TEACHING AND EXAMINATION REGULATIONS

(OER)

(See sections 7.13 and 7.59 Higher Education and Research Act)

Master's programme Human Media Interaction

Faculty of Electrical Engineering, Mathematics and Computer Science

University of Twente

The Faculty Dean,

in view of sections 9.15, first subsection, under a, 7.13, first and second subsections, 9.38, subsection b, and 9.18, first subsection, under a, of the Higher Education and Scientific Research Act of the Netherlands,

having heard the recommendations of the involved Education Committees, and with due observance of the consent of the involved Faculty Councils [1]

hereby establishes Teaching and Examination Regulations for the **Human Media Interaction** programme.

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[1] Recommendations of Committees and Councils may apply to provisions under subsections a-g of section 7.13 of the Act. Consent of the Councils applies to the provisions under other subsections.

Remarks

These Teaching and examination regulations for the Master's programme Human Media Interaction are in the format used by 3TU.O.

Changes in comparison to the 2011-2012 Regulations are marked with a solid line in the left margin (like this paragraph).

Contents

Section 1 – General

Article 1 – Definitions

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

The following terms are to be defined thus:

a. the Act: the Higher Education and Scientific Research Act (in Dutch, the WHW), in the Dutch Bulletin of Acts, Orders and Decrees, number 593 and as amended since;

b. the Dean: Faculty head; if an institution that is fully or partly responsible for the programme has opted for a Joint Faculty Board, then "Dean" will also include the Faculty Board;

c. programme the Master's degree programme as denoted in Section 7.3a subsection 1, under b of the Act;

d. student: anyone enrolled at the University of Twente as a student or external student for the purpose of benefiting from education and/or for the purpose of sitting the examinations and undergoing the degree audit which form part of the programme;

e. subject: a unit of study within the programme as referred to in Section 7.3, subsections 2 and 3 of the Act;

f. practical: a practical exercise as intended in Section 7.13, subsection 2, under d of the Act, taking one of the following forms:
1. conducting a project or developing an experimental design;
2. completing a design or research assignment;
3. conducting a literature overview;
4. completing a traineeship;
5. giving a public presentation;
6. participating in fieldwork or an excursion;
7. conducting test and experiments;
8. writing a position paper;
9. participating in other educational activities aimed at enabling participants to attain certain knowledge, insights or skills.

g. interim examination: an assessment of the student's knowledge, insight and skills in relation to a subject, as well as the marking of that assessment by at least one examiner, appointed for that purpose by the Board of Examiners;

h. degree audit: an assessment by which the Board of Examiners, in accordance with Article 7.10 of the Act, establishes whether all interim examinations in the various subjects that constitute the Master's degree programme have been successfully completed;

i.	Board of Examiners:	the programme's Board of Examiners, which has been installed in accordance with Section 7.12 of the Act;
j.	examiner:	the individual who, in line with Section 7.12, subsection 3 of the Act, has been appointed to set the interim examinations;
k.	credit:	a credit awarded in accordance with the European Credit Transfer System (ECTS); one credit denotes a study load of 28 hours;
l.	working day:	Monday to Friday with the exception of recognised national public holidays;
m.	study guide:	a guide to the degree programme containing specific information pertaining to the various subjects;
n.	institution:	University of Twente;
o.	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 Act.;
p.	disability:	all conditions which are (at least for the period in question) chronic or lasting in nature and which form a structural limitation for the student in receiving education and/or sitting interim examinations or taking part in practicals.

Article 2 – Programme composition

1. The following points regarding the programme are included in the programme appendix:
   a. programme composition and relevant interim examinations,
   b. whether the programme is full-time, part-time or a sandwich course,
   c. composition of the specializations,
   d. study load of the programme and of each of the units of study making up that programme,
   e. number and sequence of interim examinations and practical exercises,
   f. whether the interim examinations will be administered in an oral, written or other format,
   g. the content of the practicals,
   h. if and when necessary, that a satisfactory result on an interim examination is a prerequisite for admission to other interim examinations,
   i. if and when necessary, that the requirement to participate in a practical will be part of the admission procedure to a particular interim examination,
   j. the units of study from which the student may choose to fulfil programme elective requirements,
   k. the transitional regulations as referred to in article 22.

2. The programme appendix forms an integral part of these regulations.

Article 3 – The programme's final attainment levels

1. The final attainment levels of the programme are in line with the Dublin descriptors:
   a. Knowledge and understanding:
   The graduates 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[2] context;
   b. Application of knowledge and understanding:
   The graduates 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
   c. Formulate judgement:
   The graduates have the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete or limited information, but that include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgements;
   d. Communication:
   The graduates can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously;

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[2] 'research' is used to cover a wide variety of activities, with the context often related to a field of study; the term is used here to represent a careful study or investigation based on a systematic understanding and critical awareness of knowledge.

   e. Learning skills:
     The graduates have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.

2. The final attainment levels are in the programme appendix.

Article 4 – Admission to the programme

1. Students in possession of a diploma which shows that they have passed the final examination for the *Technische Informatica* (TU/e, TUD, UT), *Informatica* (RUG, UU, UvA, VU, UL, RU, OU), *Bedrijfsinformatietechnologie* (UT), *Creative Technology*, or *Technische Kunstmatige Intelligentie* Bachelor's programme will be eligible for admission to the programme.

2. Students who are not in possession of the diploma mentioned in paragraph 1 will require a certificate of admission issued by the Admissions Board. The Admissions Board is appointed by the Dean with the power to act in matters of admission to the programme.

3. Notwithstanding the provisions of paragraph 1, a student of one of the programmes involved may ask permission to sit one or more interim examinations and/or practicals of the programme before the student has passed the Bachelor's examination.
   By article 7.30a of the Act such permission can be granted only in individual cases, and only when denial of permission would cause a paramount injustice.

4. Admission of foreign students:
   a. The student must submit a proof of sufficient command of English.
      Only the following three tests are accepted: IELTS, TOEFL internet based, and CPE. Scores required for admission are:
      IELTS: 6.5 or more over all;
      TOEFL internet based: 90 or more;
      CPE: C or higher.
   b. The level of education in the country in which the student has completed his/her pre-university education: this must be more or less comparable with that in the Netherlands.
   c. Level of knowledge: the student must have accumulated sufficient knowledge on the basis of the subjects he/she has studied abroad to be at a level comparable to that of Dutch students who are admitted to the Master's programme.

5. Additional regulations for admission are in the admissions appendix.

6. The admissions appendix forms an integral part of these regulations.

Article 5 – Language

1. The language of the Master's programme is English. This applies to teaching and examination.

2. The Examination Board can grant permission to deviate from the provisions of section 1. Permission can be granted only if it serves the quality of the assessment.

3. Students who meet the admission requirements of article 4, but without the English language proficiency corresponding to the IELTS 6.5 level, must take English language courses to overcome their deficiency. The dean issues a regulation concerning the

conditions for participation in these courses, and the faculty's contribution in the costs of these courses.

4. The dean issues a regulation concerning the assessment of English language proficiency of staff members who teach courses in the programme, and of the support staff for the programme. All staff involved must meet the language requirements of the regulation. Courses to improve English proficiency of staff members are provided.

Section 2 – Interim examinations

Article 6 – Number, times and frequency of interim examinations

1. There are at least two opportunities in each academic year for sitting interim examinations.

2. Timetables of all opportunities for sitting written interim examinations are drawn up twice a year and details are published before the start of the semester.

3. Notwithstanding the provisions of paragraph 1, there will be at least one opportunity in a year to sit interim examinations relating to subjects not taught in that academic year.

4. If a subject is removed from the study programme, two opportunities to sit an interim examination in this subject will be granted after the last classes in this subject have been taught: an interim examination following the last of the classes, and one resit in the same academic year. In the following academic year there will be two subsequent resits.

5. In exceptional cases, the Board of Examiners may permit a deviation from the standard number of times and the way in which certain interim examinations may be administered.

Article 7 – Validity of interim examinations

1. The result of an interim examination is valid for an unlimited period.

2. However, in cases where the interim examination result dates from over six years ago, the Board of Examiners may impose an additional or substitute interim examination.

Article 8 – Oral interim examinations

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.

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, this is made known to the Examiner and the student at least one working day prior to the exam.

Article 9 – Determining and announcing the results

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

2. In the case of written interim examinations, the examiner is required to determine the result as soon as possible after the interim examination but within 15 working days at most. Taking due account of the student's right to privacy, the student administration then ensures that the results are registered and published within 20 working days of the interim examination date. If the examiner is unable to meet these criteria due to extenuating circumstances, the examiner must inform the Board of Examiners, stating reasons for the delay. The Board of Examiners will then pass this information on to the student or students without delay, and a new date for announcing exam results will simultaneously be made known.

3. Regarding any interim examinations that are not taken orally or in writing, the Board of Examiners will determine beforehand precisely how and within what period of time the student will be notified of the results.

4. When receiving the result of an interim examination, the student will be made aware of his or her right to inspect the results as referred to in Article 10, the opportunity for a subsequent discussion as referred to in Article 11 and the opportunity to lodge an appeal with the Examination Appeals Board.

Article 10 – The right to inspect the results

1. For a period of at least 20 working days after notification of the results of any written interim examination, the student has the right to inspect his or her marked work, on request. If a student intends to lodge an appeal regarding the marking of his or her written work, he or she will be supplied with a copy of the marked work at cost price.

2. During the period referred to in paragraph 1, all interested individuals may acquaint themselves with the questions and assignments set in the interim examination in question, as well as with the criteria used for marking.

3. The Board of Examiners may determine that the right to inspection as referred to in paragraphs 1 and 2 will be exercised at a location specified beforehand and at no less than two specific times, also to be decided in advance.
   If the student can prove that he/she is or was unable to be present at the location at the set time due to circumstances beyond his or her control, then another opportunity will be provided, if possible within the period stated in paragraph 1.
   The location and times mentioned in the first sentence will be announced within five working days.

Article 11 – Subsequent discussion of interim examination results

1. As soon as possible after the results of an oral interim examination have been announced, an opportunity will be arranged for the examiner to discuss the results with the student, if so requested by the student or at the instigation of the examiner. At this meeting, the reasons behind the marks awarded will be explained.

2. For a period of 20 working days after the results have been announced, students who have taken a written interim examination may submit a request to discuss the results with the relevant examiner. The discussion will take place within a reasonable time span and at a place and time determined by the examiner.

3. In cases where a collective discussion is organised by or on the instructions of the Board of Examiners, a student may only submit a request, as referred to in the preceding paragraph, if the student was present at the collective discussion and if the student provides a good reason for the request or if, due to circumstances beyond the student's control, the student was unable to attend the collective discussion.

4. The provisions of paragraph 3 are similarly applicable if either the Board of Examiners or the examiner first gives the student the opportunity to compare his/her answers with model answers.

5. The Board of Examiners may permit deviations from the provisions of paragraphs 2 and 3.

Section 3 – Studying with a disability

Article 12 – Adaptations to assist students with a disability

1. Students who have a physical or sensory disability are entitled to adaptations in teaching, interim examinations and practicals. If possible, the student must submit a written request to the Dean at least three months before the student is due to participate in coursework, interim examinations and/or practicals. These adaptations will be geared as much as possible to a student's individual needs, but they must not affect the quality or the degree of difficulty of a subject or an interim examination programme. The facilities provided to this end may involve adapting the form or duration of interim examinations and/or practicals to the student's individual situation or making practical aids available. This request should be submitted to either a university student counsellor or the faculty student counsellor.

2. The request referred to in paragraph 1 should be accompanied by a recent medical certificate from a doctor or a psychologist. If there is evidence of dyslexia, for example, the request should be accompanied by a document issued by a recognised dyslexia-testing bureau (i.e. registered with BIG, NIB, or NVO). If possible, this certificate should also give an estimation of the extent of the disability.

3. The Dean will decide on requests for adaptations to the educational environment. The Board of Examiners will decide on requests for adapting interim examinations. The decision must be announced within four weeks.

Section 4 – Approval by the Board of Examiners

Article 13 – Exemption from interim examinations or practicals

1. After having been advised by the relevant examiner, the Board of Examiners may decide to exempt students from an interim examination or practical. Conditions for exemption are to be specified in the Rules and Regulations of the Board of Examiners.

2. The Board of Examiners may exempt a student from a specific interim examination only on the grounds of the content, level and quality of interim examinations successfully completed earlier or on the grounds of the student's prior knowledge, insights and skills developed outside of higher education.

3. Exemptions as referred to in Articles 13.1 and 13.2 can not be granted on the basis of results from the Bachelor's programme, the diploma of which made the student eligible for admission.

Article 14 – Elective subjects

Criteria for approval of elective subjects to be followed by the student, as referred to in the programme appendix under j, are contained in the Rules and Regulations of the Board of Examiners.

Article 15 – Free programme choice

The Board of Examiners shall decide on reasoned requests from students for free programme choice as referred to in Article 7.3c of the Act. Conditions related to this matter are to be specified in the Rules and Regulations of the Board of Examiners.

Section 5 – Degree audit

Article 16 – The times and the frequency of the degree audit

There shall be an opportunity to undergo the Master's degree audit at least twice a year. The dates set by the Board of Examiners are to be published before the start of the academic year.

Article 17 – Student support and guidance

Responsibility for student support and guidance lies with the Dean. This includes informing students about study options within the programme or elsewhere. One or more study advisers may be appointed for this purpose.

Article 18 – Monitoring academic progress

1. The Dean is responsible for the registration and timely publication of the exam results of individual students in the Student Information System.

2. The Dean is responsible for facilitating discussion of the results between the student and the study adviser, when appropriate.

Section 5 – Appeals and objections

Article 19

1. Decisions by the Board of Examiners based on these regulations may be appealed within four weeks after the announcement of the decision to the student in question. Appeals should be lodged with the Examination Appeals Board, through the "Klachtenloket UT".

2. Decisions by the Dean based on these regulations may be appealed within six weeks after the announcement of the decision to the student in question. Objections are to be lodged with the Dean.

Section 6 – Contravention, changes and implementation

Article 20 – Contravening the regulations

If the study guide and/or any other regulations relating to the study programme and/or the interim examination programme prove to contravene these Regulations and the accompanying appendices, precedence will be given to the provisions of these Regulations with which the appendices form an integral whole.

Article 21 – Amendments to the regulations

1. Any amendments to these regulations will be made by special resolution of the Dean.

2. No amendments will affect the current academic year unless it is reasonable to suppose that the interests of students will not be adversely affected.

3. Amendments to these regulations may not retroactively affect a decision by the Board of Examiners to the detriment of the student.

Article 22 – Transitional arrangements

1. If the composition of the study programme undergoes intrinsic changes or if these regulations are amended, the Dean will draw up transitional regulations that will be incorporated in the programme appendix of these Regulations.

2. If and when appropriate, such transitional regulations are required to include:
   a. a provision concerning the exemptions that can be given on the basis of the interim examinations already passed;
   b. a provision specifying the validity of the transitional regulations.

Article 23 – Publication of the regulations

The Teaching and Examination Regulations and the appendices, which form an integral whole with the Regulations, shall be published on the institution's website.

Article 24 – Entry into force

The date of commencement of these regulations is September 1st, 2012 and replaces the regulations of September 1st, 2011.

The dean of the faculty authorizes,

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 Board of Studies, as well as the approval by, or advice of, the Faculty Council.

Enschede, July 3rd, 2012

Programme appendix to the Teaching and Examination Regulations of the Master's programme Human Media Interaction

The regulations in this appendix are part of the teaching and examination regulations of the master's programme Human Media Interaction of the Faculty of Electrical Engineering, Mathematics and Computer Science of the University of Twente.

Contents

a. Study load

1. The Master's degree audit for the Human Media Interaction programme has a study load of 120 credits. These 120 credits must not include any credits which constituted part of a previously passed Bachelor's audit.

2. The study loads for the units of study of the programme are in tables 1 and 2 below.

3. The programme will be taught in full-time.

b. Composition of the programme

1. The composition of the course programme is as follows:
    a. Basic subjects, 40-50 credits, as described in section c,
    b. Advanced subjects, 0-40 credits, as described in section d,
    c. Elective subjects, 0-40 credits, as described in section e,
    d. (Research) traineeship and/or Research topics, 10-40 credits, as described in section f,
    e. Graduation work, 30 credits, as described in section g.

2. Each student has an individual course programme which meets the programme requirements set in sections b, c, d, e, f and g, and also the general guidelines of section h of this appendix.

3. The requirements set in sections c and f, and in the general guidelines of section h of this appendix distinguish Graduate School students (shortly GS students) as a particular type of student, to whom other requirements may apply than the general requirements for all students.
Graduate School students are students who have been admitted to the Human Centred Interaction Technologies (HCIT) programme of the Twente Graduate School, and for whom the HMI master's programme constitutes the initial phase of their HCIT programme.

4. The requirements set in sections c and f, and in the general guidelines of section h of this appendix distinguish Trento Double Degree students (shortly TDD students) as a particular type of student, to whom other requirements may apply than the general requirements for all students.
Trento Double Degree students are students who participate in the double degree agreement of the University of Twente HMI programme and the University of Trento (Italy) LMI (Language and Multimodal Interaction) track of the Cognitive Science programme. TDD students are either TDD entry students, who study their first year in Twente and their second year in Trento, or TDD exit students, who study their first year in Trento and their second year in Twente.

5. The regulations for the approval of the student's course programme (within the rules and restrictions of the programme, as outlined in this appendix) are in section h of this appendix.

The Examination Board appoints a programme mentor to advise students in their choices. The programme mentor will have the authority to approve student's programmes on behalf of the Examination Board.

6. In addition to the programme referred to in paragraph 1, students who will be admitted to the programme on the basis of a Bachelor's degree awarded by a Dutch institute of professional education (HBO) must also complete a pre-Master's programme. See the description in the admissions appendix.

7. The admissions board may issue certificates of admission with additional requirements (see the description in the admissions appendix). These additional requirements are generally called homologation courses. The obligation to take homologation courses will diminish the space the student has to take elective subjects and/or a traineeship.

8. The admissions board may issue certificates of admission with a requirements waiver. This may be the case if the student has taken relevant subjects already in his Bachelor's programme (see the admissions appendix). A requirements waiver increases the space the student has to take elective subjects.

9. The requirements presented in sections c through g below are modified where necessary and adopted each year by the Dean. If changes are made, a transitional arrangement is made for students (cohorts) further along in the programme, enabling them to complete their course of study in accordance with the rules. The transitional arrangements are in section n of this appendix.

c. Basic subjects

The core units of the HMI master's programme are outlined in Table 1 below.

Students must choose their basic subjects among the core units of Table 1, totalling 40 EC in study load. Graduate School students must make their choice totalling 50 EC in study load. The choice for all students is limited by the following rules. (The implication of these rules for Trento Double Degree students is outlined below, after Table 1.)

- It is mandatory that Computer Ethics (191612680) is among the basic subjects. It counts as a subject in the area Man, Media and Society.
- The basic subjects must include a HMI project (192166100)[3].
- The basic subjects must include units in the area Human Computer Interaction with a study load of at least 5 EC in total.
- The basic subjects must include units in the area Natural Interaction with a study load of at least 5 EC in total.
- The basic subjects must include units in the area Artificial Intelligence with a study load of at least 5 EC in total.

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[3] It is possible to have more than one instance of a unit of study (e.g. HMI project, Capita Selecta) in a course programme. Of course the approval of the programme mentor is needed. The difference between the two must be clear to all parties.

- The basic subjects must include units in the area Man, Media and Society with a study load of at least 10 EC and at most 15 EC in total (including Computer Ethics).
- The subjects marked i -- in Table 1 are 'introductory' units of study. The number of introductory units of study included in the basic subjects is limited by the following rule: The course program can include no more than 30 credits from 'introductory' units of study.

For Graduate School students an additional requirement is imposed
- The basic subjects of a Graduate School student must include all units in the Human Centred IT area.

For Trento Double Degree students an additional requirement is imposed.

- Trento Double Degree students must take courses of the LMI programme in the areas of Artificial Intelligence, Man, Media and Society, and Natural Interaction upon instruction of the programme mentor. Moreover, their course programme should contain
  - Unit(s) in the area Human Computer Interaction (5 EC or more).
  - Computer Ethics (191612680)
  - An HMI project (192166100)[4].

This additional requirement constitutes a specific way to meet the basic HMI requirements. It applies to TDD students only.

A choice of units becomes a course programme once it has been laid down, with the approval of the programme mentor. See *section b, Composition of the programme, paragraph 5,* and *section h, Course Programme Approval.*

The programme mentor has the authority to refuse his approval even if the choice of subjects is within the limitations of these Regulations

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[4] It is possible to have more than one instance of a unit of study (e.g. HMI project, Capita Selecta) in a course programme. Of course the approval of the programme mentor is needed. The difference between the two must be clear to all parties.

Table 1[5] basis courses and their areas

	study load in EC	teaching	assessment[6]	prerequisites[7]
1. Artificial Intelligence (AI)[8]				
192320601 Multi agent systems	5		S, O	
192166420 Machine learning	10		O	
2. Human Computer Interaction (HCI)				
192166100 HMI project	10		O, Pre	
201000113 User Centred Design of New Media	5			
201000076 User studies in human media interaction	5		O	
3. Man, media, society (MMS)[9]				
191612680 Computer Ethics	5		S, O	
201200063 Philosophy of technology	5		S, O	
201100122 Research in HFM	10		S, Pre	
i[10] -- 192165201 KMT Mediatechnologie	5		O	
201100126 Human Computer Interaction	5		S	
192934090 Human Error	5		S,O	
i -- Intelligent Systems	5			

Table continues at next page.

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[5] Courses in italics are mandatory items in any course programme

[6] The abbreviations under teaching activities and assessment are explained in section m of this appendix.

[7] Numbers in the prerequisites column refer to the text following the table.

[8] For the status of 192160200 Knowledge Representation see *section n, Transitional Arrangements,* item 3.

[9] The list of MMS units has been subject to changes. For course programmes which were designed before September 1, 2012 please consult the transitional arrangement number 5 regarding MMS units (in *section n, Transitional Arrangements*).

[10] An i – preceding the course name indicates an introductory unit in the sense of section d.

4. Media technology (MT)[11]		
19121091 Image processing and computer vision	5	O
192166400 Advanced graphics	10	O
192160400 Information retrieval	10	S, O

5. Natural Interaction (NI)			
i[12] -- 192166310 Speech and language processing 1	5	S, O	
192166320 Speech and language processing 2	5	S, O	1
192166370 Conversational agents	10	O	
201000078 Brain Computer Interfacing	10	O,Pre	

6. Human Centred Interaction Technology (HCIT)	
Module 1	5
Module 2	5

Others		
192166200 Capita selecta HMI	5	O, Pre
192110322 Seminar HMI	5	O, Pre

1. To be eligible for 192166320 Speech and language processing 2 the student must have successfully completed 192166310 Speech and language processing 1.

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[11] For the status of 192110371 Graphics & virtual reality see *section n, Transitional Arrangements, item 4.*

[12] An i – preceding the course name indicates an introductory unit in the sense of section d.

d. Advanced subjects
Advanced subjects are units of study chosen from the core HMI units in Table 1 that are not included in the basic subjects described in section c.

The choice of subjects is limited by the following rules:
- Advanced subjects include no introductory units.
- The course program includes no more than 15 EC units in the area Man, Media and Society.

A choice of units becomes a course programme once it has been laid down, with the approval of the programme mentor. See *section b, Composition of the programme, paragraph 5,* and *section h, Course Programme Approval*

The programme mentor has the authority to refuse his approval even if the choice of subjects is within the limitations of these Regulations

e. Elective subjects and homologation courses
Elective subjects are subjects not taken from Table 1. They are chosen upon advice of the programme mentor.

The choice of subjects is limited by the following rule: The course program includes no more than 15 EC units in the area Man, Media and Society.

A choice of units becomes a course programme once it has been laid down, with the approval of the programme mentor. See *section b, Composition of the programme, paragraph 5,* and *section h, Course Programme Approval*

The programme mentor has the authority to refuse his approval even if the choice of subjects is within the limitations of these Regulations

In some cases the admissions board may issue a certificate of admission with additional requirements. See the admissions appendix. Generally the student will use the space for elective subjects in his course programme to meet these additional requirements, usually called 'homologation'. Consequently he can take less or no elective subjects.

f. (Research) Traineeship, research topics
1. Graduate school students must take a 15 EC research internship in their course programme.
2. Trento Double Degree students must take the 6 EC Research design course at Trento in their course programme
3. All students except Graduate School students **may** take a 20 EC traineeship in their course programme. A student who must take homologation (see section e) courses can skip a traineeship to make space for the homologation.
4. All students except the Graduate School and the Trento Double Degree students **must** take a 10 EC Research topics subject in their course programme.

g. Graduation Work

1. Students complete graduation work worth 30 credits. For Trento Double degree students the following holds: if they are entry students (starting in Twente) they complete their graduation work in Trento; if they are exit students (starting in Trento) they complete their graduation work in Twente.

2. Graduation work consists of a graduation project, a graduation report, a summary of the report, and a presentation. Generally the Research topics of section f above immediately precede the graduation work, and serve as a preparation for the graduation work.

3. Students may start graduation work only if they have completed all of the remaining components of the study programme.

4. Faculty chairs take responsibility for supervision and assessment of graduation work. For the M-HMI programme the chair responsible is HMI. For Trento Double Degree students the supervision is a joint effort by HMI and LMI.

h. Course programme approval

The student contacts the programme mentor as soon as possible to discuss the choice of subjects in the different categories (basic, advanced, and elective). Standard forms for laying down the course programme are available from the Educational support office secretariat and on the website of the Faculty of EEMCS.

Once the programme and student reach an agreement on the content of the course programme, they complete and sign the forms. The programme mentor signs on behalf of the Examination Board.

The programme mentor has the authority to refuse his approval to a proposed course programme, even if the choice of subjects is within the limitations of these Regulations.

If the programme mentor decides to approve of a course programme which violates these regulations, he needs explicit permission of the Examination Board.

The completed and signed form listing the course programme must be included in the student's file at S&O (the Student & Education service centre).

In principle, the student will earn the programme diploma if he/she completes the units of study listed in the course programme and earns results in line with the guidelines for passing the final assessment.

If the course programme listed on a signed form does not satisfy the regulations described in this programme appendix and/or does not satisfy the conditions imposed by the admissions board, the Examination Board is authorised to impose additional diploma eligibility requirements. In case the Examination Board has given the programme mentor the explicit permission to deviate from these regulations (see above), this authority does not apply

General guidelines for the composition of course programmes

There are six general rules to be observed by the student and programme mentor in assessing the student's possible course programme choices and in signing the

finalised course programme. These general rules work differently according to programme, graduation subject field and track. See also sections b-g of this appendix

1. The student creates a programme of units of study totalling 120 credits. These units are selected from among the courses offered by the UT or, where beneficial, courses offered by other universities.
   All course programmes except for Graduate School and Trento Double Degree students **have to include a 30-credit graduation assignment, and a 10-credit Research Topics unit**. Graduate School students have to include a **15 credit research internship and a 30 credit graduation assignment**. Trento Double Degree students have to include the **6 credits Trento course Research design, and the 30 credit graduation assignment**.
   Students with a course programme totalling fewer than 120 credits or one lacking a graduation assignment of at least 30 credits will not successfully pass the Master's programme final assessment. There are no exceptions to this rule, except that the Examination Board may grant a student exemption from the mandatory 10 credits Research Topics.

2. The admissions board may grant a student admission with additional requirements, imposing additional diploma eligibility requirements. These requirements differ from student to student. No more than 30 credits will be required to satisfy the conditions imposed by the admissions board.
   The Master's programme final assessment cannot be passed if the course programme of this category of students does not satisfy the additional requirements imposed. There are no exceptions to this rule.

3. Requirements apply to each course programme to ensure basic knowledge in the field of study and the track selected. The admissions board may adjust these requirements on the basis of the student's prior education and training. Such an adjustment will never entail an intensification of the requirements. The Master's programme final assessment cannot be passed if the course programme does not satisfy the basic knowledge requirements. The only exception to this rule is when the admissions board lowers the basic knowledge requirements.

4. Requirements apply to each course programme to ensure sufficient depth of study in the track selected. The manner in which these requirements are satisfied is determined in consultation with the study adviser. This includes, where necessary, taking into account which chair/chairs will bear responsibility for the student's graduation supervision. The Master's programme final assessment cannot be passed if the course programme does not satisfy the depth of study requirements. There are no exceptions to this rule.

5. Requirements apply to some course programmes governing the chair from which the student can complete his/her studies, according to the graduation subject field or track selected. The Master's programme final assessment cannot be passed if, during the course of study, the requirements for the composition of the graduation committee are not satisfied. There are no exceptions to this rule.

6. One guideline applicable to all course programmes is that continuing students (i.e. holders of a UT Bachelor's diploma eligible for automatic admission to one of the Master's programmes) complete part of the programme's 120 credits **outside** of the UT. The Examination Board may decide to exempt an individual from this guideline.

The total number of credits completed at the UT or at another university or research institute approved by the study adviser, **must be at least 90, except for Trento Double Degree students, who complete at least 60 credits** at the UT. The Examination Board may permit a student to deviate from this rule. Additional requirements with regard to the type of activities completed by students outside of the UT may be posed. For instance, the obligation that a student completes a traineeship. Such a requirement must involve no more than 30 credits. The Master's programme final assessment cannot be passed if the course programme does not satisfy the requirements imposed with regard to the units of study completed outside of the UT, unless an exemption has been granted.

i. Free programme

1. Students can compile their own programme, with an associated degree audit. The programme requires prior approval by the Board of Examiners. The Board of Examiners draws up a regulation for approval of free programmes.

2. When applying to the Board of Examiners for the prior approval referred to in paragraph 1, students must provide details of their reasons for making this request.

j. Organisation of practicals

There are no specific regulations for the organisation of practicals.

k. The order of and the conditions for admission to units of study, interim examinations and practicals.

To participate in a unit of study the student it is mandatory for a student to register as a participant. Registration is possible in the periods published in the rosters.
To sit (interim) examinations, registration is mandatory also. Periods for registration are published in the roster. Admission to units of study and interim examinations can be denied to students who did not register.
Additional conditions of admission to the units of study and to interim examinations are in table 1, and in sections f (for traineeship) and g (for graduation work).

l. The final attainment levels of the programme

1. The degree programme has the following general scientific attainment levels
   a. Graduates have an extensive knowledge of and understand the issues relevant to their specific field of study (i.e. programme-specific attainment targets) described in section l of this appendix under 2 below.
   b. Graduates can contribute to scientific research, and independently design, conduct and present the results of small-scale research.
   c. Graduates can provide an original contribution to the development and/or application of the field of study.
   d. Graduates can analyse complex problems (change problems) relevant to the field of study and obtain the required knowledge and information.

e. Graduates can design, validate and implement solutions/systems in their operational context; identify and apply relevant advanced knowledge, methods and techniques from their field of study.
f. Graduates can assess solutions/systems and their applications according to their properties and potential to solve problems even if they are new to or unfamiliar with the situation or lack information and/or reliable information; they can use their assessment as a basis for (substantiation of) decisions.
g. Graduates understand the ethical, social, cultural and public aspects of problems and solutions in their field of study; apply this insight in their international role as scholar.
h. Graduates can work as part of and play a leading role in a team; manage and plan a development process; document development and research processes.
i. Graduates can substantiate research results, designs and applications in writing and verbally; critically assess and participate in debates regarding the same.
j. Graduates can independently acquire new knowledge and skills; reflect on trends in their field of study, responsibilities and roles and use this insight as a guide for and integrate it into their own personal development.
k. Graduates can integrate information from other disciplines into their own work if necessary.
l. Graduates take a critical approach to reading, incorporating information presented in and participating in debates regarding international scientific literature relevant to their field of study.

The word 'original' in 1c is understood to mean 'demonstrative of a creative contribution', and not 'pioneering'.

The qualification under 'a' above, that HMI graduates command a high level of scientific knowledge and understanding of human media interaction, is elaborated as follows.
a. Graduates have a thorough knowledge and understandings of each of the sub-fields listed below and identify and utilize any links:
   - methodology of user-oriented design, including the drafting of user requirements, user studies and usability engineering;
   - forms of natural interaction, including natural language and speech recognition technology, multimodal interaction and interaction via dialogue systems and conversational agents;
   - intelligent interaction employing techniques taken from artificial intelligence, e.g. intelligent multi-agent systems and learning systems;
   - media technologies, e.g. image processing, computer vision, graphics and virtual reality, enabling complex interaction.
b. Graduates can design, both independently and as part of a team, sophisticated applications involving digital media and interactive systems and geared to the needs of users
c. Graduates can use state-of-the-art techniques, methods and design and development tools in developing sophisticated applications make an

informed selection of and contribute to the further development of these methods, techniques and tools

d. Graduates have knowledge of and gain practical experience with interaction design methods

e. Graduates have knowledge of and understand various aspects of the user context of digital media and interactive systems and, based on this, communicate effectively and efficiently with users during the various phases of the development process

f. Graduates have knowledge of and understand basic questions and research methods into human behavior (psychology and philosophy) and grasp the relevance of these fields of study to the design of interactive systems

g. Graduates can draft, transfer, document and communicate to technical designers specifications on the basis of a knowledge and understanding of the technical aspects of digital media and interactive systems

h. Graduates can assess systems for human media interaction according to their technical and operational aspects, incorporating a thorough knowledge and understanding of mathematics

HMI graduates have specialist knowledge of one or more of the four Human Media Interaction sub-fields outlined above and practical experience conducting, reporting about and applying the results of scientific research in developing innovative interactive systems and the relevant techniques and methods.

m. Assessment and marking

Table 1 show how assessments for the units of study are organised.

The 'Assessment method' columns use the following codes:

S   written interim examination

O   written assignment: detailed exercises, a report, an essay or other written document reviewed and assessed by the examiner, but not in the presence of the student

M   oral assessment: a meeting involving the student and the examiner or other individual, during which the student's knowledge is assessed

P   practical assignment: a functioning product prepared and submitted by the student to be assessed in terms of behaviour, operation and/or use (e.g. a simple programme or a larger, functioning prototype)

Pj   project: group activities as part of which the resulting group work and the student's participation are assessed

Pre   presentation: information presented by the student before an audience, usually other students

These codes are used to give a general indication of the assessment method of each unit of study, not outline the exact rules governing the form of assessment.

n. Transitional arrangements

1. Regulation 2008-2009 regarding Research topics
Occasion: This regulation is necessary because Research topics are a mandatory item in the course programmes of all M-HMI students, starting 1 September 2008.
Term of validity: until September 1, 2012.
Contents of the regulation: Students who have their course programme approved before 1 March 2009 can take the degree without a Research topics unit in their programme. Programmes submitted for approval after 1 March 2009, must contain a Research topics unit. After 1 March 2009, programmes without Research topics can be approved only if the student has explicit permission of the Examination Board.

2. Regulation 2010-2011 regarding Computer Ethics
Occasion: This regulation is necessary because Computer Ethics are a mandatory item in the course programmes of all M-HMI students, starting 1 September 2010.
Term of validity: until September 1, 2014.
Contents of the regulation: Students who have their course programme approved before 1 September 2010 can take the degree without 191612680 Computer Ethics in their programme. Programmes submitted for approval after 1 September 2010, must contain the mandatory Computer Ethics unit.

3. Regulation 2012-2013 regarding Knowledge representation
Occasion: This regulation is necessary because the Knowledge Representation course is no longer offered, and has disappeared from table 1 as an AI unit, starting 1 September 2012.
Term of validity: until September 1, 2015.
Contents of the regulation: Students who have their course programme approved before 1 March 2013 can take the degree with 192160200 Knowledge Representation in their programme.

4. Regulation 2012-2013 regarding Graphics and Virtual Reality
Occasion: This regulation is necessary because the Graphics & Virtual Reality course is no longer offered as a Master's programme course, and has disappeared from table 1 as an MT unit, starting 1 September 2012.
Term of validity: until September 1, 2015.
Contents of the regulation: Students who have their course programme approved before 1 March 2013 can take the degree with 192110371 Graphics & virtual reality in their programme.

5. Regulation 2012-2013 regarding MMS courses
Occasion: This regulation is necessary because some of the MMS courses which were in table 1 are no longer open to HMI students, which caused a change in the list of MMS courses in table 1, starting 1 September 2012.
Term of validity: until September 1, 2015.

Contents of the regulation: Students who have their course programme approved before 1 March 2013 can take the degree with courses from the list of MMS courses of previous years. The courses involved are:

192934110 Research methods C&M
i -- 192165201 Media and technology
192934100 Media psychology
192934160 Ergonomical design
192934050 Computer games studies

Admissions appendix to the Teaching and Examination Regulations of the Master's programme Human Media Interaction

The regulations in this appendix are part of the teaching and examination regulations of the master's programme Human Media Interaction of the Faculty of Electrical Engineering, Mathematics and Computer Science of the University of Twente.

Contents

Enrolment as a student is required to sit interim examinations and to be eligible to earn the Master's diploma. In order to be enrolled, students must demonstrate that they have been admitted to one of the Master's programmes.

Admission involves an assessment of the student's eligibility for the Master's programme of his/her choice. The Dean has appointed the admissions board with the power to determine admissibility. If the admissions board positively assesses an application for admission, it issues a certificate of admission. Students with a certificate of admission are eligible for enrolment by the Central Student Administration. Enrolment will only take place if the other admission requirements maintained by the UT have also been satisfied.

Admission pursuant to a regulation

The Teaching and Examination Regulations stipulate that certain groups of students are eligible for admission. (Article 4.1).

1. Students in possession of a diploma which shows that they have passed the final examination for the *Technische Informatica* (TU/e, TUD, UT), *Informatica* (RUG, UU, UvA, VU, UL, RU, OU), *Bedrijfsinformatietechnologie* (UT), *Creative Technology*, or *Technische Kunstmatige Intelligentie* Bachelor's programme will be eligible for admission to the programme.

In addition to these provisions from the Teaching and Examination Regulations, the Dean has adopted the following provisions.

1. Applicants who satisfy the following three requirements are eligible for admission to the HMI Master's programme.
   a. The applicant is holder of a diploma from Saxion Universities (Saxion Hogeschool Enschede) demonstrating that he has satisfied the requirements of the final assessment of the Computer Science (Informatica) Bachelor's programme or the Technical Computer Science (Technische Informatica) Bachelor's programme
   b. The applicant has successfully completed the Advanced Algorithms elective module as part of his bachelor's course programme
   c. The applicant, according to UT records, has sat the interim examination of either the subject 192140250 ADC plus or the subject 192140200 ADC while completing the Advanced Algorithms elective module and received a mark of 6, 7, 8, 9 or 10 or, if no mark is awarded, 'pass' ('G' in Dutch)
2. Applicants who satisfy the following requirements are eligible for admission to the HMI Master's programme.
   a. The applicant is holder of a diploma from the University of Twente demonstrating that he has satisfied the requirements of the final assessment of the Advanced Technology Bachelor's programme.
   b. The applicant has successfully completed the following electives as part of his bachelor's course programme
   192135000 Programmeren 1
   192135050 Programmeren 2
   192145090 Inleiding mens machine interactie
   192140250 Algoritmen, Datastructuren en Complexiteit plus
   192140302 Artificial Intelligence

Admission to the Master's programmes after individual assessment

In all other instances, the admissions board conducts a more detailed assessment of the applicant's eligibility for admission. This assessment takes the following factors into account:

a. the highest diploma earned by the applicant: This must be at least a Bachelor's diploma from a recognised higher education institution. If such a diploma cannot be produced, the admissions board will ask for a statement attesting to the equivalency of the applicant's qualifications with the Bachelor's diploma required. The body issuing this statement must be authorised to do so.
b. the nature of the degree course and the content of the course programme completed by the applicant, the speed with which the course programme was completed and the marks earned: The nature of the degree course, content of the course programme and marks earned for the individual units of study must clearly demonstrate that the applicant has the fundamental academic skills and appropriate basic knowledge for the Master's programme or is able to compensate for any gaps in basic knowledge.
c. the student's motivation for applying for admission
d. the applicant's command of English: This only applies to international students. The threshold values for sufficient command of English are in Article 4.4 under a of the Teaching and Examination Regulations.

Variations in admission decisions

Issuing an unconditional certificate of admission
The admissions board may decide to admit applicants to the Master's programme after assessing their file. These applicants will be issued a certificate of admission.

Issuing a conditional certificate of admission
The admissions board may not reach a final decision about admission, because it finds insufficient or formally incorrect evidence of the applicant's status in the application file. In such a case the board can decide to admit the applicant conditionally. The student can enrol at the UT on the condition he or she submits the evidence lacking in the original application file to the satisfaction of the admissions board. (A typical case of conditional admission is when the applicant's file shows no formal proof of sufficient proficiency in English.)

Issuing a certificate of pre-Master admission
In some cases, the admissions board will issue applicants a certificate of pre-Master admission. While these individuals may enrol at the UT, they are not entitled to sit interim examinations or to have the final assessment conducted.

Pre-Master admission is associated with a pre-Master's programme, i.e. a list of units of study, the attainment targets and learning objectives of which are at the undergraduate level. Students in this category must first successfully complete this pre-Master's programme to be fully admitted to the Master's programme and become fully enrolled students with all the associated rights. Certificates of pre-Master admission are valid for a limited term (generally one year). Students who are not fully admitted during this term must re-apply for admission.

Completing a pre-Master's programme to convert a pre-Master admission to 'fully admitted' student status is often referred to as 'overcoming deficiencies'.

NB: While the results earned as part of an undergraduate-level pre-Master's programme do not count towards a Bachelor's degree, a certificate is awarded in recognition of the academic achievements during the pre-Master's programme.

Issuing a certificate of admission with additional requirements
The admissions board may attach additional requirements to a certificate of admission (also to conditional and pre-Master admissions). These additional requirements do not impact the right to enrol, sit interim examinations or have the final assessment conducted. They do, however, impact the regulations governing successful conclusion of the Master's programme final assessment. With this admission decision, the admissions board establishes additional requirements for the course programme to satisfy in order to successfully pass the Master's programme final assessment. Naturally, the additional requirements will be limited to the extent that the student will still be able to complete the programme with a study load of 120 credits.

The additional requirements placed on the course programme are referred to as 'homologation'. Please refer to the programme appendix, section e.

Issuing a certificate of admission with a requirements waiver

Article 13.3 of the Teaching and Examination Regulations stipulates that the Examination Board may not honour requests for exemptions based on results earned as part of a Bachelor's programme. However, the Examination Board may waive a requirement placed on the course programme in recognition of the results earned as part of a Bachelor's programme and, consequently, permit the student to successfully pass the Master's programme final assessment with a course programme that does not satisfy all the formal requirements. Students who wish to have a waiver for requirements placed on the course programme based on their undergraduate education should submit a request to the admissions board. The admissions board will render a decision on the request on behalf of the Examination Board. If granted, it will issue a certificate of admission with a waiver for requirements, thereby granting the student the right to have the Master's programme final assessment conducted without meeting all the formal requirements. Such a waiver will never affect the Master's programme study load. A study load requirement of less than 120 credits is not permitted.

Special regulations

Sitting interim examinations when not admitted to a Master's programme

By a change of the Act, effective September 1, 2012, the regulations concerning interwoven programmes (i.e. the rights for students to sit interim examinations when not admitted to the Master's programme) are terminated.

There are no transitional arrangements for students with interwoven programmes.