i)
3. *Coherence and didactic concept (facet 6 NVAO accreditation system)*
4. *Electives and practical exercises*
 - 4a Content of the specializations (OER, Article 2.1b)
 - 4b Requirements related to electives and student's individual choices (OER, 2.1j)
 - 4c Content of practical exercises (OER, article 2.1d)
5. *General information*
 - 5a Admission to the programme (OER Article 4)
 - 5b Language of teaching and exams (OER article 2.1l)
 - 5c International cooperation
 - 5c Programme committee (OLC) and Examination Board
6. *Transitional arrangements (OER, article 2.1k; OER, article 22)*

1. Objectives

1a. Profile of the programme

The objective of the Master's in Public Administration is to train students for management-supporting and policy-advising positions within public administration in the broadest sense of the word. In this broad sense, the term 'public administration' refers to both government organizations and social organizations, companies and institutions that play a role in the collective decision-making on the administration and structuring of our society and the implementation of decisions made in that context.

1b. Final attainment targets

The final attainment targets of the Master's programme in Public Administration have been specified in a set of 'learning outcomes'. The complete set of learning outcomes is as follows.

Competence in choosing and using Public Administration approaches and skills.

The student is familiar with the existing knowledge base and is able to increase its width and depth through study. He/she...

- is familiar with relevant theories, methods, techniques and current questions regarding problem-oriented and interactive policy analysis
- has knowledge and understanding of political, administrative and societal relations as well as of the legal preconditions for policy making, guidance, planning and control of political and administrative processes
- acknowledges the importance of democracy and the constitutional principles for the functioning of public institutions
- can judge the appropriateness and effectiveness of a problem approach, based on ex ante and ex post evaluations
- has the ability to comprehend and master a given policy area and to use policy-oriented skills.

Competence in doing research

The student has the competence to acquire new scientific knowledge through research. For this purpose, research means: the development of new knowledge and new insights and understanding in a purposeful and methodical way. He/she...

- is able to assess the usability and validity of assignments for applied research
- is able to monitor the usability and validity in assignments for applied research
- is able to perform research in the field of public administration.

Competence in designing

The student has the competence for design. Designing is a synthetic activity aimed at the realisation of new approaches, solutions and the sensible use of measures in the public domain. He/she ...

- is to use disciplinary knowledge in coherent ways in the design of solutions for societal problems
- is able to use disciplinary knowledge in coherent ways in the design of approaches regarding the dynamics of political and administrative problems
- is able to critically reflect on the usability of disciplinary knowledge
- is to involve research findings in the design of (new) policies, political and administrative processes and structures
- is able to design an appropriate and effective problem approach based on theoretical insight and research findings.

Competence regarding a scientific approach

The student has a systematic approach characterised by the development and use of theories, models and coherent interpretations. They have a critical attitude and insight in the nature of scientific work. He/she...

- is able to use disciplinary knowledge in coherent ways at the interpretation and analysis of societal developments and their backgrounds

- is able to use disciplinary knowledge in coherent ways at the interpretation and analysis regarding the dynamics of political and administrative problems and their backgrounds
- is to critically reflect on the validity of (inter-) disciplinary knowledge.

Competence regarding intellectual skills

The student is competent in reasoning, reflection and forming a judgement in the context of the discipline. He/she...

- is able to independently keep up with developments in the field of Public Administration
- is able to critically assess disciplinary approaches in the field of study
- can critically reflect on one's own analytic competences; draw conclusions and identify fields and strategies for one's own improvement
- is able to take a critical stance regarding the validity of (inter-) disciplinary knowledge.

Competence in co-operation and communicating

The student has the competence of being able to work with and for others. This requires adequate interaction, a sense of responsibility, leadership and communication with colleagues and non-colleagues. The student has competences to participate in scientific or public debate. He/she...

- is able to present societal issues, their backgrounds, disciplinary perspectives and views regarding political and administrative issues in oral and written form (in English)
- is able to present research ideas and – findings for various audiences
- is able to involve professionals and laymen in the analysis, (design for a) solution and evaluation of societal problems
- is able to advise various groups of professionals and laymen regarding legal and judicial aspects.

Competence to take the temporal and social context into account

Beliefs and methods have their origin and decisions have social consequences in time. The student is aware of the temporal and social context of their work and has the competence to integrate these insights into their work. He/she...

- is able to locate a societal problem against the temporal and contextual background
- is to take ethics and history into account in the definition, analysis and solution of societal problems.

1c. Level of the programme

The curriculum and final attainment targets of the Public Administration programme have recently been renewed, in order to make them more competence-based and even better adjusted to public administration practice. To this end, the 3TU "*Criteria for academic Bachelor's and Master's curricula*" were used as an important guideline and source of inspiration. The seven areas of competence distinguished in this framework have been related to the key competences of the public administration professional as described above in par. 1b.

2. Composition of the programme

The Master's programme consists of 60 EC (1 year, 1680 hours) and has four specializations:

- Policy and Governance (PG)
- Public Safety (PS)
- Public Management (PM)
- Regulation and Innovation

The tables below show the courses in each specialization and the exam format and study load for each course.

In all specializations it is possible to start in Quartile (Q) 1 = September or in Quartile 3 = February.

During Quartile 2 (or Quartile 4 if you started in February) there will be special Research Methods classes to help you start with your master thesis.

Table 1: MSc. Public Administration, curriculum 2012-2013

Specialization: Policy & Governance				
Q	Code	Course	EC	Exam format
1	201100077	Policy Analysis in Public and Technological Domains	5	PSS
1	201100073	Economic Methods of Sustainability Assessment	5	PSS
1	194106090 194114060 194106100 201000089	Choose between: Social Problems	5	PSS
		Issues and Approaches in Higher Education Policy		PSS
		Policy Instruments and Evaluation in Environment and Sustainability		PSS
		Public Management Theories and Tools		PSS
2&4	194119040	Methodology for Public Administration	5	PSS
2&4	194128030	Master Thesis I	10	BAM
3	194111240	Public Governance and Policy Networks	5	PS
3	194101070	Public Governance and Legitimacy	5	PSS
3	201100076	Deliberative Governance of Knowledge & Innovation	5	PS
4&2	194128030	Master Thesis II	15	BAM
			<i>total: 60 EC</i>	

Specialization: Public Safety				
Q	Code	Course	EC	Exam format
1	201100077	Policy Analysis in Public and Technological Domains	5	PSS
1	201100079	Public and private Policing	5	PSS
1	201100078	Crime Science for Public Safety	5	PSS
2&4	194119040	Methodology for Public Administration	5	PGI
2&4	194128030	Master Thesis I	10	BAM
3	194111240	Public Governance and Policy Networks	5	PS
3	194101070	Public Governance and Legitimacy	5	PSS
3	201100081	Public Safety and Public Safety Governance	5	PSS
4&2	194128030	Master Thesis II	15	BAM
			<i>total: 60 EC</i>	

Specialization: Public Management				
Q	Code	Course	EC	Exam format
1	201000089	Public Management Theories and Tools	5	PSS
1	194107040	Public Sector Reform	5	PSS
1	194120100	HRM and organizational development	5	PSS
2&4	194119040	Methodology for Public Administration	5	PGI
2&4	194128030	Master Thesis I	10	BAM
3	194101070	Public Governance and Legitimacy	5	PSS
3	192340101	Implementation of IT in Organizations	5	PSS
3	194111240	Public Governance and Policy Networks	5	PS
4&2	194128030	Master Thesis II	15	BAM
			<i>total: 60 EC</i>	

Specialization: Regulation & Innovation				
Q	Code	Course	EC	Exam format
1	194101150	Theories of Regulation	5	PSS
1	194117020	Innovation & Regulation	5	PS
1	201200040	Risk-regulation	5	PSS
2&4	201200041	Regulatory Design	5	PGI
2&4	194128030	Master Thesis I	10	BAM
3	201200042	Current affairs in advanced technology	5	PSS
3	201200039	Smart rules & regimes	5	PSS
3	194111240 194101070 201100081	Choose one from: Public Governance and Policy Networks	10 (5+5)	
		Public Governance and Legitimacy		
		Public Safety and Public Safety Governance		
4&2	194128030	Master Thesis II	15	BAM
			<i>total: 60 EC</i>	

Key to exam formats:

- S = written exam
- M = oral exam
- PGI = group practical exercise, including a written group report and (in so far as possible) individual assessment of the manner in which the student participated in the group exercise
- PS = practical exercises, including a written report
- PSS = practical exercises or assignments, including a written and/or oral report, and a written exam; the student may sit the written exam only after satisfactorily completing the practical exercises and the written and/or oral report
- PSM = similar to PSS, however, an oral exam will be sat
- BAM = reviewed in accordance with the procedures laid down in the regulations applicable to the Master's assignment.

3. Coherence and didactic concept

The Public Administration master programme has four important starting points:

- The programme familiarises students, on the basis of various disciplinary perspectives, with a Policy & Governance, a Public Management and a Legal Governance approach to tackling public problems under conditions of governance; all this combined with thorough knowledge of research concepts and methods;
- The programme allows students to focus on particular fields/domains of application or a particular professional approach; the Public Management and Legal Governance specializations provide such opportunities, as well as the Public Safety specialization; without such theme-based specialisations, the Policy & Governance specialization leads to generic professional and academic qualifications in policy research and policy advice;
- The programme is doable; especially data on average duration of study for students on a scholarship demonstrate that the one-year master programme is doable;
- The programme is (partly) oriented towards professional activity; all tracks were decided upon only after an analysis of job advertisements for the public domain as a basis for extended consultations with our Practitioners' Board and discussions in the Programme Committee.

The specialisations are internally coherent, especially through the concentration on particular fields of application/professional approaches. Given the fact that we have chosen to allow students to enter the programme at the beginning of each semester, we have limited possibilities to build up complexity in the programme. The two thesis-work quartiles, however, provide excellent opportunities for splitting up between the logical steps in research: choice of topic, problem formulation, theoretical approach and research design, first; data collection, analysis and reporting, second.

The master is a training to perform research, but also a test of competences. The aim is that students demonstrate that they are able to integrate theoretical perspectives and research skills in an applied scientific context. For this the students need to show in their papers, and especially in their MSc thesis, their ability:

- to formulate a problem definition that suits the problem at hand including research questions, sub-questions, methodology and time-frame;
- to use concepts and theories of the public domain, preferably those that figure prominently in their selected track/specialisation;
- to make educated choices regarding:
 - units of research;
 - choice of variables;
 - choice of analysis – or design strategy;
 - choice of research – design methods;
- to formulate research – design findings and link them to the research – design questions;

- to devote attention to the social embedding and ethical aspects of the research at hand;
- to give a clear, structured presentation, comprehensible for audiences of different level and (professional or disciplinary) background.

4. Electives and practical exercise

4a. Content of the specializations

The programme has four specializations, also referred to as “tracks”. Students can choose a special direction for their studies by means of the selection of a track, by selecting the electives in the track (if available) and in their choice of the Master's assignment.

Policy and Governance

The track Policy & Governance prepares students for careers in public governance, in policy-related advisory and staff functions in both public and private organizations. To this end it focuses on two main themes: Policy, aimed at the design of effective public policies, and Governance, with special attention for legitimacy and feasibility issues. The master thesis consists of a research project on a problem related to public policy and governance. In two of the obligatory courses, the policy aspects of especially *Sustainability* and *Knowledge and innovation* are highlighted. The optional course has four choices, of which three are aimed at a specific policy field.

Public Safety

The track Public Safety shares courses with the track Policy & Governance. Complementing these generic courses on public governance and policy, the remaining courses pay special attention to subjects that offer insight and academic knowledge in the core of (governing) public safety. In addition, the Master's project in this track will concentrate on a subject related to the field of safety.

Regulation and Innovation

In this specialisation we focus on the relation between regulation and technological innovation. You will especially address the legal side of governance of regulation, to promote technological innovation in balance with checking the risks of technological innovation. You will learn to understand the main issues in technology with the course Current Affairs in Advanced Technology, and you are offered the opportunity to choose two courses of interest on this topic, e.g. health care, sustainability, energy sector, food industry or ICT.

Public management

This track positions itself on the interface between Business Administration and Public Administration. The central intent is to connect the management instruments of Business Administration with the insights of governance known from Public Administration. The track prepares students for management supporting positions in public sector organizations. The central themes of the track are:

- the public management “toolkit”: Financial Management, Human Resource Management, Information management
- the public administration context: what distinguishes the public manager?

The master thesis consists of a research project on a problem related to public management.

4b. Requirements related to electives and student's individual choice

(No special requirements are in place).

4c. Content of practical exercises

A practical exercise is a study unit or a component of a study unit in which the emphasis is on the student's activity, such as:

- preparing a literature review, paper or experimental design, thesis, article, or position paper, or delivering a public presentation;
- a design or research assignment, tests and experiments, practical exercises, skills practice;
- work placement, fieldwork or excursions;
- participation in other required learning activities aimed at achieving the desired skills.

Practical exercises are generally part of a study unit for which there is a responsible examiner. The structure of the practical exercise(s) is described in general terms in OSIRIS, and in more detail on Blackboard at the beginning of the programme.

The Master's assignment (or Master's project or Master's thesis) is not supervised by a single responsible instructor; instead, a Master's committee is assembled for each assignment. The Master's project is an individual project, and is evaluated on an individual basis. The Master's project tests the student's competence in the integrated application of the knowledge, comprehension and skills covered in the study units. The Examination Board prescribes an evaluation checklist to help ensure the quality of the evaluation. Further information on the Master's assignment is found in the Master's project manual, which can be found through the blackboard site of the course *194128030 Masterthesis PA*.

5. General information

5a. Admission to the programme

A request to be admitted to the programme is assessed by an admission committee that consists of the following programme directors:

- Prof M.R. Kabir PhD (BA)
- Prof R. Hoppe PhD (PA)
- Prof N.S.Groenendijk PhD (ES)
- G.A.C. Wagenaar PhD (HS)
- E.W. Hans PhD MSc (IE&M)
- Prof J. van Hillegersberg PhD (MBI)
- Prof O.A.M. Fisscher PhD MSc (post-academic programmes).

In addition to the general criteria, Public Administration distinguishes two types of (inter)national education;

- Research Universities (primarily responsible for research-oriented programs)
- Universities (college) for professional education (prepares students particular for more practical professions)

The assessment of all applicant's skills is based on academic background, as outlined below.

1. Dutch Degrees of Research Universities

- a. A Bachelor's degree in Public Administration awarded by a Dutch university*
Applicants with a Bachelor's degree in Public Administration awarded by a Dutch university will be admitted to the program. With regard to proficiency in English, the admission committee decides whether additional requirements should be set or a diagnostic test should be taken.
- b. Another Bachelor's degree awarded by a Dutch university*
Applicants with a Bachelor's degree in a related field awarded by a Dutch research university will be admitted after completion of a 20 EC pre-Master's programme. The admissions committee determines whether or not a pre-Master is awarded and

determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme within 12 months²² before being admitted to the Master's degree programme.

c. *Another Bachelor's degree awarded by the University of Twente*

Applicants with a Bachelor's degree other than PA awarded by the University of Twente may be admitted to the program after completion of a pre-Master's programme. The admissions committee determines whether or not a pre-Master is awarded and determines the content of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme within 12 months²³ before being admitted to the Master's degree programme. For information concerning the admission go to: <http://www.utwente.nl/master/how-to-apply/current-ut-bachelor-students.doc/>.

2. Degree by a Dutch college for higher professional education (HBO)

a. *A Bachelor's degree in a related field awarded by a Dutch University (college) for higher professional education*

Students with a Bachelor's degree in a related field awarded by a Dutch University (college) for higher professional education will be admitted if:

- they have successfully completed the 30 EC pre-Master's programme within a period of twelve months²⁴. The admissions committee determines the content of the pre-Master's programme.
- their proficiency in Mathematics is at pre-university level (Dutch VWO A1, 2 or HAVO Wiskunde B).

Students who have had a higher professional education (HBO) are assumed to be sufficiently proficient in the English language at the start of the Master's phase²⁵. It is the responsibility of the student to attain this level of English.

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

- Management Economics and Law (in Dutch: MER)
- Public Administration (in Dutch: Bestuurskunde)
- Public Safety (in Dutch: Integrale Veiligheidskunde)
- Business Economics (in Dutch: Bedrijfseconomie)
- Marketing (in Dutch: Commerciële Economie)
- Business Administration (in Dutch: Bedrijfskunde).

b. *Another Bachelor's degree awarded by a Dutch University (college) for higher professional education*

Applicants with a degree in a non-related field are judged on an individual basis. In specific cases and on the recommendation of a track coordinator, the admission committee may grant exemptions, entirely or partly, from the domain-specific part of the pre-Master's programme. The applicant must have successfully completed the entire pre-Master's programme within 12 months²⁶ before being admitted to the Master's degree program.

3. Bachelor's degrees from a non-Dutch university

The admissions committee assesses international applicants with a Bachelor's degree awarded by a non-Dutch Research University or University (college) for higher

²² Per course of the pre-Master's programme no more than two attempts are permitted to sit the corresponding exam. If the student fails to successfully complete the pre-Master's programme on time, he/she will not be admitted to the Master's Programme.

²³ Idem (as the previous note)

²⁴ Idem (as the previous note)

²⁵ Their proficiency in the English language is at pre-university education level (Dutch: VWO) or at academic IELTS level with overall band score of 6.5 or higher, or a TOEFL internet based (TOEFL-iBT) score of at least 90.

²⁶ as note 23

professional education on an individual basis. The assessment of the applicant's skills is based on:

- a [NUFFIC credential evaluation](#);
- a letter of motivation;
- proof of sufficient mastery of the English language (an IELTS overall band score of 6.5 or higher, or a A TOEFL internet-based (TOEFL-iBT) score of at least 90)
- any additional information required by the admissions committee.

5b. Language of teaching and exams

The programme is offered in English, and the exams are taken in English. The report of the Master's project will be 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.

To safeguard the quality of teaching and examination in the English language, MG has taken the following measures:

- An assessment is made of all MG teaching staff and examiners as to their command of the English language. If their IELTS score is slightly below the established minimum level, they will be allowed a remediation period. Failing to meet the standard after this period will lead to exclusion from the English-language programme. Any newcomers will be assessed upon their entry.
- Inclusion of specific demands on their proficiency in the English language in the admission requirements for the MG English language programmes, wherever a sufficient command is not warranted by the candidates' prior education.

5c. International cooperation

(not applicable)

5d. Program Committee (OLC) and Examination Board

Members of the Programme Committee (OLC) are appointed by the Dean of the faculty every (two) year(s) (faculty regulations article 13). The most up-to-date composition of the committee can be found at the webpage of the [programme committees](#). Correspondence with the PA Programme Committee goes through m.j.m.tevaarwerk@utwente.nl. For more information contact the administration office on (053 489)3200.

Members of the Examination Board are appointed by the Dean of the faculty every two years (faculty regulations article 12). The recent composition of the Board can be found at the [webpage of the Examination Boards](#). Correspondence with the Boards goes through mastersgriffie@mb.utwente.nl. For more information contact the administration office on (053 489)3200.

6. Transitional arrangements

2012-2013

Since the 'Recht en Bestuur' specialization is changed in a new specialization Regulation and Innovation, for this specialization the courses have changed. Furthermore, slight changes were made in the Public Management specialization.

The corresponding transitional arrangements are described below.

Specialization Recht en bestuur / Regulation and Innovation				
	Course 2012-2013		Course 2011-2012	
Q	Code	Course	Code	Course
1	194101150	Theories of Regulation	194101100	Recht & Regulering
1	201200040	Risk-regulation	194101110 191763150	Handhaving & Bescherming OR Competition Law
3	For courses in the third quartile, Overheid & markt (191763090) and Organisatie & Recht (194101120) please contact prof. Heldeweg for an individual arrangement.			

Specialization Public Management				
	Course 2012-2013		Course 2011-2012	
Q	Code	Course	Code	Course
3	194101070	Public Governance and Legitimacy	201000120	Public Agencies and Public-private Partnerships
3	194111240	Public Governance and Policy Networks	194111240 194101070	Public Governance and Policy Networks OR Public Governance and Legitimacy

In **2011-2012** the two specializations *Higher Education* and *Environment and Sustainability* are integrated into the specialization *Policy and Governance*. By choosing the optional course on these areas, you can highlight those aspects of the policy field.

Further changes are as follows:

Specialization Policy and Governance				
	Course 2011-2012		Course 2010-2011	
Q	Code	Course	Code	Course
1	201100077	Policy Analysis in Public and Technological Domains	194111230	Public Policy Analysis
1	201100073	Economic Methods of Sustainability Assessment	410113	Economic Methods of Policy Analysis
1	201100073	Economic Methods of Sustainability Assessment	194107040	Public Sector reform
3	201100076	Deliberative Governance of Knowledge & Innovation	194111250	Methods of Policy Deliberation

- 1) Public Policy Analysis is renamed in Policy Analysis in Public and Technological Domains. Examinations are the same.
- 2) Public Sector Reform was a 2010-only substitution for Economic methods of Policy Analysis. You can still follow Public Sector Reform, see the Public Management specialization.
- 3) A re-examination is possible for Methods of Policy Deliberation (two opportunities will still be offered in 2011-2012). However, we advise you to follow the new course.

Specialization Public Safety				
	Course 2011-2012		Course 2010-2011	
Q	Code	Course	Code	Course
1	201100079	Public and private Policing	194107230	Issues and Approaches in Public Safety Policy
1	201100078	Crime Science	194107240	Policy Instruments and Evaluation in Public Safety Policy
3	201100081	Public Safety and Public Safety Governance	194107250	Issues in Public Safety Governance

These changes are limited to a change of name of the course, so last year's students can sit the exams of the equivalent course with the new name.

In **2009-2010** the track Public management has been changed. See the following table for your new course.

Specialization Public Management				
	Course 2010-2011		Course 2009-2010	
Q	Code	Course	Code	Course
1	201000089	Public management Theories and Tools	411011	Public Sector Management Control
1	194107040	Public Sector Reform	410704	Public Sector Reform
1	194120100	HRM and organizational development	410509	Strategic HRM in the Public Sector
3	201000120	Public agencies and public-private partnerships	411917	Public Bureaucracies
3	192340101	Implementation of IT in organizations	410510	Public Performance Management Information Systems
3	194101070	Public Governance and Legitimacy	410107	Public Governance and Legitimacy

B2g: Programme-specific appendix to the OER 2012-2013

For the post-graduate Master of Science programme

Environmental and Energy Management (MEEM)

1. *Objectives (subject 1 NVAO accreditation system)*
 - 1a Profile of the programme
 - 1b Final attainment targets of the programme (OER, art. 3)
 - 1c Level of the programme (facet 2 NVAO accreditation system; OER, art. 3)

2. *Composition of the programme*
 - The content of the programme and its associated examination (OER, article 2.1a)
 - Nature of the programme (OER, Article 2.1g)
 - Study load of the programme and of each of the study units making up the programme (OER, article 2.1e)
 - The exam formats (OER, article 2.1h)
 - Number and sequence of exams and practical exercises (OER, article 2.1f)
 - Required sequence of exams (OER, article 2.1i)

3. *Coherence and didactic concept (facet 6 NVAO accreditation system)*
 - 3a Coherence
 - 3b Didactic concept

4. *Electives and practical exercises*
 - 4a Content of the specializations (OER, Article 2.1b)
 - 4b Requirements related to electives and student's individual choices (OER, 2.1j)
 - 4c Content of practical exercises (OER, article 2.1d)

5. *General information*
 - 5a Admission to the programme (OER Article 4)
 - 5b Language of teaching and exams (OER article 2.1l)
 - 5c International cooperation
 - 5c Programme committee (OLC) and Examination Board

6. *Transitional arrangements (OER, article 2.1k; OER, article 22)*

1. Objectives

1a Profile of the programme

The aims and final attainment targets of the MEEM are derived from those needed to function effectively at an academic level in the public and /or private sector, or to conduct (applied) academic research in the area of environmental or energy management.

The MEEM has an orientation as a postgraduate and academic programme that aims at preparing for jobs in companies, government and non-governmental organisations as internal and external consultants / environmental or energy (project) team members, civil servants and researchers in the domain of environmental science, specialized in environmental and energy management. It thus can be categorized as a postgraduate, professional and academic master programme.

The content of the program is characterized by:

- Attention for both the private and the public sector with respect to environmental and energy management;
- Multidisciplinary:
 - insights are derived from various disciplines in the domain of environmental sciences (e.g. policy science, economics, legal sciences, (basic) natural / technical sciences and (organizational) sociology) as well as social science research methods and techniques, specialized in environment and energy management;
 - the ability to apply disciplinary knowledge and insights in mutual connection on questions of environmental and energy management and sustainable development in a broad sense;
- Scientific nature;
- High quality;
- Stimulating the interaction between participants with their insights and experiences, in line with the postgraduate character of the programme;
- A postgraduate, professional and academic master programme.

1b Final attainment targets of the programme

The aim of the programme is reflected in its final attainment targets. The final attainment targets for the Master of Environmental and Energy Management are:

Domain Specific Final attainment targets

1. Graduates have knowledge of and insight in the relevant key concepts and theories of policy studies and law and can describe and categorize relevant policy instruments, describe the legal basis of common policy instruments used in environmental and energy management and are able to assess their usefulness and feasibility in various contexts.
2. Graduates have basic knowledge of and insight in a variety of clean(er) and treatment technologies relevant for environmental and energy management, and tools that can be used for assessing the options for improving the environmental and energy impacts of products and production processes. They are able to make basic calculations for some of these tools and to make judgements about what technological solutions are appropriate for specific situations.
3. Graduates have knowledge of and insight in relevant key terms and concepts of organizational theory, operations management and financial analysis. They are able to apply these to analyze (energy and environmental projects in) an organization, define needs for change and advise about implementation.
4. Graduates have knowledge of and insight in the relevant key concepts, theories and tools, strategies and management systems for corporate environmental and energy management, including Corporate Social Responsibility. Graduates are able to analyze

an existing situation and design solutions for (a specific issue in) environmental or energy management.

Integration / multidisciplinary related Final attainment targets

5. Graduates understand the concept of sustainable development and the relationships between resource utilization, production processes, societal processes and environmental pressure and are able to apply combinations of concepts and theories in environmental and energy management to the situation in the home country or other specific real life situations.
6. Graduates are able to integrate knowledge from various disciplines and to understand interrelationships in sustainable development processes, and are capable of formulating an action programme, policy, project or recommendations for environmental or energy management issues in their context based on this integrated knowledge.

Academic and Professional Final attainment targets

7. Graduates have academic and research skills like critically reflecting on literature, designing a research proposal and executing and reporting on an (applied) research project.
8. Graduates are able to independently access relevant scientific literature to obtain additional knowledge and apply this to the problem at hand.
9. Graduates take the responsibility for the continuous development of their own knowledge and skills.
10. Graduates are able to make a relevant contribution as an individual or as a member of a multi-disciplinary team to analyzing and solving complex environmental or energy problems in an organization or region. They are able to function in an international team, with English as the language of communication.
11. Graduates are able and willing to recognize the ethical aspects related to their activities.
12. Graduates are able to give a structured written and oral presentation in English about individual or team work. They also adhere to existing academic traditions, such as providing proper credits and references.
13. Graduates are able to reflect on matters and issues in the domain, are able to form an opinion and to contribute to both scientific and practitioners' discussions and e.g. to critically reflect on the role of technology in the process towards sustainable development
14. Graduates have knowledge of the principles of relevant professional skills, like communication, management and consulting skills, and have some basic experiences in applying these

1c. Level of the programme

Table 1: Dublin Descriptors and final attainment targets of MEEM

Descriptor	levels
<i>Descriptor 1: Knowledge and understanding</i> Have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with Master's level, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context	1,2,3,4,5,6,14
<i>Descriptor 2: Applying knowledge and understanding</i> Can apply their knowledge and understanding and problem solving abilities in new of unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study; have the ability to integrate knowledge and handle complexity	1,2,3,4,5,6,7,8 11,12,13,14
<i>Descriptor 3: Making judgments</i> Can formulate judgments with incomplete or limited information, including reflections on social and ethical responsibilities linked to the application of their knowledge and judgments	1,5,6,7,10,11,13
<i>Descriptor 4: Communication</i> Can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously	7,10,12,13,14
<i>Descriptor 5: Learning skills</i> Have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous	7,9

As can be seen from table 1, the final attainment targets of the MEEM match those of the Dublin Descriptors for master's programmes. Also, in developing the final attainment targets, the Criteria for Academic Bachelor's and Master's Curricula of the 3TU were used to check consistency and comprehensiveness.

2. Composition of the program

The MEEM has a total study load of 65 EC, and is divided into three components: a course work period, a case study period and the research project. The course work can be categorized around three main themes:

- Management (business administration)
- Governance and Law
- Technology (albeit technology is not taught at academic master level, but in a contextual sense).

Next to the courses on the three themes, courses or course elements are included that are more integrative in nature, and also workshops / courses concerned with academic research and professional skills. In general, there are many interlinks between courses.

The course work period is common for all students. After this, for the case studies and research project, students choose a specialization: Environmental Management, Water Management, or Energy Management.

Parts of the course work are offered in the form of a short course (EMSI), in which also non-MEEM students participate. Further, the programme has a certain degree of flexibility in execution, to match the timetables of both students and lecturers.

Table 2: The MEEM program for 2012-2013

Educational Items	ECs	Contact hours (appr.)	Exam format
Courses (joint programme)			
Policy Strategies and Implementation for Water Governance and other Sustainability Issues	4	30	PS + PG
Environmental Law	2	18	S + PS
Energy Management, Policy and Technology *	4	54	S + GP
Management: operations, organizations and financial analysis **	4	56	S + PG / PGR
Environment and Technology (incl. Water Technologies*)	4	36	S + PS
Environmental Management and Corporate Social Responsibility	4	24	S + PS
Ecology, Society and Sustainable Development	2	18	PGR / PG + AP + PS
Total	24		
Academic Research Skills: Methodology, effective writing & Research Proposal			
Academic Research Skills: Methodology, effective writing & Research Proposal	4	30	PR + PS
Communication, management and consulting skills **	2	30	AP + PS / PR
Total	6		
Case study period Environmental Management specialisation			
Case study period Environmental Management specialisation	12	~48 (variable)	PGI / PGR
OR			
Case study period Energy Management specialisation	12	~ (variable)	PGI / PGR
OR			
Case study period Water Management specialisation	12	~ (variable)	PGI / PGR
Total	12		
Research project (specialised programme)			
Research project	23	~8 (variable)	BAM
Grand total	65		

*: offered as part of the short course EMSI

** : partly offered as part of the short course EMSI

This structure is foreseen for students who begin the program in September 2012. The following abbreviations are used under the 'Exam format' column:

S	=	written exam
M	=	oral exam
PGI	=	group assignment, including a written group report and (in so far as possible) individual assessment of the manner in which the student participated in the group exercise
PG	=	group assignment, including a written group report and the assessment of this report for the group
PS	=	individual assignment, including a written report
PGR	=	group assignment and oral report of this through a presentation
PR	=	individual assignment and oral report of this through a presentation
AP	=	active participation is obligatory
BAM	=	reviewed in accordance with the procedures laid down in the regulations applicable to the Master's assignment.

The student's work must be eligible for review. More specific details are made known in a timely manner by the examiner and / or programme manager in accordance with the provisions of art. 4 of the Rules and Regulations of the Examination Board (part C of this charter).

The procedures for the part of the exam called Research project (master's thesis) are outlined in the specific manual 'Guidelines for the Research project'. The procedures described in this manual are assumed to be part of the Students' charter.

Specific regulations, procedures and requirements with respect to MEEM exams are laid down in the 'exam regulations' in the study guide. For example, these regulations specify that the duration of the programme is one year. With regard to the course work (that is, all the items except the case study and research project), during this year there will be in principle two opportunities offered to pass an exam. There will be an exam and a re-exam or an assignment and a repeat assignment. Students are automatically registered for the exams and, if needed, the re-exams. When a student does not enter an (re-)exam or does not hand in an (re-)assignment without informing the lecturer beforehand, then this (re-) exam or (re-) assignment will still be classified as a valid exam opportunity.

In special circumstances, students may be allowed an extra opportunity to take an exam. To apply for this, the student must make a request, in writing, to the Examination Board of the programme. For practical exercises and projects, e.g. the case study period and research project, there is no second opportunity to repeat these elements of the course. In cases of serious illness or accidents or other situations beyond control of the student, the Examination Board and programme management will try to find a solution.

The procedures and rules described in the study guide are assumed to be a part of the Students' charter.

3. Coherence and didactical concept (Samenhang en didactisch concept)

3a Coherence

The Master of Environmental and Energy Management is a coherent study programme. This coherence is anchored in the basic structure and set up of the programme, as well as in its organization. More specific, coherence is reached through the following four mechanisms:

1. Strong and clear basic structure of programme
2. Coherence between courses
3. Working towards research project
4. Organization

Structure of programme – the MEEM has three parts: course work, case study, and research project. The course work is common to all students; the case study and research project are based on the specialization streams. The build up throughout the programme takes place in three areas: from stand-alone courses in the course-work period, via integration subject and pre-structured work in the case period, towards the final individual research project. During the course work period, the core courses are structured around the themes of Management, Governance and Technology. They provide the (mainly) disciplinary knowledge in the different environmental and energy management areas. Besides, there are integrative courses (e.g. Environmental Management and CSR; Ecology, Society and Sustainable Development) that bring together various elements, and skills courses like Academic Research Skills and communication.

Coherence between courses - The lecturers know which courses connect to theirs (indicated in course descriptions) and where there is a potential risk of overlap or benefit of additionally. They take this into account when preparing and planning their contributions.

Working towards research project - The preparations for the research project already start during the course work period:

- In the course Academic Research Skills students learn how to design a research project.
- After about 4 months of course work students are asked to indicate their choice for specialization and (initial) research theme.
- Based on the specializations and themes chosen, students are assigned with tutors.
- Both the tutors and the students receive the reader 'Guidelines for the research project' which provides information and guidelines.
- By month 5 or 6 of the programme, the research project preparations start. First by writing a research proposal, and when approved the execution of the research project starts.

Organization - The MEEM programme has a relatively small scale and the programme manager and programme coordinators have good relationships with both students and lecturers and supervisors. Lecturers regularly discuss their course contents, materials and set up with the programme manager or programme coordinators.

3.b Didactic concept

The aim of the MEEM is to develop the professional knowledge and skills of participants through active learning at an academic level, taking into account the (educational, professional, and geographical) backgrounds of the participants.

The primary focus of the MEEM programme is to prepare graduates for a professional career for which academic education is important. As such, it aims to equip its participants with the necessary knowledge and skills to be able to work on and design solutions for multi-disciplinary problems in environmental or energy management. This is reflected in the final attainment levels, which show a focus on application and integration of models, theories and tools, a critical attitude towards the appropriateness of potential solutions in their specific context, and attention for assignments and project work focused on analysis and design of solutions. At the same time, graduates are also equipped to work in (applied) academic research in the area of environmental, water and energy management.

Thus, the didactic approach can thus be summarized as:

Academic education for (future) professionals (connections with actual practice in the professional field)
Multi-disciplinary
Innovative approach
Learning-by-doing
Training of skills (e.g. teamwork)

4. Electives and practical exercises

4a Content of the specializations

The Master of Environmental and Energy management has three specializations:

- 1) Environmental management
- 2) Water management
- 3) Energy management

The course work period is common for all students. After this, for the case studies and research project, students choose a specialization: Environmental Management, Water Management or Energy Management.

4b Requirements related to electives and student's individual choices

Not applicable, because the programme does not have a 'vrije ruimte', except for the choice of specialization and research project topic.

4c Content of practical exercises

A characteristic of the instructional approach in the MEEM programme is a strong link between theory and practice. This calls for active learning, and teaching methods that enable this. Thus, in most courses practice-oriented application of concepts is used to teach participants (how) to use them in practice and to reflect upon the context in which tools and concepts are or can be used. This, in turn, gives rise to discussion in class, in which participants learn from each other and from the situation and solution strategies used in various countries. Active learning by students is promoted by including e.g. assignments, workshops/interactive classes, short courses, case study and the research project. In view of the international postgraduate nature of MEEM, many programme elements specifically use this application of theory and concepts to provide a link to the home region/country of students.

5. General information

5a. Admission to the programme

Admission requests for the program are assessed by an admission committee that consists of:

- Prof. dr J.Th.A. Bressers
- Prof. Dr. J. Lovett Dr. Joy Clancy
- Mrs. dr. S. Hophmayer-Tokich
- Support: Mrs. R. Koster, BA.

The standard admission criteria are as follows:

- have at least a Bachelor's degree in a related discipline in the natural, technical, environmental or social sciences²⁷. For more details, see next section.
- work experience is recommended or, depending on disciplinary background, required (see next section)
- have a basic understanding of chemistry (high school level)

²⁷ Second class lower and third class bachelors provide access to the MEEM programme only when complemented with respectively 2 years of relevant work experience or ample (5 yrs) relevant work experience and a convincing motivation.

- have excellent communication skills and a very good understanding of the English language
- demonstrate sufficient proficiency in English by means of a minimum score of 6.5 on the Academic IELTS test, or a score of at least 90 on the Internet based TOEFL-iBT test.

Further, for a positive assessment the following is required:

- A letter showing motivation and expectations that match with the programme
- Positive recommendation letter(s)
- CV
- Relevant diplomas and transcripts have to be certified.

- Requirements prior education and work experience

With respect to the disciplinary background and work experience mentioned above, the following criteria apply:

1. Admission based on relevant disciplinary background

Candidates with a Bachelor in the following fields can be admitted:

A. Natural, Technical and Environmental Sciences

Bachelors in the field of Engineering Sciences, Technical Sciences, Natural Sciences (chemistry, physics, geology, biology, ecology, etc.), Environmental Studies / Sciences, agricultural / forestry Sciences, Earth Sciences, natural resources management, Environmental Health Sciences

B. Social Sciences

Bachelors in the field of Business / Business Administration / Commerce, Policy Studies / Political Science, Economics, Law, Management / accounting sciences, Public Management, Environmental / Natural Resource / agriculture / forestry Management, Public Health, (physical, regional, economic) Planning sciences.

For applicants with an educational background in these areas, work experience is recommended.

2. Admission based on prior education plus expertise

Candidates with other Bachelors in the Natural, Technical, Environmental or Social Sciences can be admitted based on at least 3 years of work experience that includes some tasks related to knowledge / skills covered in the Master Programme, or when there are several relevant items in the prior education.

3. Admission based on work experience and Bachelor's degree

Applicants with a Bachelor that is not in the Natural, Technical, Environmental or Social Sciences (here referred to as Human Sciences) can be admitted when possessing at least 5 years of directly relevant work experience. That is, the experience entails many tasks that relate to the skills and knowledge covered in the MEEM programme.

The standard procedure includes finetuning, e.g. with respect to IELTS, potential over-qualification or potential mismatches.

In individual cases, programme management can deviate from the admission requirements. However, not with respect to the Bachelor's degree and only if management has good reasons to assume that the applicant has enough background and motivation to complete the programme successfully. In those cases, the situation is discussed with the applicant. Usually, the responsibility for the lacking item lies with the applicant.

- Other provisions

The management of the program may, in divergence from what is stated before, to persons that do not yet fulfill the requirements for admission, give the student the opportunity to follow certain parts of the master.

5b. Language of teaching and exams (*Taal onderwijs en tentamens*)

All courses and exams are given in the English language.

To safeguard the quality of teaching and examination in the English language, MG has taken the following measures:

- Assessment of all MG teaching staff and examiners as for their command of the English language. If their IELTS score is slightly below the established minimum level, they will be allowed a remediation period. Failing to meet the standard after this period will lead to exclusion of the English-language programme. The assessment process for existing staff and examiners is expected to be concluded before the end of 2010, newcomers will be assessed upon their entry.
- Inclusion in the admission requirements for the English language programmes of MG of specific demands as for the proficiency in the English language, wherever a sufficient command may not be warranted by the candidate's prior education.

5c. International cooperation

The MEEM programme has a positive attitude towards international cooperation and actively explores opportunities for this.

Starting 2009-2010, cooperation with the University of Padjadjaran (Bandung, Indonesia) in the form of a Double Degree programme, was launched. Further, many of the lecturers involved in the MEEM programme are internationals themselves, are part of international networks and / or participate in international research or educational activities.

5d. Program Committee (OLC) and Examination Board

- Program Committee

The programme committee of MEEM consists of several of the core lecturers of the programme. The tasks of the program committee are:

- giving advice on the Teaching and Examination Regulations (OER) in accordance with article 7.13 of the WHW;
- assessing every year the manner in which the Teaching and Examination Regulations (OER) is carried out;
- giving advice - asked or not asked - to the administration of the program (section 1 of article 9.17 of the WHW) and the Dean on all matters with respect to the education.

The core lecturers meet at least once a year, during the Annual evaluation meeting.

Core teachers of the program are:

- Dr. Joy Clancy
- Prof Jon Lovett
- Dr. L. Franco
- Dr. F.H.J.M. Coenen
- Prof.dr.ir. K. Krabbendam
- Dr. M. Heldeweg

Students are involved in and stimulated to give feedback on the programme through different channels, for example the coordination and evaluation meetings.

- support: Dr. Sharon Hophmayer-Tokich, Rinske Koster and Hilde van Meerendonk-Obinna.

- Examination Board

The Dean has, in accordance with article 7.12 of the WHW established an Examination Board for the master programs in the faculty. The members are appointed from the personnel who are charged with providing education. For the latest composition of the Examination Board

see the [website](#) of the Board.

Correspondence with the Examination Board goes through mastersgriffie@mb.utwente.nl.

6. *Transitional arrangements*

Not applicable

B2h: Programma-specifieke bijlage bij de OER 2012-2013

Voor de post-initiële Master opleiding

Public Management (MPM)

1. *Doelstellingen (onderwerp 1 NVAO accreditiekader)*
 - 1a Profiel van de opleiding
 - 1b Eindtermen van de opleiding (OER art. 3)
 - 1c Niveau van de opleiding (facet 2 NVAO accreditiekader; OER art. 3)

2. *Samenstelling van het onderwijsprogramma*
 - Inhoud van de opleiding en van de daaraan verbonden examens (OER art 2.1a)
 - Aard van de opleiding (OER art 2.1f)
 - Studielast van de opleiding en van elk van de daarvan deel uitmakende onderwijseenheden (OER art 2.1d)
 - Aard van de tentamens/toetsvorm (OER art. 2.1g)
 - Aantal en volgtijdelijkheid van tentamens en praktische oefeningen (OER art 2.1e)
 - Volgorde eisen (OER art 2.1h)

3. *Samenhang en didactisch concept (facetten 6 en 10 NVAO accreditiekader)*

4. *Keuzemogelijkheden en praktische oefeningen*
 - 4a Inhoud van de afstudeerrichtingen (OER art 2.1b)
 - 4b Eisen gesteld aan invulling van vrije ruimte en de te maken keuzes (OER 2.1i)
 - 4c Inrichting van de praktische oefeningen (OER art2.1c)

5. *algemene informatie*
 - 5a Toegang tot de opleiding (OER art 4)
 - 5b Taal onderwijs en tentamens (OER art 2.1k)
 - 5c Internationale samenwerking (OER art 20)
 - 5d opleidingscommissie (OLC) en examencommissie

6. *Overgangsregelingen (OER art 2.1j; OER art 22)*

1. Doelstellingen

1a. Profiel van de opleiding

Het doel van de opleiding is hoger opgeleide functionarissen in organisaties in de publieke en semi-publieke sector zodanig (multidisciplinaire) kennis, inzichten en vaardigheden te doen verwerven dat zij, mede voortbouwend op de eigen initiële opleiding en werkervaring, optimaal strategische en leidinggevende functies kunnen vervullen en daarmee bijdragen aan hun loopbaanperspectieven.

De opleiding kenmerkt zich naar inhoud door:

- gerichtheid op management en bestuur in publieke en semi-publieke organisaties;
- de relatie tussen het openbaar bestuur en zijn maatschappelijke omgeving;
- multidisciplinariteit: inzichten worden ontleend aan de functionele gebieden op het gebied van management en organisatie en de disciplines politicologie, recht, economie en sociologie, alsmede methoden en technieken van sociaal wetenschappelijk onderzoek;
- expliciet aandacht voor technologie en innovatie in het publieke domein;
- expliciet aandacht voor maatschappelijk verantwoord handelen;
- expliciet aandacht voor de internationale, i.h.b. Europese context;
- wetenschappelijkheid;
- hoge kwaliteit.

1b. Eindtermen van de opleiding

De eindkwalificaties die studenten aan het eind van de masteropleiding Public Management bezitten.

1. Afgestudeerden beschikken over managementvaardigheden en –gedrag op basis van inzicht in de huidige stand van de wetenschappelijke kennis van kernthema's uit de verschillende disciplines die bij elkaar komen in de multidisciplinaire context van management in de publieke sector.
2. Afgestudeerden zijn in staat om kennis uit uiteenlopende kennisgebieden te integreren die in combinatie in de complexe omgeving van het management in het publieke domein van belang zijn.
3. Afgestudeerden zijn in staat professionele situaties en problemen vanuit verschillende perspectieven en op verschillende niveaus van abstractie te analyseren.
4. Afgestudeerden beschikken over het vermogen om een keuze te maken uit verschillende benaderingswijzen voor het oplossen van problemen in de multidisciplinaire context van management in het publieke domein.
5. Afgestudeerden zijn in staat om, met behulp van de verworven theoretische inzichten en methodes veranderingen in publieke organisaties te ontwerpen, implementeren en evalueren.
6. Afgestudeerden beschikken over de kennis en de vaardigheid om effectief te communiceren met specialisten op alle relevante terreinen van het publieke management.

1c. Niveau van de opleiding

De onderstaande tabel toont dat met de eindtermen van de opleiding een redelijke aansluiting op het masterniveau van de Dublin Descriptoren wordt gerealiseerd.

Tabel 1: Dublin Descriptors en eindtermen van de MPM

Descriptor	eindtermen
Descriptor 1: Knowledge and understanding Have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with Bachelor's level, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context	1
Descriptor 2: Applying knowledge and understanding Can apply their knowledge and understanding and problem solving abilities in new of unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study; have the ability to integrate knowledge and handle complexity	1, 2, 3, 4, 5
Descriptor 3: Making judgments Can formulate judgments with incomplete or limited information, including reflections on social and ethical responsibilities linked to the application of their knowledge and judgments	3, 4
Descriptor 4: Communication Can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously	6
Descriptor 5: Learning skills Have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous	

2. Samenstelling van het onderwijsprogramma

2a. Opbouw

De opleiding is in deeltijd geprogrammeerd en bestaat uit een cursorisch deel van 2 jaar en een aansluitende afstudeeropdracht. De totale studielast is 60 EC. Het cursorische deel is opgebouwd uit zes modules van ongeveer gelijke omvang. De opleiding wordt afgesloten met een openbaar colloquium waarin het resultaat van de eindopdracht wordt gepresenteerd. De afgestudeerden ontvangen het masterdiploma. Voor het behalen van het masterdiploma moeten de uitwerkingen van de opdrachten evenals de tentamens voldoende te worden beoordeeld. De opleiding is EAPAA-geaccrediteerd, the European Association for Public Administration Accreditation.

Tabel 2: Het programma van de opleiding MPM

Module	Vak	EC	Toets-vorm
1	HR- & Organisatiemanagement	8	PGI
2	Strategie Beleid & Politiek	8	PSS
3	Financieel Management & Bedrijfsvoering	8	PGI
4 t/m 6	<u>Een keuze van drie uit:</u>	24	PSS
	- Strategievorming & Organisatieontwikkeling	(8)	PGI
	- Management van eGovernment	(8)	PGI
	- Risico & Regulering	(8)	BAM
	- Innovatieve bedrijfsvoering	(8)	
	- Europa	(8)	
	- Integriteit & Ethiek	(8)	
	- Opdrachtgeverschap & Regievoering	(8)	
	- HR-management: verdieping en bijzondere onderwerpen	(8)	
	- Ondernemerschap & Duurzaamheid	(8)	
	Master Thesis	12	
	Methodologie en internationale aspecten (inclusief buitenlandse studiereis) maken expliciet deel uit van het programma. Deze zijn verweven met cq ingeroosterd in de verschillende modules.		
Totaal		60	

Voor de codering bij “toetsvorm” geldt het volgende:

PGI = praktische oefening in groepsverband; schriftelijke verslaggeving daarvan per groep en (voor zover mogelijk) individuele beoordeling van de wijze, waarop de student aan activiteiten in groepsverband heeft deelgenomen;

PSS = praktische oefeningen of opdrachten, schriftelijke en/of mondelinge verslaggeving daarvan, schriftelijk tentamen. Aan het tentamen mag pas worden deelgenomen als de praktische oefeningen zijn verricht en de verslaggeving daarvan met een voldoende resultaat is beoordeeld.

BAM = conform de regels zoals vastgesteld in de regelingen betreffende de masteropdracht

3. Samenhang en didactisch concept

De Master Public Management kenmerkt zich door een multidisciplinaire, analytische en creatieve benadering van problemen waarmee managers en leidinggevenden in de publieke sector te maken hebben.

Om deze opzet te waarborgen worden verschillende onderwijsvormen gehanteerd. Docenten lichten de bestudeerde literatuur nader toe en verdiepen deze. Onderlinge relaties tussen de verschillende benaderingen en opvattingen worden verduidelijkt. En steeds wordt daarbij aansluiting gezocht bij de praktijk van de publieke sector in het algemeen en die van de deelnemers in het bijzonder.

Kortgezegd; het onderwijs in de master is modulair, integratief en interactief van aard:

Modulair

Het cursorisch gedeelte van de master bestaat uit zes masterclasses. Elke masterclass bestaat in principe uit twintig dagdelen, verdeel over tien cursusdagen in evenzoveel weken.

Integratie

Elke masterclass wordt, bij wijze van toetsing, afgesloten met het uitvoeren van een modulecase of -opdracht. In de uitwerking van deze modulecase of -opdracht past de deelnemer de pas verworven kennis en inzichten van de desbetreffende module toe op een concreet onderwerp uit uw eigen organisatie. Door de masterclasses op deze manier in te richten en af te sluiten worden theorie en praktijk optimaal geïntegreerd.

Interactief

Communicatie over en weer tussen deelnemers en tussen deelnemers en docenten is een belangrijk kenmerk van de master. Er wordt meerwaarde gecreëerd door koppeling van hoogwaardige kennis en inzichten uit de wetenschap en praktijk aan bestaande kennis, inzichten en opvattingen van de deelnemers en hun organisaties.

4. Keuzemogelijkheden en praktische oefeningen

4a. Inhoud van de afstudeerrichtingen

Niet van toepassing.

4b. Eisen gesteld aan invulling van vrije ruimte en de te maken keuzes

Behoudens de keuzeruimte voor moduleopdrachten en eindopdracht is dit niet van toepassing.

4c. Inrichting van praktische oefeningen

In elke module worden een of enkele opdrachten uitgevoerd, in subgroepen of individueel. Het doel van deze opdracht(en) is om de nieuwe kennis en inzichten toe te passen op concrete situaties. Ook het verzorgen van een presentatie voor docent(en) en medestudenten en een openbare presentatie maken hiervan in de meeste modules deel uit, evenals de deelname aan een internationale studiereis en enkele bezoeken aan instituties in onder meer Brussel en Den Haag.

Het afrondende onderdeel van de Master Public Management is het schrijven van de masterthesis (scriptie). Het doel hiervan is de tijdens de opleiding opgedane kennis, inzichten en vaardigheden toe te passen op een vraagstuk uit de praktijk van de publieke sector. Het resultaat dient een wetenschappelijk verantwoorde bijdrage te zijn aan de oplossing van dat vraagstuk. Dit betekent dat:

- gehanteerde inzichten, modellen en theorieën afkomstig dienen te zijn uit wetenschappelijke literatuur;
- gepresenteerde feiten op wetenschappelijk verantwoorde wijze verkregen moeten zijn;
- conclusies beredeneerd uit de geconstateerde feiten dienen te zijn afgeleid.

Elke cursist schrijft individueel een scriptie. De scriptie wordt begeleid door (in principe) twee docenten van de MPM, een eerste en een tweede begeleider. Het onderwerp en de probleemstelling van de scriptie worden in overleg met de eerste begeleider en de programmamanager vastgesteld.

5. Algemene informatie over de opleiding

5a. Toegang tot de opleiding

In aansluiting op het gestelde in artikel 4 wordt de toelatingsaanvraag voor de opleiding beoordeeld door *de toelatingscommissie*, bestaande uit:

- prof. dr. ir. O.A.M. Fisscher
- mr. C. Regtuit
- H.W. Hoving.

Voor deelname aan de opleiding is tenminste drie jaar praktijkervaring vereist in of met het publieke of semi-publieke domein, bij voorkeur in managementfuncties. Bij de beoordeling van de aanmeldingsverzoeken wordt verder van de volgende indeling gebruik gemaakt:

1. Universitaire vooropleiding

Bachelors-/drs-/ir-/mr-/master-opleiding in een aanpalende richting. In geval van niet aanpalende vooropleiding wordt op individuele basis beslist door de toelatingscommissie, in het bijzonder op basis van anderszins verworven competenties.

2. HBO-bachelors

Nederlandse HBO-bachelors van een aanpalende opleiding zijn in beginsel toelaatbaar. Bij HBO-bachelors, in het bijzonder bij niet aanpalende opleidingen, wordt op individuele basis beslist door de toelatingscommissie, in het bijzonder op basis van anderszins verworven competenties.

3. Buitenlandse bachelors

Studenten met een bachelor-diploma van een buitenlandse opleiding worden op individuele basis beoordeeld door de toelatingscommissie. Competenties worden getoetst op basis van:

- voldoende beheersing van de Nederlandse taal
- een NUFFIC-diplomavergelijking
- een 'letter of motivation'
- een IELTS-score van minimaal 6.0 overall, met een 6.0 op iedere subscore
- zo nodig aanvullende informatie, dit ter beoordeling van de toelatingscommissie

5b. Taal

De MPM is een Nederlandstalige managementopleiding. De gebruikte literatuur is ten dele Engelstalig.

5c. Internationale samenwerking

Niet van toepassing. Veel van de bij de opleiding betrokken docenten maken deel uit van internationale netwerken, waaruit ten behoeve van MPM geput wordt.

5d. Opleidingscommissie (OLC) en examencommissie

De *opleidingscommissie* van de MPM wordt gevormd door de kerndocenten van de opleiding. De kerndocenten komen tenminste een keer per jaar bij elkaar, tijdens de jaarlijkse evaluatiebijeenkomst.

De inbreng van studenten wordt gerealiseerd door hen regelmatig uit te nodigen om feedback op het programma te geven.

Ambtelijke ondersteuning: mr. C. Regtuit

De taken van de opleidingscommissie zijn:

- advies uitbrengen over de onderwijs- en examenregeling
- jaarlijks beoordelen van de wijze van uitvoeren van de onderwijs- en examenregeling
- het gevraagd en ongevraagd geven van advies aan het bestuur van de opleiding en de decaan over alle aangelegenheden aangaande het betreffende onderwijs

De decaan heeft, conform WHW artikel 7.12, en in aansluiting op artikel 7B van dit statuut, voor de facultaire masteropleidingen een *examencommissie* ingesteld. De leden van de examencommissie worden (twee)jaarlijks door de decaan benoemd uit de leden van het personeel die met het verzorgen van het onderwijs zijn belast (faculteitsreglement art.12).

De meest recente samenstelling van de commissie is te vinden op haar [webpagina](#).

Correspondentie met de commissie gaat via de ambtelijke ondersteuning, mastersgriffie@mb.utwente.nl. Meer informatie via het secretariaat van de onderwijsondersteuning (tel. 3200)

6. Overgangsregelingen

Voor de deelnemers van cohort 2010 geldt dat voor alle onderdelen van het voor hen geldende curriculum zo nodig nog (maximaal twee) tentamenkansen worden aangeboden. Dit curriculum ziet er als volgt uit:

Module	Vak	EC	Toetsing
1	Organisatiemanagement	8	PGI
2	Financieel management	8	PSS
3	Beleidsmanagement	8	PGI
4	Informatiemanagement	8	PSS
5	Personeelsmanagement	8	PGI
6	Politiek & management	8	PGI
	Master Thesis	12	BAM
	Methodologie en internationale aspecten (inclusief buitenlandse studiereis) maken expliciet deel uit van het programma. Deze zijn verweven met c.q. ingeroosterd in de verschillende modules.		
Totaal		60	

B2i: Opleidings specifieke bijlage bij de OER 2012-2013

voor de post-initële Masteropleiding

Risicomanagement (MRM)

1. *Doelstellingen (onderwerp 1 NVAO accreditatiekader)*
 - 1a Profiel van de opleiding
 - 1b Eindtermen van de opleiding (OER art. 3)
 - 1c Niveau van de opleiding (facet 2 NVAO accreditatiekader; OER art. 3)
2. *Samenstelling van het onderwijsprogramma*
 - Inhoud van de opleiding en van de daaraan verbonden examens (OER art 2.1a)
 - Aard van de opleiding (OER art 2.1f)
 - Studielast van de opleiding en van elk van de daarvan deel uitmakende onderwijseenheden (OER art 2.1d)
 - Aard van de tentamens/toetsvorm (OER art. 2.1g)
 - Aantal en volgtijdelijkheid van tentamens en praktische oefeningen (OER art 2.1e)
 - Volgorde eisen (OER art 2.1h)
3. *Samenhang en didactisch concept*
 - 3a Samenhang (facet 6 NVAO accreditatiekader) (*nog niet opgenomen*)
 - 3b Didactisch concept (facet 10 NVAO accreditatiekader) (*nog niet opgenomen*)
4. *Keuzemogelijkheden en praktische oefeningen*
 - 4a Inhoud van de afstudeerrichtingen (OER art 2.1b)
 - 4b Eisen gesteld aan invulling van vrije ruimte en de te maken keuzes (OER 2.1i)
 - 4c Inrichting van de praktische oefeningen (OER art2.1c)
5. *algemene informatie*
 - 5a Toegang tot de opleiding (OER art 4)
 - 5b Taal onderwijs en tentamens (OER art 2.1k)
 - 5c Internationale samenwerking (OER art 20)
 - 5d opleidingscommissie (OLC) en examencommissie
6. *Overgangsregelingen (OER art 2.1j; OER art 22)*

1. Doelstellingen

1a. Profiel van de opleiding

De masteropleiding Risicomanagement of 'MRM' is een postacademisch programma dat als doel heeft de studenten voor te bereiden, in termen van kennis en vaardigheden, op posities op academisch niveau in private en publieke organisaties, waarvoor expertise op het terrein van risicomanagement vereist is, als managers of interne dan wel externe adviseurs. De opleiding is in deeltijd geprogrammeerd en bestaat uit een cursorisch deel van 2 jaar en een aansluitende afstudeeropdracht.

De MRM is een Nederlandstalige managementopleiding, gericht op de publieke, semipublieke en private sector. De opleiding kenmerkt zich naar inhoud door:

- een integrale benadering van het onderwerp risicomanagement, met de rol van de organisatie centraal gesteld;
- aandacht voor zowel publieke als private organisaties en hun omgevingen;
- multidisciplinariteit;
- inzichten worden ontleend aan de disciplines risicomanagement, bedrijfs- en bestuurskunde, sociologie en psychologie, communicatie en technologie, alsmede methoden en technieken van sociaalwetenschappelijk onderzoek;
- het ontwikkelen van het vermogen om de risicomanagementproblematiek van een organisatie in context te (h)erkennen en ook bekend te raken met het begrippenkader van enerzijds het maatschappelijk domein en anderzijds gespecialiseerde terreinen;
- wetenschappelijkheid;
- hoge kwaliteit;
- praktijkgerichtheid;
- het bevorderen van de interactie tussen cursisten met hun inzichten en ervaringen, passend bij het postacademische karakter.

1b: eindkwalificaties op het gebied van kennis, inzicht en vaardigheden

In tabel 1 staan de eindkwalificaties die studenten aan het eind van de opleiding tot Master Risicomanagement bezitten.

Tabel 1: eindkwalificaties afgestudeerden masteropleiding Risicomanagement

De afgestudeerde ...	
1.	Heeft kennis en inzicht in de theorieën van risicomanagement, en is in staat en gemotiveerd zich nieuwe kennis op die gebieden eigen te maken, te identificeren, te volgen en toe te passen.
2.	Heeft inzicht in het specifieke karakter van risico's (en onzekerheid), en heeft kennis van de verschillende soorten risico's, van de verschillende manieren om de risico's in te schatten en te beheersen en van de manieren om de financiële aspecten af te dekken.
3.	Kan risicobewustzijn bevorderen
4.	Is bij het afwegen van risico's in staat om de verschillende niveaus (eigen organisatie, ketenbewustzijn, maatschappelijk niveau) waarop de risico's zich aandienen, te onderscheiden, en de samenhang te onderkennen.
5.	Is in staat mondeling en schriftelijk te communiceren over risicomanagement: a) kan informatie over risicomanagement effectief overbrengen, leidend tot overeenstemming, begrip, acceptatie en actie. b) onderkent de impact van interne en externe communicatie voor de organisatie en de omgeving en weegt deze mee in deze communicatie
6.	Is in staat om conclusies, alsmede de kennis, motieven en overwegingen die hieraan ten grondslag liggen, duidelijk en ondubbelzinnig over te brengen op een publiek van specialisten of niet-specialisten

7.	Is in staat te adviseren over risicomanagement: a) heeft kennis van de theorieën m.b.t. adviseren en communiceren over risicomanagement b) heeft de vaardigheden om te adviseren ²⁸ over risicomanagement aan individuen, teams en organisaties c) is in staat de adviesvaardigheden passend bij de context in te zetten (op bestuurs- en uitvoerend niveau, voor interne en externe stakeholders, etc.)
8.	Is in staat een oordeel te vormen in diverse omstandigheden, hierover te adviseren en te communiceren rekening houdend met de volgende punten: a) een complex (politiek) krachtenveld b) tegenstrijdige meningen en belangen c) binnen en om de organisatie(s) d) een gegeven machtsverhouding
9.	Is in staat te reflecteren op het eigen leerproces en de eigen positie in het dagelijks werk als professional
10.	Kan reflecteren op de eigen houding en positie bepalen en kan deze vasthouden of veranderen en daarbij rekening houden met de eigen normatieve positie en de integriteit van de organisatie: a) heeft inzicht in de morele aspecten van beslissingen en ontwikkelingen b) heeft kennis van de standaarden van risicomanagement, de beroepsgroep en de ethiek
11.	Is in staat in een team samen te werken en daaraan leiding te geven onder diverse omstandigheden: a) is in staat om, bij het omgaan met risico's, de binnen de werksituatie relevante kennis en ervaring te mobiliseren, door de explicitering ervan te faciliteren. b) kan als lid of leider van een (breed samengesteld) team doelgericht samenwerken ook onder druk van tijd en de publieke opinie c) is in staat tot en staat open voor het onderkennen en aangaan van adequate in- en externe samenwerkingsverbanden
12.	Is in staat zelfstandig (onder begeleiding) een onderzoek te doen en een probleem op te lossen: a) heeft kennis van en inzicht in de methoden en technieken van onderzoek en ontwerp (zowel technisch als organisatorisch) b) kan een goede vraagstelling voor onderzoek ontwikkelen c) is in staat de juiste methode en technieken te selecteren en toe te passen d) is in staat complexe situaties te analyseren in termen van oorzaak-gevolgverbanden. e) is in staat onderzoekrapportages kritisch te beoordelen

1c. Niveau van de opleiding

De onderstaande tabel toont dat met de eindtermen van de opleiding een goede aansluiting op het masterniveau van de Dublin Descriptoren wordt gerealiseerd.

Tabel 2: Dublin Descriptoren en eindtermen van de MRM

Descriptor	eindtermen
Descriptor 1: Knowledge and understanding Have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with Master's level, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context	1,2,7,10,12
Descriptor 2: Applying knowledge and understanding Can apply their knowledge and understanding and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study; have the ability to integrate knowledge and handle complexity	1,3,7,10,11,12

²⁸ N.B.: met 'advies'/'adviseren' wordt verwezen naar de rol van een adviseur. MRM beoogt niet risicomanagement-consultants op te leiden

Descriptor 3: Making judgments Can formulate judgments with incomplete or limited information, including reflections on social and ethical responsibilities linked to the application of their knowledge and judgments	4,5,(7),8
Descriptor 4: Communication Can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously	3,5,6,8
Descriptor 5: Learning skills Have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous	1,9

2. Samenstelling van het onderwijsprogramma

De opleiding is in deeltijd geprogrammeerd en bestaat uit een cursorisch deel van 2 jaar en een aansluitende afstudeeropdracht. De totale studielast is 70 EC. Het cursorische deel is opgebouwd uit negen modules van ongeveer gelijke omvang. De opleiding wordt afgesloten met een openbaar colloquium waarin het resultaat van de eindopdracht wordt gepresenteerd. De afgestudeerden ontvangen het masterdiploma. Voor het behalen van het masterdiploma moeten de uitwerkingen van de opdrachten evenals de tentamens voldoende worden beoordeeld.

Tabel 3: het programma van de opleiding MRM

Module	Vak	EC	Wijze van toetsing
1	Inleiding	6	S
2	Risicobeoordeling	3	S; PS
3	Risicobeheersing	4	S; PS
4	Communicatie	3	S
5	Studiereizen (2x)	5	PS
6	Organisatie	6	PS + participatie in de werkcolleges
7	Bijzondere onderwerpen	13	S; PS
8	Bernstein-reflectie	1	PS
9	Casusproject (afstudeeropdracht)	18	BAM
1a+2a+3a+4a+6a+6b+7a	Methodologie en casussen	9	S; PS; peer-review door medecursisten
A	Actualiteitencolleges	2	PS, (deelname)
	De leerlijn Methodologie en Casussen loopt parallel met de kernleerlijn, en heeft met die laatste interactie		
Totaal		70	

Het programma geldt voor studenten die op 1 januari 2010 met hun studie zijn begonnen, alsmede voor het cohort dat – onder voorbehoud van voldoende deelname – in september 2011 van start gaat. In het overzicht van het studieprogramma voor de master zijn de examenonderdelen als volgt opgenomen: module / vakomschrijving / studielast in EC / wijze van toetsing.

Voor de codering bij "wijze van toetsing" geldt het volgende:

S	=	schriftelijk tentamen;
PS	=	praktische oefeningen en schriftelijke verslaglegging daarvan;
BAM	=	conform de regels zoals vastgesteld in de regelingen betreffende de masteropdracht (hier: casusopdracht)

Bepalend is dat de student een te beoordelen prestatie levert. Nadere details zijn te vinden in OSIRIS en/of worden door de examinerator tijdig bekend gemaakt op Blackboard, conform het gestelde in artikel 4 van de Regels en Richtlijnen Examencommissies (onderdeel C van dit Statuut).

Voor het examenonderdeel “casusproject” wordt de examenprocedure beschreven in de desbetreffende handleiding. De daarin beschreven procedure wordt geacht onderdeel van het Studentenstatuut te zijn.

3. Samenhang en didactisch concept

3a Samenhang

De samenhang in het programma is zichtbaar in twee parallel lopende leerlijnen: de leerlijn “kernmodules” en de leerlijn “methodologie en casussen”.

De kernmodules vormen de hoofdmoot van het programme. Te beginnen bij de introductiemodule worden de verschillende elementen van de risk management cyclus behandeld: beoordeling, beheersing – inclusief financiële aspecten -, communicatie, en organisatie – inclusief ethische en implementatievraagstukken. Een buitenlandse veldreis en vijf ééndaagse cursussen over ‘special topics’ zijn verweven met deze leerlijn. Het laatste onderdeel in de serie kernmodules is het casusproject (afstudeeropdracht), dat bij voorkeur wordt uitgevoerd in de werkomgeving van de deelnemer.

De leerlijn van de methodologie en casussen bereidt de studenten voor op het gebruik van wetenschappelijke onderzoeks- en ontwerpmethoden, inclusief de ontwikkeling van casussen. De ontwerpgerichte activiteiten binnen deze leerlijn zijn gericht op organisatieontwerp. Er is daardoor een duidelijke interactie met module 6, Organisatie. Verdere interacties met de leerlijn van de kernmodules vinden o.a plaats met module 3, risicobeheersing).

3b Didactisch concept

De deelnemers in de MRM hebben over het algemeen meerjarige relevante werkervaring, vaak ook (deels) op het gebied van het risicomanagement. Leren met en van elkaar is daarom een belangrijk element in het didactisch concept van de opleiding. Dit uit zich bijvoorbeeld in frequente discussies tijdens de colleges. Daarnaast is het programma sterk interdisciplinair van aard, in lijn met het object van studie – risico management. De kern van het didactisch concept kan daarom als volgt worden verwoord:

ontwikkeling van professionele kennis en vaardigheden door ‘active learning’ op een academisch niveau, rekening houdend met de opleidings- en professionele achtergrond van de deelnemers.

Dit wordt vertaald in de volgende onderwijskundige uitgangspunten die aan de basis van het programma staan:

- het bevorderen van actieve leervormen
- het voortbouwen op bij de student reeds aanwezige kennis, ervaring, vaardigheden professionele achtergrond
- het gericht bevorderen van kennisverwerving en vaardighedenontwikkeling.

4. Keuzemogelijkheden en praktische oefeningen

4a. Inhoud van de afstudeerrichtingen

Niet van toepassing.

4b. Eisen gesteld aan invulling van vrije ruimte en de te maken keuzes

Behoudens de keuzeruimte voor moduleopdrachten en eindopdracht is dit niet van toepassing.

4c. Inrichting van praktische oefeningen

In de meeste modules worden een of enkele opdrachten uitgevoerd, in subgroepen of individueel. Het doel van deze opdracht(en) is om de nieuwe kennis en inzichten toe te passen op concrete situaties. Ook het verzorgen van een presentatie voor docent(en) en medestudenten en een openbare presentatie maken hiervan deel uit, evenals de deelname aan twee studiereizen, één in Nederland en de andere in het buitenland.

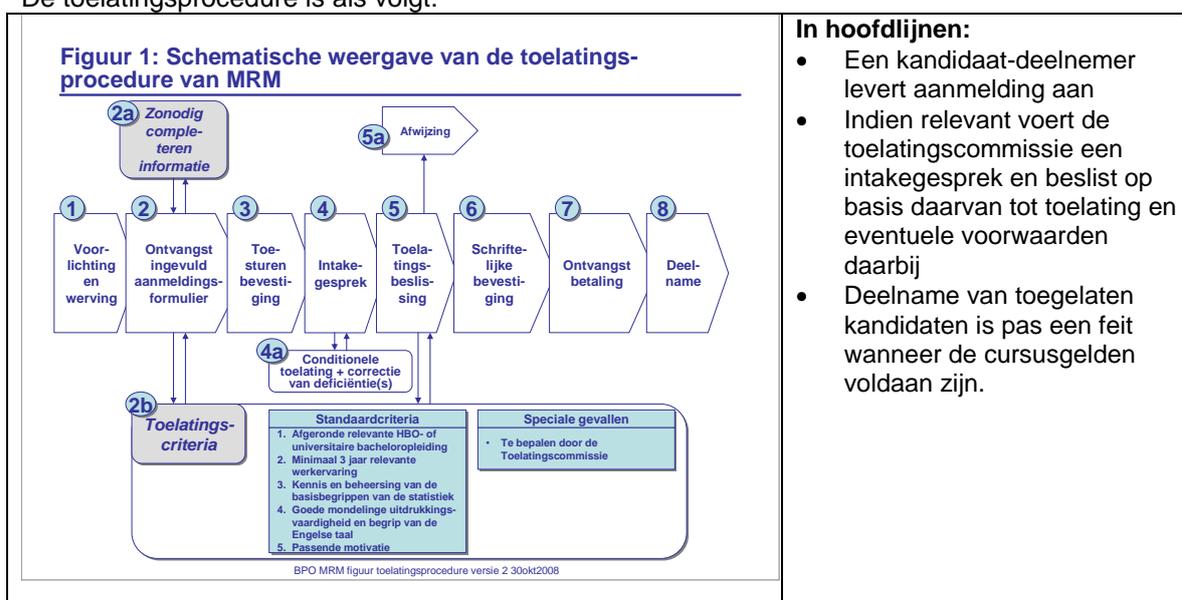
5. Algemene informatie over de opleiding

5a. Toegang tot de opleiding

De toelatingsaanvraag voor de opleiding wordt beoordeeld door de toelatingscommissie, bestaande uit:

- prof. dr. J.I.M. Halman
- prof. dr. ir. O.A.M. Fisscher
- mr. C. Regtuit
- H.W. Hoving.

De toelatingsprocedure is als volgt:



Bij de beoordeling van de aanmeldingsverzoeken wordt een op schrift gestelde toelatingsprocedure gehanteerd, waarin onderstaande vijf criteria zijn uitgewerkt. Deze criteria worden in de toelatingsprocedure in onderlinge samenhang gewogen.

1. Afgeronde relevante HBO- of universitaire bacheloropleiding

Afgestudeerden van de in tabel 1 genoemde opleidingen voldoen aan dit criterium.

Techniek en natuurwetenschappen	Maatschappijwetenschappen	Specialistische opleidingen
<ul style="list-style-type: none">Scheikunde, scheikundige technologie(Technische) wiskunde(Technische) natuurkundeIngenieursopleidingen	<ul style="list-style-type: none">Economie(Technische) bedrijfskundeBestuurskunde	<ul style="list-style-type: none">Risicomanagement (Haagse Hogeschool)
<i>HBO-bachelors</i> Nederlandse HBO-bachelors van een aanpalende opleiding zijn in beginsel toelaatbaar. Bij HBO-bachelors, in het bijzonder bij niet aanpalende opleidingen, wordt op individuele basis beslist door de toelatingscommissie, in het bijzonder op basis van anderszins verworven competenties.		

2. Minimaal 3 jaar relevante werkervaring

Minimaal drie jaar relevante werkervaring is vereist. Voorbeelden van relevante werkervaring zijn de volgende functies: hoofd van een productieafdeling; senior personeelsadviseur; Veiligheid-, gezondheid- en milieuadviseur of -specialist, dan wel –hoofd; medior of senior management consultant, hoofd Brandweer of Politie; gemeentesecretaris; hoofd financiële afdeling; adviseur risicomanagement; medior specialist risicomanagement.

3: Kennis en beheersing van de basisbegrippen van de statistiek

De kandidaat beheerst de grondbeginselen van de waarschijnlijkheidsrekening (afhankelijke en onafhankelijke kansen, steekproeven). Beheerst de eenvoudige beschrijvende statistiek (momenten, correlaties, regressie, en dergelijke, verdelingen) en de grondbeginselen van de inductieve statistiek, in het bijzonder t-toets, binomiaal toets, en dergelijke. De toelatingscommissie bepaalt of een aanvullende eis en correctie van een eventuele deficiëntie noodzakelijk zijn.

4: Redelijke actieve en passieve beheersing van de Engelse taal

De voertaal van MRM is Nederlands. Maar veel studiemateriaal is Engelstalig en de studiereis kan Engels als voertaal hebben. VWO-diploma met (eindexamen) Engels en/of een HBO-diploma is vereist. De niveau-eisen zijn:

- Leesvaardigheid: IELTS 6,5 (komt overeen met CEF C1)
- Spreek-, luister- en schrijfvaardigheid: IELTS 5,5/6,0 ((komt overeen met CEF C2).

Met betrekking tot voldoende Engelse taalvaardigheid bepaalt de toelatingscommissie of een aanvullende eis, dan wel een diagnostische toets en correctie van een eventuele deficiëntie noodzakelijk is.

5: Passende motivatie

Dit criterium wordt in het intakegesprek getoetst, aan de hand van de volgende aspecten:

- De kandidaat is gemotiveerd en geëquipeerd om naast het opdoen van kennis en vaardigheden ook kennis en ervaringen in te brengen;
- Is duidelijk gemotiveerd voor de opleiding, bijvoorbeeld blijkend uit carrièremogelijkheden;
- Beschikt over voldoende ruimte en werk en privéleven om de studiebelasting en kosten van de opleiding te dragen.

5b. Taal

De MRM is een Nederlandstalige managementopleiding. De gebruikte literatuur is ten dele Engelstalig.

5c. Internationale samenwerking

Niet van toepassing. Veel van de bij de opleiding betrokken docenten maken deel uit van internationale netwerken, waaruit ten behoeve van MRM geput wordt.

5d. Opleidingscommissie (OLC) en examencommissie

De taken van de *opleidingscommissie* zijn:

- advies uitbrengen over de onderwijs- en examenregeling
- jaarlijks beoordelen van de wijze van uitvoeren van de onderwijs- en examenregeling
- het gevraagd en ongevraagd geven van advies aan het bestuur van de opleiding en de decaan over alle aangelegenheden aangaande het betreffende onderwijs

De commissie bestaat uit 3 docentleden, die elk teven (kern)docent van tenminste één module van de opleiding zijn, en 3 studentleden. De ambtelijke ondersteuning wordt verleend door de afdeling Professional Learning & Development van de Faculteit MB.

De decaan heeft, conform WHW artikel 7.12, en in aansluiting op artikel 7B van dit statuut, voor de facultaire masteropleidingen een *examencommissie* ingesteld. De leden van de examencommissie worden (twee)jaarlijks door de decaan benoemd uit de leden van het personeel die met het verzorgen van het onderwijs zijn belast (faculteitsreglement art.12). De meest recente samenstelling van de commissie is te vinden op haar [webpagina](#). Correspondentie met de commissie gaat via de ambtelijke ondersteuning, mastersgriffie@mb.utwente.nl. Meer informatie via het secretariaat van de onderwijsondersteuning (tel. 3200)

6. Overgangsregelingen

Niet van toepassing.

C - Rules & Regulations of the Examination Boards

Rules and Regulations (R&R) for academic year 2012-2013

as adopted by

the Examination Boards of the School of MG

The Examination Boards instituted by the Dean of the School of Management & Governance have coordinated the rules and regulations (R&R). These Rules and Regulations apply to:

- Bachelor's programmes Business Information Technology (BIT), Business Administration (BK) including the English-language variant (IBA, Public Administration (BSK) including the English-language variant European Studies (ES), Health Sciences (GZW) and Industrial Engineering & Management (TBK)
- Master of Science degree programmes Business Administration (BA), European Studies (ES), Health Sciences (HS), Industrial Engineering & Management (IEM), Business Information Technology (MBI) and Public Administration (PA)
- PHO²⁹ Master's programmes MEEM, MPM, MRM

Explanatory notes and practical aspects of these rules and regulations are found on the [website of the Examination Boards](#).

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- Article 1: the Examination Board
- Article 2: conferral of examination authorities
- Article 3: authorities of the Examination Board
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- Article 9: pass/fail system
- Article 10: graduating with distinction
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- Article 12: exemptions
- Article 13: approval of flexible programme and free minor
- Article 14: quality control

²⁹ Post Hoger Onderwijs, i.e. postgraduate continuing education

Article 1 The Examination Board (WHW sections 7.12, 7.12a and 7.12b)

1. In accordance with section 7.12 and 7.12a of the WHW, the Dean, mandated to this end by the Executive Board of the institution, establishes an Examination Board for each programme or group of programmes, to determine on an objective basis whether students meet the conditions set under the Teaching and Examination Regulations in regard to the knowledge, understanding and skills required for obtaining a degree. The Examination Boards are also charged with the task of warranting the quality of the exams and examinations (WHW section 7.12b).
2. In accordance with section 9.14 of the WHW, the Dean of the school of MG has set faculty regulations to further govern the administration and the structure of the school. Article 12 of the Faculty Regulations governs the establishment and composition of the Examination Boards and the appointment of the members.
The boards established by the Dean and the members appointed to each board are published at the [website of the Examination Boards](#).
3. The Examination Board shall meet in closed session.
4. Decisions of the Examination Board may only be taken if at least two-thirds of the members of the Examination Board with voting rights are present. The Examination Board adopts resolutions by a simple majority of votes.
5. The Examination Board may enlist the assistance of programme staff such as the programme director, programme coordinator or study adviser. These personnel act in an advisory capacity at the meetings.
6. The Examination Board may resolve to charge its authorities to the chairman or secretary, insofar as doing so is not precluded by the law or these regulations.
 - a. The determination of whether a student has passed normally is charged to the chairman, or in the event of the prevention of the chairman, another member of the committee.
 - b. The signing of degree certificates and formal 'pass' declarations is charged to the chair, or, in his/her absence, another member of the Examination Board; under certain conditions the signing of degree certificates may be charged to the supervisors of the Bachelor's/Master's programme with authority for examinations (see R&R, art. 11, paragraph 3).
 - c. Signing off on the 40 EC system (Bachelor's OER, art. 16) is charged to the representative of the relevant Bachelor's programme.

Article 2 Conferral of examination authorities (WHW section 7.12c)

1. In order to administer the exams and confirm their results the Examination Board will appoint examiners. The examiners provide the Examination Board with the required information (section 7.12c of the WHW).
In the event that multiple examiners are appointed for the same study unit, one of them will be designated as responsible examiner. Generally, the examiner with primary responsibility for the teaching will also have primary responsibility for the evaluation of the academic results.
A list of examiners is compiled annually before the start of the academic year and published at the [website of the Examination Board](#).
2. In designating the examiners, the Examination Board will apply the following criteria:
 - a. the members of the permanent or temporary academic staff (associate/assistant professors, full professors, lecturers) of UT involved in the programme and who possess the appropriate teaching qualifications are authorized to administer examinations
 - b. the authorization is restricted to the domain within which the staff members are recognized as experts
 - c. staff members of partner universities are also authorized as examiners if they meet the set criteria
 - d. The Examination Board may resolve to appoint other parties as examiners. The resolution will specify the term of validity and the subject area

Article 3 Authorities of the Examination Board

1. In a number of situations explicitly provided for in the WHW and the OER, the Examination Board is authorized to depart from the provisions of the OER. These authorizations include, but are not limited to:
 - a. Authority to extend the period of validity of exams (article 7.13, paragraph 2k, WHW)
 - b. Authority to depart from exam format (article 7.13, paragraph 2l, WHW)
 - c. Authority to make open oral exam sessions closed (article 7.13, paragraph 2n, WHW)
 - d. Authority to depart, in special cases, from the language of the Master's thesis (Master's OER, art. 4a, paragraph 2a)
 - e. Authority to depart, in special cases, from the language of a Master's programme or a track of a Master's programme (Master's OER, art. 4a, paragraph 3)
 - f. Authority to depart from the date of examination (upon the student's request to postpone the affirmation of the student's successful passing of an examination; OER, arti. 17, paragraph 5)
 - g. Authority to change number of times that exams can be taken (OER, art. 8, paragraph 5)
 - h. Authority to depart from 40 ECTS credits regulation (Bachelor's OER, art. 16, paragraphs 7 & 8)
 - i. Authority to depart from rules on justification of results (Bachelor's OER, art. 12)

Article 4 Drafting and form of exams and exam formats

1. The exam formats for the study units are set out in the programme-specific appendices (part B2 of the students' charter).
2. Learning objectives are explicitly formulated for each study unit and are announced before the start of the academic year. The exam formats match the learning objectives. The questions and tasks on an exam will not be outside the scope of the learning objectives.
3. Every exam will be transparent, valid and reliable.
4. The responsible examiner will ensure that the student is able to gain sufficient understanding of the requirements assessed in the exams in a timely manner (no later than two weeks before the start of the teaching – OER art. 8a, paragraph 2), and that these requirements are published appropriately (via Blackboard).

Article 5 Written and oral exams

1. For all organizational matters relating to exams, the official sequence of teaching in the programme is the guideline. The rules for exams and examinations will promote academic progress by cohorts as a group and will be designed to prevent delays in academic progress that could disrupt the sequence of teaching in the programme.
2. The maximum duration of a written exam will be 3½ hours, and the maximum duration of an oral exam will be 1½ hours. The maximum duration of a group oral exam will be 4 hours. The precise duration will be announced by the examiner in advance through the appropriate channels (Blackboard).

Exams for study units in the programme taught in other Schools will be scheduled at the times set by the relevant examiner.
3. For each exam session, the examiner will appoint one or more qualified invigilators to monitor the exam session. At least one instructor involved in the teaching of the study unit in question will be present in the exam session or is available for telephonic contact by the appointed invigilator(s) throughout the session.
4. Students must identify themselves with a proof of registration (student ID card) at the exam session. Upon the start of the exam session, this proof of registration must be placed visibly on the writing table at the student's seat. If the student cannot produce identification, the student may be refused admittance to the exam.

5. If the student arrives too late, the examiner or invigilator may summarily refuse the student the right to participate in the exam.

Article 6 Regulations and instructions on evaluating exams and confirming results (WHW, article 7.12b, paragraph 1b)

1. The Examination Board may give the examiners regulations and instructions on the evaluation of the exam and the confirmation of the results (section 7.12b, paragraph 1b, WHW). The regulations stipulated by the Examination Board will pertain primarily to warranting the quality of exams and examinations, partly in light of the knowledge, understanding and skills required to obtain a degree.
- 2a A scoring prescription will always be used for the evaluation of exams: an assessment key in the case of closed questions, model answers in the case of open questions, and evaluation criteria in the case of practical exercises.
- 2b The evaluation criteria for a practical exercise will be communicated to the students at the start, through the appropriate channels (Blackboard)
3. If a study unit or portion thereof is being evaluated by different examiners, the responsible examiner will ensure that all examiners use the same evaluation criteria.
- 4a. Written exams will be evaluated on the basis of predefined criteria for the individual papers and sub-papers of the exam.
- 4b. The maximum number of points that can be obtained per exam question will be printed on the exam papers.
5. If in the exam session it becomes apparent that the assessment of the feasibility of completing the exam within the available time, the clarity of the questions or the level of difficulty, the examiner is authorized to prescribe different criteria for evaluation as referred to in paragraph 2 of this article. These new criteria may not have a demonstrably negative impact on the students.
- 6
 - a. Normally, the Bachelor's research paper ("bachelorreferaat") in the BIT programme will be evaluated by the main supervisor of the research project.
 1. If this main supervisor is not designated as examiner by the Examination Board, this main supervisor will act as adviser, and the paper will be evaluated by the coordinator of the research area under which the student's project falls.
 2. An evaluation guideline is used for the evaluation of the project.
 - b. A Bachelor's committee of examiners will be composed to evaluate the Bachelor's assignment or project (for all Bachelor's programmes other than BIT; see 6.6.a).
 1. The Bachelor's committee will include at least:
 - the student's primary project supervisor (and examiner)
 - a second supervisor (and examiner), best able to cover an additional discipline (used in the project)The examiners preferably hold a Ph.D.
The Bachelor's committee for the Double Diploma programme European Studies must consist of at least one supervisor (and examiner) of the School of MG and one supervisor (and examiner) from the Westfälische Wilhelms-Universität Münster.
Any expert(s) from the field may be added in the role of adviser.
 2. An evaluation form is used for the evaluation of the project.
 3. The report of the bachelor assignment is public. By way of exception the report of the bachelor assignment can be declared confidential by the examiner. Reports that receive the label 'confidential' are not freely claimable externally. If the label 'confidential' is attached, an additional public version of the report must be drawn up that is freely accessible. Only in highly exceptional cases reports can be declared highly confidential, on the condition that the Examination Board has given it's approval.
 - c. For the evaluation of the Master's thesis or project for first degree programmes, a Master's committee of examiners will be composed..
 1. The Master's committee will include at least:
 - the student's primary project supervisor (and examiner)

- a second supervisor (and examiner) best able to cover an additional discipline (used in the project).

At least one of the supervisors of the Master's project must hold a Ph.D.

For the Master's programme in BIT, at least one supervisor from MG and one supervisor from EEMCS must be on the committee. The Master's committee for the Double Diploma programme European Studies must consist of at least one supervisor of the School of MG and one supervisor from the Westfälische Wilhelms-Universität Münster.

Any expert(s) from the field may be added in the role of adviser.

2. An evaluation form is used for the evaluation of the project.
 3. The report of the Master's project is public. By way of exception the report of the Master's project can be declared confidential by the examiner. Reports that receive the label 'confidential' are not freely claimable externally. If the label 'confidential' is attached, an additional public version of the report must be drawn up that is freely accessible. Only in highly exceptional cases reports can be declared highly confidential, on the condition that the Examination Board has given its approval.
- d. For the evaluation of the Master's thesis or project for PHO Master's programmes, a Master's committee composed of examiners will be assembled.
1. The Master's committee will include at least:
 - the student's primary project supervisor (and examiner)
 - a second supervisor (and examiner) best able to cover an additional discipline (used in the project) or the programme director of the PHO Master's programmes

Any expert(s) from the field may be added in the role of adviser.
At least one of the supervisors of the Master's project for PHO Master's programmes must hold a Ph.D.
 2. An evaluation form is used for the evaluation of the project.

Article 7 Measures in event of fraud (WHW section 7.12b, par. 2)

1. Fraud is defined as:
 - a. Using more or different resources for the exam and exam components than those sanctioned by examiner upon the start of the study unit.
 - b. The use by the student in an exam or exam component of resources or assistance that the student knew or should have known was not permitted. These include but are not limited to:

Notes:

 - using crib sheets
 - copying from neighbours in the exam
 - allowing neighbours to copy from the student's own work during the exam
 - having contact with any party other than the invigilators about the exam material during the hours that the exam is being taken and while the work has not yet been handed in
 - use of electronic equipment
 - c. Forgery
including manipulation of research data in individual or group projects
 - d. Conduct on the part of students designated as fraudulent by the examiner prior to the taking of the exam or exam component This conduct includes, by definition, showing one's own work to other students.
 - e. Plagiarism, by:
 - verbatim copying of work or excerpts from work of another without indicating that the wording is that of another person and/or without indicating the exact reference of the passage
 - paraphrasing work or excerpts from work of another without indicating that the argumentation is that of another person and/or without indicating the exact reference of the argumentation
 - copying the work of another without indicating that the work in question is that of another

- re-using the student's own work for different purposes without giving notice thereof
 - f. Piggybacking: a student who withdraws from commitments made or rules set for working in a group who then turns in group work for exam purposes and wrongly benefits as a member of the group from an evaluation of the work of the group as a whole even though the student's role in the group does not warrant that evaluation of the student as an individual
2. In the event of fraud, the examiner or invigilator will inform the student that the fraud will be reported to the Examination Board and that the board will determine the sanctions to be applied. The student will not receive an evaluation.
 3. After having heard the student, the Examination Board will determine the sanctions that will be applied, and inform the student in question thereof.. In such cases, the Examination Board may exclude such students from that exam for a maximum of one year. In the event of premeditated or repeated fraud, the Examination Board may exclude the student from participation in any or all exams for a maximum of one year.

Article 8 Rules in event of emergencies

1. If an emergency occurs or is expected during or shortly before an exam, the exam will be immediately postponed. The examiner will set a new date and time for the exam in consultation with the programme director.
2. The new date and time set for the exam, which will be within one month (not counting the holiday periods), is binding. It will be announced via the normal channels within three working days after the accessibility of the building is restored.
3. If during the course of an exam, an emergency occurs or is expected, the procedure is as follows:
 - a. at the start of the exam, the student will write his name and student number on all exam work.
 - b. all present must immediately leave the exam room upon being ordered to do so by the responsible authority or invigilator.
 - c. the student will leave all unfinished exam work behind in the exam room.
 - d. if the student was able to start the exam, the instructor may, insofar as reasonably possible, determine the final mark based on the portion of the exam completed.
4. If the examiner is unable to determine a final mark based on the provision of article 8.3d, a re-sit of the exam will be organized for the students affected by the interruption of the exam, on the condition that they had registered for the exam session in question. This re-sit will take place within one month (not counting the holiday periods).

Article 9 Pass/fail system

1. The student successfully completes the propedeutic phase, Bachelor's programme or the Master's programme if and when he has achieved a 'pass' for all the study units forming part of that phase/programme (see also OER, art. 17, paragraph 1)
2. An study unit is completed with a 'pass' if the mark received is 6 or higher.
3. Exam evaluations are generally expressed in the form of a mark from 1 to 10. The key to these marks is:

1: very poor	4: inadequate	7: fair pass
2: poor	5: near pass	8: good
3: very inadequate	6: pass	9: very good
		10: excellent

 - a. If a fractional mark ends in .50 or higher, it is rounded to the nearest higher whole mark.
 - b. If a fractional mark ends with a decimal lower than .50, it is rounded to the nearest lower whole mark.
 - c. A mark between 0 and 1.49 is rounded to 1.

Study units may be awarded a mark of 'G' (complete) if the examiner or examiners are of the opinion that the student has performed adequately. Students may also receive a mark of 'O' (fail) or 'VR' (exemption).

4. The results of partial exams (tests, sub-assignments) will be recorded in the examiner's own administration. These results need not be rounded. The examiner will determine the way in which partial exams contribute to the ultimate result of the study unit and provide this information to the students at the start of teaching of the study unit in question.

Article 10 Graduating with distinction (OER, article 4b)

1. The school offers a system for graduating with distinction (see OER, article 4b). If a student meets the set requirements, then the designation 'cum laude' will be recorded on the student's degree certificate.
2. In exceptional cases, the Examination Board may depart from the set requirements. In such cases, argumentation of the special circumstances and the exceptional nature of the performance must be provided.

Article 11 Degree certificates and statements (WHW section 7.11; OER article 17)

1. The Educational Affairs Office (BOZ) of SMG will check periodically – after each exam period and in the month of October – which students meet the requirements of the first year, Bachelor's and Master's examination respectively
2. The Examination Board will issue a degree certificate as evidence of successful completion of the first-year, Bachelor's or Master's examination. The degree certificate will be signed by the chairman of the Examination Board, or, in the absence of the chairman of the Examination Board, by one of the members of the Examination Board.
3. a For all Bachelor's programmes apart from BIT, if a student satisfactorily completes all study units of the programme the Bachelor's degree certificate may be extended upon passing the Bachelor's project. In this case, the degree certificate will be signed by the two supervisors with authority to conduct the examination (see R&R, article 6). For BIT, see the general system provided for under article 17 of the OER.
b If a student satisfactorily completes all study units of the Master's programme, a degree certificate may be extended upon passing the Master's project. In this case, the degree certificate for the Master of Sciences programme will be signed by the two supervisors with authority to conduct the examination. For the PHO Master's programmes MEEM, MPM and MRM, the diploma will be signed by an examiner and the PHO programme director.
c If a student, who has successfully completed all study units of the Bachelor's or the Master's programme, does not wish to receive the degree certificate upon passing the final (Bachelor's or Master's) project, he has, according to article 17, paragraph 3 of the OER, the right to submit a motivated request to the Examination Board to postpone the affirmation of the student's passing of the (Bachelor's or Master's) examination and the issuing of the corresponding degree certificate. This request has to be submitted in time, i.e. before handing in the form 'Announcement (BSc/MSc) colloquium' to BOZ. In his request, the student must indicate the reasons for, as well as the desired duration of, the postponement he asks for. The latter may never exceed the limit of one year. Then, on the form 'Announcement (BSc/MSc) colloquium' which the student has to hand in at BOZ, the student has to indicate that he requested postponement of the issuing of the degree certificate.
4. BOZ will send the student who, according to their finding, successfully completed all study units of the Bachelor's examination at a moment in time beyond the passing of the Bachelor's project and for this reason has not yet been issued the degree certificate, an e-mail notifying him thereof. This e-mail includes the following information:
 - that, according to the data at the disposition of BOZ, the student meets all the requirements of the Bachelor's examination

- that the student has, according to article 17, paragraph 3 of the OER, the right to submit a motivated request to the Examination Board to postpone the affirmation of the student's passing of the Bachelor's examination and the issuing of the corresponding degree certificate, in which case the student has to indicate the duration of the desired postponement
 - that, giving due consideration to the legally established limit for 'langstuderen' (falling behind by more than one year in the Bachelor's or Master's programmes), the duration of the postponement may never exceed the limit of one year
 - that in case of postponement, the date the Examination Board has decided, after the delay period, to proclaim the student's successful passing will, according to article 17 paragraph 5 of the OER, be taken as the date of examination
 - that the student has to submit his request to the Examination Board at the latest 10 working days after the e-mail was sent by BOZ
 - that the student must indicate that he requested postponement of the issuing of the degree certificate on the form 'Diploma application' that was sent to him by BOZ, and return the form to BOZ.
5. At all times the student who has ascertained that he has successfully completed all study units of his (Bachelor's or Master's) exam and who did not receive a notification thereof from BOZ, may himself submit a request to affirm the result of the examination and issue the degree certificate. The request to the Examination Board may be submitted filling out the special form for this end and hand it in at BOZ.
 6.
 - a. The study units composing the programme and the evaluation for those units will be recorded on an appendix ('supplement') to the diploma. The appendix will also state any additional units examined at the student's request prior to the confirmation of the examination results, on the condition that they were graded with a passing mark.
 - b. If these additional units are part of a special honours track designed for excellent students in connexion to the programme, this will also be recorded
 7. A diploma supplement will be included as an appendix to the Bachelor's or Master's degree certificate. This supplement is intended to provide insight into the nature and content of the completed programme, partly for the purposes of the international comparability of programmes.
 8. If the student is awarded the designation of 'cum laude' upon graduation (see R&R, article 10), this will be stated on the degree certificate.
 9. A student who has successfully completed more than one exam and to whom a degree certificate as referred to in paragraph 1 cannot be extended may, upon request, be given a written statement to be issued by the Examination Board in which, at a minimum, the successfully completed exams are listed (section 7.11, paragraph 4, WHW).

Article 12 Exemptions (WHW, 7.13 article paragraph 2r+ t; OER art. 14)

1. The Examination Board may grant exemption for taking exams in study units and/or participation in practical exercises in the programme if the student has achieved the intended learning objectives in another way, as evidenced by documentation to be submitted by the student.
2. The Examination Board will exempt students from the obligation to participate in practical exercises if the student can plausibly demonstrate that he would have moral objections to the performance of, or to being required to perform, a specific assignment or exercise. In such cases, the Examination Board will consult with the examiner of the study unit to determine another way in which the learning objectives can be met.

Article 13 Approval of flexible programme and free minor (WHW, section 7.12b, paragraph 1c and OER art.15 (Bachelor's OER 15a))

1. The Examination Board will decide on a request for permission to pursue a flexible programme, and in reaching that decision will evaluate whether the programme fits within the domain of the programme, whether it is coherent and whether it is of a sufficient level considering the final attainment targets of the programme.

2. The Examination Board will decide on a request for permission to pursue a free minor, and in that decision will review whether the minor meets the objectives for a minor.

Article 14 Quality control (WHW, section 7.12b paragraph 1b)

1. The Examination Board has formulated a number of quality related instruments and criteria on the program level, the course level, the level of the final projects and in relation to the examiners, to suitably guarantee the quality of the exams and examinations. These instruments and criteria are:
 - a the test plans of an educational programme, that describe the way the final attainment targets of the programme are accounted for by the learning objectives of the constituent study units and how these learning objectives are tested
 - b the test format of an individual study unit, which describes its learning objectives and the way they are tested
 - c the evaluation tools used for the different exams or parts thereof
 - d the transparency of testing and evaluation for the students
 - e the students' opinion on the quality of testing and evaluations
 - f the quality of evaluations of final bachelor and master projects
 - g the domain expertise and didactic qualities of the examiners.

Section D: Faculty-specific procedures for protection of student rights (as enacted by the executive board in the institution section of the students' charter)

D1: Quality assurance

The school of Management and Governance (MG) has a quality assurance system in place designed to improve the education on an on-going basis. This system comprises a number of evaluation procedures for aspects such as individual courses in the curriculum, as well as the programme as a whole. The programme director has final responsibility for overseeing the quality of the education. In addition, students are expected to make a contribution to the improvement of the quality of the education. They may express their input in the programme in terms of rights and obligations in a number of ways:

1. Academic Quality Committee

In the Academic Quality Committee (known as "OKC") of MG, students in all programmes work together as a professional team on increasing the quality of the education. The OKC is involved in coordinating and carrying out course evaluations and panel discussions and will ensure that the evaluation process is improved on an on-going basis. The website of the OKC

(http://www.utwente.nl/mb/en/education/Organization/EQC/website_okc_en_2006.doc/)

includes information on the results of the course evaluations.

2. Course evaluations

The student's opinion on the content and conduct of the study units is an important aspect of the quality assurance system. The faculty uses a procedure for the course evaluations that includes the programme director/department chair conducting periodic interviews with instructors based on survey results. The course evaluations are designed to identify issues. The goal is to highlight both the strong points and any problem areas in order to improve the course where possible. The course evaluation is conducted by means of a questionnaire on paper or a panel discussion, or in a few select cases, by means of an online survey. Panel discussions will include student assistants of the OKC and instructors and students from the course in question. A panel discussion is an extremely effective option for MG students to express their opinions on a course in a constructive and direct manner.

3. Evaluation of the final project

The Bachelor's project and Master's project constitute the finalizing element of their respective program (Bachelor and Master). To allow testing of the student's mastery at the indicated level (Bachelor or Master), the nature of these projects differs from the common course format. As a result, the evaluation of these projects focuses on, on the one hand, improving the quality of the connection between the project and the preceding preparatory courses, and, on the other hand, improving the fit between the project and connecting study and career opportunities.

4. Programme days

To evaluate the curriculum or a portion thereof, or to focus on subjects such as cohesion, academic feasibility, return on study or study supervision, in addition to other evaluation forms such as a mid-term review, programmes sometimes opt to organise programme days. This not only relies on the input of students and academic support personnel, but student contributions also play a very important role in areas such as formulating potential improvement actions, which can then be discussed in the programme committee.

5. Programme committee

The programme committee (OLC) consists of students and staff. The committee will advise on the Teaching and Examination Regulations, the academic programme and its performance. The committee is entitled to give solicited and unsolicited advice to the programme management, including the programme director as well as the Dean as head of the faculty.

6. Student satisfaction survey

On a regular basis student satisfaction surveys are being held. The general goal of these surveys is to identify problems in the programme. The results are fed back to the

programmes.

7. Complaint desks

A number of study associations offer the student the option to submit a complaint about the quality of the education. The education committee of the study association handles the incoming complaints about subjects, instructors, exams or studying conditions. In addition to this, a special desk is available at Student Services (2nd floor in the "Vrijhof") where students can file a complaint or submit an appeal or objection concerning the relation between the student and the institution.

D2: Health and Safety

The Netherlands have stringent Health and Safety legislation (the *Arbowet*), which also extends to students. All students are entitled to enjoy a safe and healthy working environment at the University of Twente. The university and the School of Management and Governance do everything possible to ensure the safety of their buildings. They provide various facilities so students can study in a healthy and safe environment and they offer all necessary information. However, students themselves also have their personal responsibility. Although studying at the School presents hardly any health and safety risks, it is worthwhile to take note of the following points that may arise.

Health

The most significant risk to health while studying at the University, probably finds its base in the time that you will work with the computer and in the way that you do so. More often we see students using a laptop instead of a desktop. To increase the quality and efficiency of education and to prepare students better for the developments on the labour market, the faculty MB has little by little introduced the use of ICT by students during education hours since the academic year 2009 – 2010.

This offers many interesting opportunities for studying, which for sure you would like to discover in good health. Therefore it's good to be aware of the risks for your health that are related to the use of a computer in general and a laptop in particular.

In both cases it involves repetitive movements in a stationary, sitting position, which can lead to Repetitive Strain Injury (RSI, also known as CANS: Complaints of Arms, Neck and/or Shoulders). RSI is a general term for mobility problems and pain in the fingers, hands, wrists, arms, neck, and/or shoulders. Such complaints are quite common among students and the chance of getting these complaints increases if you also work in a bad posture, which is always the case when working with a laptop and / or tablet without a separate mouse / stylus pen, keyboard and stand that can be well adjusted. Avoiding the risks does not entail avoiding computers altogether, but it is useful to know about RSI and what you can do to prevent it.

Further information is available at the page [Health and Safety](#) of the School's website. You are encouraged to read this site carefully.

In case of using a laptop, do pay some extra attention to the information about working with a laptop and take advantage of this information. What goes for using a laptop goes even more for using a tablet.

You can also find interesting information about this subject on the page [RSI](#) of the site of the Human Resources department and on the site of the [RSI Association](#). For the RSI telephone helpline you can dial 0900-7745456 or 0900-RSILIJN.

Within the School itself the Health, Safety and Environment coordinator can provide general advice and assistance on the subject: Monique van Velthoven, tel. 053 489 3828, m.j.vanvelthoven@utwente.nl.

If you have specific symptoms which may be RSI related, you can contact the UT Medical Service, tel. 053 489 8000, or your own family doctor.

For information on ways in which you can extend your study period, postpone examinations or receive graduation support due to RSI related complaints, you can contact the [Student Counselling Service](#), tel. 053 489 2035.

Effective treatment of RSI may also involve a [Student Psychologist](#), tel. 053 489 2035, who is not so much concerned with the physical symptoms as well as with the underlying personal factors which may play a role in its development. The services of the Student Psychologist are free of charge and no referral is required.

Safety

Accidents happen, also at the university. It is therefore important to know exactly what to do in case of an emergency. For full information, please see the page [Health and Safety](#) of the Schools site.

Because this is an extremely important topic, a few of the main points are emphasized here.

- In case of an emergency, you must immediately call (053 489) **2222**. This is the university's central emergency response number.
- Regularly read the "What to do in case of an emergency" notices in the buildings you visit. Take note of the assembly point(s) to be used if the building has to be evacuated:
For a partial evacuation of Ravelijn: Atrium Ravelijn is the assembly point.
For total evacuation of Ravelijn/A-building: Canteen Waaier is the assembly point.
- Familiarize yourself with the escape routes and the emergency exits.

If you have any questions about safety issues, contact Monique van Velthoven, tel. 053-489 3828, e-mail m.j.vanvelthoven@utwente.nl.