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

The regulations in this appendix are part of the teaching and examination regulation 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 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.
5. 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.
6. The admissions board may issue certificates of admission with additional requirements (see the description in de 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.
7. 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.
8. 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 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.
- 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.
  It is mandatory that Computer Ethics (191612680/192166500) is among the basic subjects in this area.
- The basic subjects must include a HMI project (192166100)[1].
- 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.

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[1] 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[2][3]

	study load in EC	teaching activities	assessment	prerequisites
1. Artificial Intelligence (AI)				
192320601 Multi agent systems	5		S, O	
192160200 Knowledge Representation	10		S, O	
192166420 Machine learning	10		O	
2. Human Computer Interaction (HCI)				
201000113 User Centred Design of New Media	5		S	
192166100 HMI project	10		O, Pre	1
201000076 User studies in human media interaction	5		O	
3. Man, media, society (MMS)				
191612510 Introduction to philosophy of technology	5		S, O	
192166500 Computer Ethics[4]	5		S, O	
192934110 Research methods C&M	5		S, Pre	
i -- 192165201 Media and technology	5		O	
192934100 Media psychology	5		S	
192934160 Ergonomical design	5		S, O, Pre	
192934050 Computer games studies	5		O	

Table continues at next page.

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[2] The abbreviations under teaching activities and assessment are explained in section m of this appendix. Numbers in the prerequisites column refer to the text following the table.
[3] An i – preceding the course name indicates an introductory unit in the sense of section d.
[4] Computer Ethics is a mandatory subject in the MMS area for all students.

4. Media technology (MT)			
i -- 192110371 Graphics & virtual reality	5	O	
19121091 Image processing and computer vision	5	O	
192166400 Advanced graphics	10	O	
192160400 Information retrieval	10	S, O	
5. Natural Interaction (NI)			
i -- 192166310 Speech and language processing 1	5	S, O	
192166320 Speech and language processing 2	5	S, O	2
192166370 Conversational agents	10	O	
201000078 Brain Computer Interfacing	10	O,Pre	
6. Human Centred Interaction Technology (HCIT)			
Module 1	5		1
Module 2	5		1
Others			
192166200 Capita selecta HMI	5	O, Pre	1
192110322 Seminar HMI	5	O, Pre	

1. This course is excluded from the provisions of article 4 under 3 of the Teaching and Examination Regulations. Students must have a Bachelor's diploma and (or) a certificate of admission to sit the interim examination.
2. To be eligible for 192166320 Speech and language processing 2 the student must have successfully completed 192166310 Speech and language processing 1.

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.

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. See also section h.

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. 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.
3. All students except the Graduate School students **must** take a 10 EC Research topics subject in their course programme. The regulation of Article 4 paragraph 3 does not apply to the Research topics.
4. Students may start a traineeship only if they have passed the Bachelor's audit referred to in Article 4 paragraph 1 of the Teaching and Examination Regulations. The regulation of Article 4 paragraph 3 does not apply.

g. Graduation Work
1. Students complete graduation work worth 30 credits.
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. The regulation of Article 4 under 3 does not apply.
4. Faculty chairs take responsibility for supervision and assessment of graduation work. For the M-HMI programme the chair responsible is HMI.

h. Course programme approval

Approval procedures

The student must complete the following steps to obtain course programme approval:

1. Orientation
   Students complete subjects and sit interim examinations as they see fit. In this phase only a few credits can be earned. During this phase, the student can be advised by the admissions board or, if the choice of track is clear, by a programme mentor (see section b under 3). If the student chooses subjects or projects during orientation without consultation of the admissions board or a programme mentor, he/she does so at his/her own risk.
   If 15 credits have been earned in de Master's Programme, the orientation ends. At this point, permission from a study adviser is required for a more complete programme of at least one year. Phase 2 begins.
   In case the student during orientation chooses only subjects and projects which are mandatory for any course programme (within a given graduation subject field or track), consultation with and approval by a programme mentor may be postponed to a maximum of 30 credits. No one can earn more than 30 credits in phase 1.

2. Approval of initial choices
   After receiving approval from the programme mentor, at least 60 credits of the course programme to be completed or already partially completed are laid down. The choice of graduation subject field or track is clear, as is the matter of whether a traineeship will be included in the course programme. The manner in which the credits for optional units of study are to be allocated and the chair/chairs from which the student will graduate may still be not entirely clear.

3. Approval of entire course programme
   The programme mentor approves the 120-credit course programme in its entirety. At this point it is clear which chair/chairs will bear responsibility for the student's graduation supervision.

Students may reduce the term of Phase 1 and skip Phase 2. Regardless of how the student wishes to proceed, once the limit established for the orientation phase has been reached (i.e. 15 programme credits earned or 30 credits for mandatory units of study only), the study adviser must be contacted.

Laying down and obtaining approval of course programmes

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 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.

General guidelines for the composition of course programmes

There are six general rules to be observed by the student and study adviser 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 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**.

   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**. 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 complete 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'.

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 192166500 Computer Ethics in their programme. Programmes submitted for approval after 1 March 2010, must contain the mandatory Computer Ethics unit.