

SECTION B: PROGRAMME-SPECIFIC SECTION MASTER HUMAN MEDIA INTERACTION

1. General provisions

Article 1.1 Definitions

Definitions additional to the ones in Article 1.2 of Section A.

- a. graduation supervisor: [a staff member of the HMI chair who supervises the student's final project](#)

2. Programme objectives and final attainment targets

Article 2.1 Aim of the Human Media Interaction Master's programme

[Highlighting the interaction between people and technology, the HMI master's programme studies this relationship from different perspectives. Special emphasis is placed on the manner in which people interact with technology \(i.e. what are their requirements, abilities and limitations\) and on the identification of the best way to implement or further develop technical capabilities to meet the needs of users.](#)

[The HMI master's programme focuses specifically on intelligent, multimodal systems offering a more natural form of interaction than currently possible with conventional monitors, mice and keyboards. By employing a broad range of input modalities to observe and intelligently interpret user actions, these intelligent interactive systems aim to automatically determine the user objectives and operational context and make the necessary adjustments. This multimodality applies both to system input and output; text, speech, haptic and visual feedback and all manner of communication media are integrated and presented to users in an intelligent manner.](#)

[The HMI programme combines technical expertise and skills in the field of interaction technology with knowledge and skills in user-oriented design methodologies and an understanding of how people interact with technology.](#)

Article 2.2 General attainment targets

The degree programmes have the following general scientific attainment targets

- a. Graduates have an extensive knowledge of and understand the issues relevant to their specific field of study (i.e. domain specific attainment targets) described in [art. 2.4](#).
- 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. 'Original' is understood to mean 'demonstrative of a creative contribution'.
- 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.

Commented [GMv(1)]: Geïntroduceerd vanuit oudere OER, kan wat mij betreft ook weg, of korter. Als kop opgenomen om de final attainment targets wat context te geven.

- 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.

Article 2.4 Domain specific attainment targets

The degree programme has the following subject specific scientific attainment targets (elaborating art. 2.3)

- a. Graduates have a thorough knowledge and understanding of each of the sub-fields listed below
 - 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;
- 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.

Commented [Dirk2]: dit moet iets helderder geformuleerd worden.

Commented [Dirk3]: hier zou echt in gesnoeid kunnen worden omdat het ene en het andere nauwelijks te onderscheiden zijn.

Commented [Dirk4]: werd al in a gedeeltelijk genoemd enkel "practical application" toevoegen.

Commented [Dirk5]: deze ook anders formuleren. psychologie en filosofie kan weg, maar eerder fysiologie, taalkunde... die relevant zijn voor de

HMI graduates have specialist knowledge of one or more of the three 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.

Commented [Dirk6]: specialist is niet hetzelfde als through. specialist slechts van 1 subfield.

Commented [Dirk7]: voor HCID studenten ook vermelden: Innovation & Entrepreneurship als subfield.

3. Further admission requirements

Admission requirements additional to the ones in Article 2 of Section A can be found in Appendix A.

4. Curriculum structure

Article 4.1 Programme structure

1. Each student has an individual course programme with units of study as outlined by a - d, further elaborated in **Article 4.2 to 4.68**:
 - a. Compulsory units of study (55 EC):
 - i. 192166100 Human ~~Computer-Media~~ Interaction Project (10EC)
 - ii. 191612680 Computer Ethics (5EC)¹
 - iii. 192199508 Research Topics (10EC)
 - iv. 192199978 Graduation Project / Final Assignment (30EC)
 - b. 15 EC core courses in the techniques for Intelligent Interactive systems listed in art. 4.2, out of which at least 1 advanced course
 - c. Optional internship
 - d. Additional core courses (art. 4.2 – 4.43) and electives -so that the total course programme adds up to at least 120 EC.
2. Students whose admission to the HMI programme is derived from, or constitutes a part of, their admission to a special programme within the Twente Graduate School (HCIT programme) or the EIT ICT Labs Master school (HCID programme), may have a course programme which deviates from the requirements listed under 4.1 – 4.96. Regulations regarding the course programme for these students are in **Appendix C** of these Regulations.
3. A choice of units becomes a course programme once it has been laid down, with the approval of the programme mentor (**Art. 5**). The programme mentor has the authority to refuse his approval even if the choice of units is within the limitations of these Regulations.
4. In some cases the admissions board may issue a certificate of admission with additional requirements. See the admissions appendix. Students must use the space for elective subjects in their course programme to meet these additional requirements, usually called 'homologation'. Homologation requirements limit the space the student has for electives in the student's course programme.

Commented [Dirk8]: voor welke gevallen geldt nog zoiets? moeten psychologie studenten bv. minder psychologie vakken volgen? zou dat hier onder kunnen vallen?

Commented [MvG9]: Nee in principe niet. In het beschreven geval sturen we juist op wat ze wel moeten doen, niet op wat ze niet mogen doen. Voor de gevallen dat de student wel toelaatbaar is maar nog wel bepaalde kennis ontbreekt. Deze ontbrekende kennis is dus niet zodanig dat je een premaster voor wilt schrijven, maar moet wel overbrugd worden om succesvol te kunnen zijn in de master. In dat geval kunnen we aanvullende eisen stellen aan het programma. Meestal gaat het dan om een stukje van een bachelormodule of een bepaald inleidend mastervak. Als we trouwens de eis laten staan dat de programme mentor (=jij?) altijd het programma moet goedkeuren, is het minderen van de psychologiecomponent sowieso geen probleem.

Commented [MvG10]: Nieuwe code, voorheen 1 vak a 10EC: 192166420

Article 4.2 Core courses: Techniques to build (Socially) Intelligent Interactive Systems (system focused - intelligent = automatic understanding of actions, intentions, emotions of users)

General Techniques (5 EC)

- 2016XXXXX Introduction to Machine Learning
- 2016XXXXX Advanced Machine Learning

¹ With the exemption of students with an UT Bachelor's degree in Creative Technology.

- 191210910 Image Processing and Computer Vision

Sensing Technology / Human Signal Processing (5 EC)

- 2016XXXXX Affective Computing
- 2016XXXXX Natural Language Processing
- 2016XXXXX Speech Processing
- 2016XXXXX Brain Computer Interfaces*

Commented [MvG11]: Nieuwe code, 201000078 is 10 EC variant

Interactive Systems (5 EC)

- 2016XXXXX Information Retrieval
- 2016XXXXX Conversational Agents
- 2016XXXXX Brain Computer Interfaces*
- 192111301 Ubiquitous Computing
- 2016XXXXX Trends in Human Robot Interaction Research*

Commented [MvG12]: Nieuwe code, 192160400 is 10 EC variant

Commented [MvG13]: Nieuwe code, 192166370 is 10 EC variant

Advanced (5 EC)

Advanced Research Project (... in Affective Computing, Natural Language Processing, Speech Processing, Brain Computer Interfaces, Information Retrieval, Conversational Agents, Human Robot Interaction)

Commented [MvG14]: Dit moet een rijtje worden met vakken en codes als deze eenmaal bekend zijn

Article 4.3 Core courses: Human Computer Interaction and Design Courses

(user focused; context, user requirements, interaction design, human factors, user evaluation studies)

- 191612680 Computer Ethics (5EC)
- 2016XXXXX Designing Interactive Experiences (~~was Media and Technology~~)
- 201000113 User Centered Design of New Media (5 EC)
- 192166100 Human Media Interaction Project (10 EC)
- 201100126 Human Computer Interaction (5 EC)
- 2016XXXXX Trends in Human Robot Interaction Research* (x EC)

Article 4.4 Core courses: Innovation and Entrepreneurship

- ~~201500289 Innovation and Entrepreneurship Theory (5EC)²~~
- ~~201500505 Business Development Lab² (10 EC)~~
- ~~201500065 New Technology Business Development (15 EC)²~~
- ~~194105070 Information Systems for the Financial Services Industry (5EC)~~
- ~~XXXXXXXXX Summer School (4 EC)~~

Commented [M15]: Behalve "Information Systems etc" zijn dit feitelijk allemaal bachelorvakken. Ik zou deze dus NIET opnemen in het reguliere HMI-masterprogramma, maar alleen in het programma voor HCID-studenten!

Article 4.5 Electives

1. ~~Outside the core units as listed in article 4.2 – 4.3, students are free to choose electives courses.~~
Possible electives are:

- ~~192850830 Create the Future (10 EC)~~
- ~~201500440 Design and Emotion (5 EC)~~
- ~~201500133 Embodied Interaction (5 EC)~~

Commented [MvG16]: With a maximum of...EC? Of maakt de verhouding core en elective niet uit voor normale HMI?

² Not for students with an UT Bachelor's degree in Creative Technology

³ Only for students with an UT Bachelor's degree in Creative Technology

- ~~201400180 Multi-Sensory Design (5-EC)~~
- ~~201000201 Virtual Reality (5-EC)~~
- ~~Advanced Database Systems~~
- ~~201400174 Data Science (5-EC)~~
- ~~201300074 Research Experiments in Databases and Information Retrieval (5-EC)~~
- ~~192140302 Artificial Intelligence (Self-Tuition) (5-EC)~~
- ~~192166200 Capita Selecta HMI (5-EC)~~

Commented [MvG17]: Vak wordt niet meer aangeboden in 2016-2017 i.v.m. vertrek Mena Habib.

Article 4.46 Internship

Students may take a 20 EC internship in their course programme. Organisational procedures are found on: www.utwente.nl/ewi/en/education/external_training/. These procedures are considered part of this Regulation.

Article 4.57 Research Topics

All students must take a 10 EC Research topics course in their course programme in preparation for their 192199978 Final project.

Article 4.68 Final Project

1. All students must carry out graduation work under the supervision of a staff member of the HMI chair. The following requirements must be met:⁴
 - a. Students complete graduation work worth 30 credits.
 - b. Graduation work consists of a graduation project, a graduation report, a summary of the report, and a presentation. Generally the Research topics of [art. 4.57](#) above immediately precede the graduation work, and serve as a preparation for the graduation work.
 - c. ~~Students may only start the graduation work with a maximum of 10 EC of unfinished courses, unless the graduation supervisor deems the content of the unfinished courses essential with regards to the chosen topic of the Final Project. Students may start graduation work only if they have completed all of the remaining components of the study programme, unless the graduation supervisor grants permission to deviate from this rule.~~
 - d. The HMI chair takes responsibility for supervision and assessment of graduation work.
 - e. The graduation project description is written down as an agreement, signed by both the student and the supervisor. The supervisor signs on behalf of the Examination Board.⁵

Commented [Dirk18]: "graduation" is wel wat anders georganiseerd bij HCID.

Commented [Dirk19]: ok: dus niet de programma mentor bv.

Commented [MvG20]: Conflict m fac.brede afspraak deel A

5. Course programme approval

Article 5.1 Approval procedures

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

1. Contacting the programme mentor and laying down the course programme. Students may complete subjects and sit interim examinations up to a maximum of 15 credits in

⁴ Organizational procedures are found on: www.utwente.nl/hmi/programmeinformation/final_project.doc/

⁵ Forms to be found on: www.utwente.nl/hmi/programmeinformation/rules_documents/

a specialization before contacting the programme mentor⁶. At this point, permission from the programme mentor is required for complete programme of 120 credits. The programme is written down as an agreement on the content of the course programme, signed by both the student and the programme mentor⁷. The programme mentor signs on behalf of the Examination Board.

2. Alterations and renewed approval of entire course programme.
The course programme laid down in phase 2 can be altered during executing the master's programme, by laying down revised course programmes. This can be done until research topics and final project are started by the student. At that time the study adviser/programme mentor should have approved 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.
3. The completed and signed form listing the course programme must be included in the student's file at Bureau Onderwijszaken (BOZ, office of educational support) a part of Centre for Educational Support (CES). The student will earn the 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.
4. If the course programme listed on a signed form does not satisfy the regulations described in these regulations and/or does not satisfy the conditions imposed by the admissions board, the Examination Board is authorized to impose additional diploma eligibility requirements.
5. Requirements apply to each course programme to ensure basic knowledge in the field of study. The admissions board may adjust these programme requirements on the basis of the student's prior education and training. Such an adjustment will never entail an intensification of the requirements, the programme will always have a study load of 120 credits.
6. The total number of credits completed at the UT or at another university or research institute approved by the study adviser/programme mentor, must be at least 90. The Examination Board may permit a student to deviate from this rule.

Article 5.2 Approval of Free programme choice

~~The Examination Board 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 Examination Board.~~

6. Degree

Students who have successfully completed their Master's final examination are awarded a Master of Science degree. The degree awarded is stated on the diploma.

⁶ It is strongly recommended for students to contact the study adviser/programme mentor immediately at the start of the master's study.

⁷ Forms to be found on: www.utwente.nl/hmi/programmeinformation/rules_documents/

Commented [MvG21]: Is dit mogelijk buiten de HMI chair/supervision van de chair?

Commented [MvG22]: Op de site van CES heet het ook gewoon BOZ in het Engels. Dit is denk ik ook het meest herkenbaar als een student gaat vragen binnen de UT waar hij moet zijn.

7. Transitional and final provisions

Article 7.1 Transitional provisions

The transitional arrangements can be found in appendix B.

Article 7.2 Publication

1. The dean will ensure the appropriate publication of these Regulations and any amendments to them.
2. The Teaching and Examination Regulations will be posted on the faculty website.

Article 7.3 Effective date

These Regulations enter into force with effect from 1 September 2016

Thus drawn up by the on ...2016....

Advice from Board of Studies,

....., on [date]

....., on [date]

....., on [date]

Approved by authorized Faculty Council on [date]

Adopted by: the dean on [date] 20....

A. ADMISSIONS APPENDIX TO THE TEACHING AND EXAMINATION REGULATIONS OF THE MASTER'S HUMAN MEDIA TECHNOLOGY

The provisions in this appendix are an integral 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 and are an addition to the regulation stated in Section A and B. References to numbered articles in this appendix are references to the main text of these Regulations.

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 the Master's programme.

Article A.1 Admission to the programme

1. Admission to the programme can be granted only to students who meet the requirements regarding the level of their previously earned diploma's, in accordance with the provisions of Art.7.30b of the Act.
2. 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 Business & IT (UT), Creative Technology (UT), or (Technische) Kunstmatige Intelligentie (RUG, UvA, UU, RU) Bachelor's programme will be eligible for admission to the programme.
3. Students who are not in possession of the diploma mentioned in Article A.1.2 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. Admission involves an assessment of the student's eligibility for the Master's programme of his/her choice. 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.
4. Admission of foreign students. In addition to the requirements in article 2.6 and 2.8 of Section A, the following criteria apply:
 - a. 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.
 - b. Level of knowledge: the student must have accumulated sufficient knowledge on the basis of the courses he/she has studied abroad to be at a level comparable to that of Dutch students who are admitted to the Master's programme.

Commented [M23]: Heet dit tegenwoordig niet "Business & IT"?

Commented [MvG24R23]: Heb het veranderd, want het is inderdaad duidelijker voor studenten. Croho en bij DUO is het nog wel bedrijfsinformatietechnologie.

Article A.2 Admission to the programme pursuant to a regulation

The Dean has adopted the following provisions for certain students to be eligible for admission (next to the ones mentioned in Article A.1).

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 of a university of professional education (HBO) demonstrating that he has satisfied the requirements of the final assessment of the

- Computer Science (Informatica) HBO Bachelor's programme or the Technical Computer Science (Technische Informatica) HBO Bachelor's programme.
- b. The applicant has successfully completed the first half of the "Kies op Maat" transfer minor for Computer Science or Human Media Interaction
 - c. The applicant, has successfully completed module 6, i.e. 201500118201400256 Intelligent Interaction Design of the Bachelor's programme TI / BIT at the University of Twente
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 or she has satisfied the requirements of the final assessment of the Psychology Bachelor's programme.
 - b. The applicant has successfully completed: ~~modules 1 and 2, i.e. 201300070~~ Parels der Informatica, and 201500111201300074 Software Systems of the "~~Technische Informatica~~" TI Bachelor's programme
 3. 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 or she has satisfied the requirements of the final assessment of the Industrial Design Bachelor's programme.
 - b. The applicant has successfully completed the programming theory and project part of 201500111 Software Systems of the TI Bachelor's programme.

Commented [Dirk25]: Klopt dit nog Mariet?

Article A.3 Admission to the Master's programmes after individual assessment

In all other instances than those mentioned in Art. A.1 and A.2., the admissions board conducts a detailed assessment of the applicant's eligibility for admission. This assessment takes the following factors into account:

1. the highest diploma earned by the applicant: This must be at least a Bachelor's diploma from a recognized 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 authorized to do so.
2. 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.
3. the student's motivation for applying for admission
4. the applicant's command of English: This only applies to international students. The threshold values for sufficient command of English are in Article 2.8 of section A.

Article A.4 Variations in admission decisions

1. 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 (unconditional) certificate of admission.

2. 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 enroll 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.)

3. 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 enroll at the UT, they are not entitled to sit interim examinations or to have the final assessment conducted.

~~Bridging programmes will consist of one or two modules selected by the Admission Board from the following 5:~~

- ~~• the two bridging modules for admission to Computer Science~~
- ~~• the first two modules of the Technische Informatica Bachelor's programme~~
- ~~• module 6 of the Technische Informatica Bachelor's programme.~~

Students with a certificate of pre-Master admission must first successfully complete the Bridging programme before being 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 Bridging 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 Bridging programme do not count towards a Bachelor's degree, a certificate is awarded in recognition of the academic achievements during the Bridging programme.

4. 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".

5. Issuing a certificate of admission with a requirements waiver

Commented [M26]: Statistiek ontbreekt nog en Python Programming. Is het echt nodig om dit zo expliciet op te schrijven, is nogal beperkend? Ik zou het weglaten.

Commented [MvG27R26]: Dit stond in de eerdere OERs, ik zie echter geen bezwaar tegen het niet opnemen.

Article 4.7 of Section A of the Teaching and Examination Regulation 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

B. TRANSITIONAL ARRANGEMENTS APPENDIX TO THE TEACHING AND EXAMINATION REGULATIONS OF THE MASTER'S PROGRAMME HUMAN MEDIA INTERACTION

The regulations in this appendix are an integral 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. References to numbered articles in this appendix are references to the main text of the teaching and examination regulations. [Regulations with a passed validity date can be found in previous teaching and examination regulations.](#)

[In general students with an approved programme are allowed to finish their programme under the previous conditions taking into account the current en previous transitional arrangements that might apply to them.](#)

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 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 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 Article 15.1 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. Since the course is no longer offered, this option applies only to students who already sat the interim examination. Otherwise, the course programme must be adapted.~~

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 Article 15.1 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~~

Commented [MvG28]: Volgens mij kunnen alle regels vervallen waarbij de validity is verstreken. Die zijn dan eigenlijk toch niet meer geldig.

Commented [Dirk29]: deze kan vervalle? (of nog even laten staan)

Commented [MvG30R29]: Volgens mij kunnen alle regels vervallen waarbij de validity is verstreken en kunnen we in het eerste artikel hiernaar verwijzen.

Deleted; contents of the regulation are incorporated in Regulation 6.

6. Regulation 2013-2014 regarding MMS courses

Occasion: This regulation is necessary because the possibilities for HMI students to take MMS courses (as in Article 15.1) of the Behavioural Science faculty have been subject to changes.

Term of validity: until September 1, 2015.

Contents of the regulation: Students who have their course programme approved before the date indicated below, can take the degree with courses from the list of MMS courses of previous years. Since the courses are no longer available (c.q. no longer open for HMI students) this provision applies only to students who have taken the course (and sat the interim examination) before September 1, 2013. Otherwise, their course programme must be adapted. The courses involved are:
192934110 Research methods C&M (approval before March 1, 2013)
201200202 Research in HFM (for HMI) (approval before March 1, 2014)
192165201 Media and technology (approval before March 1, 2013)
192934100 Media psychology (approval before March 1, 2013)
192934160 Ergonomical design (approval before March 1, 2013)
192934090 Human error (approval before March 1, 2014)
192934050 Computer games studies (approval before March 1, 2013)
20130 New Resilience engineering is the designated replacement course for 192934090 Human Error.

7. Regulation 2013-2014 regarding User studies in human media interaction

Occasion: This regulation is necessary because the User studies in human media interaction course is no longer available, and has disappeared from Article 15.1 as an HCI unit, starting 1 September 2013.

Term of validity: until September 1, 2015.

Contents of the regulation: Students who have their course programme approved before 1 March 2014 can take the degree with 201000076 User studies in human media interaction in their programme. Since the course is no longer available this provision applies only to students who have taken the course (and sat the interim examination) before September 1, 2013. Otherwise, their course programme must be adapted.

8. Regulation 2013-2014 regarding Advanced graphics

Occasion: This regulation is necessary because the Advanced graphics course is no longer available, and has disappeared from Article 15.1 as an MT unit, starting 1 September 2013.

Term of validity: until September 1, 2015.

Contents of the regulation: Students who have their course programme approved before 1 March 2014 can take the degree with 192166400 Advanced graphics in their programme. Since the course is no longer available this provision applies only to students who have taken the course (and sat the interim examination) before September 1, 2013. Otherwise, their course programme must be adapted.

1. Regulation 2016-2017 regarding the split of the 10 EC courses into two 5 EC courses

Occasion: Apart from the Human Media Interaction project, all 10 EC courses will be split into two 5 EC parts

Terms of validity: until September 1, 2017

Contents of the regulation: Students who have not completed one or more of the following courses as part of their approved programme need to replace these courses with both of the corresponding new 5 EC courses: 192166420 Machine Learning, 201000078 Brain Computer Interfacing, 192160400 Information Retrieval and 192166370 Conversational Agents

2. Regulation 2016-2017 regarding 192165201 KMT Mediatechnology

Occasion: Name change KMT Mediatechnologie to better reflect the contents of the course

Commented [Dirk31]: het zou mooi zijn als we hier vanaf kunnen, want we kunnen hier niet op aan.

kan er niet een algemene overgangsregel komen; zoiets als studenten die voor 2016 zijn ingeschreven kunnen afstuderen onder de voorwaarden die toen golden - met ook inachtneming van de overgangsregelingen die hen zouden kunnen betreffen zoals opgenomen in de OERs van daarvoor....

Commented [M32]: Dit is niet "new" meer, en bovendien mag Resilience Engineering ook al niet meer door HMI-studenten gevolgd worden!

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Terms of validity: until September 1, 2017

Contents of the regulation: Students who have 192165201 KMT Mediatechnologie as part of their approved course programme and have not yet completed the course need to substitute the course with 2016XXXXX Designing Interactive Experiences.

3. Regulation 2016-2017 regarding Speech and language processing 1 and 2

Occasion: The content of Speech and Language Processing 1 and 2 has been reorganized so that SLP 1 deals with "Language" only, and SLP2 deals with "Speech" only. The courses have been renamed accordingly.

Terms of validity: until September 1, 2017

Contents of the regulation: Students who have included SLP 1 / 2 in their approved course programmes and have not yet completed these courses need to adapt their course programme.

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C. SPECIAL COURSE PROGRAMME APPENDIX TO THE TEACHING AND EXAMINATION REGULATIONS OF THE MASTER'S PROGRAMMES HUMAN MEDIA INTERACTION

The regulations in this appendix are an integral 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. References to numbered articles in this appendix are references to the main text of the teaching and examination regulations.

Article C.1 graduate research programme Human-Centered Interaction Technologies intermediate leading to the diploma

1. Students enrolled for the Human-centered Interaction Technologies (HCIT) programme of the Twente Graduate School (TGS) must complete a 120 EC course programme in Human Media Interaction, and will take the HMI diploma.
2. The HMI course programme of these students must satisfy the following constraints of Article 4.1 of the programme specific Section B of these regulations with the exception of the mandatory Research Topics. The course programme of an HCIT student will not contain the 10 EC Research Topics, but instead contain a 15 EC Research Internship, ~~as part of their Final Project.~~
3. The programme mentor can give the student directions (in accordance with the HCIT Programme Leader) to take ~~courses~~ additional mandatory courses other than those specified in Article 4.1.

Commented [M33]: Zoals het er nu staat lijkt het alsof 15 EC intership BOVENOP final project komt, dat is niet de bedoeling! Final project omvat een research intership van minimaal 3 maanden.

Commented [MvG34R33]: Is dat niet zo dan? Zo had ik de vorige OER ook gelezen. NB. Dit gaat om de HCIT studenten vanuit TGS, dit is een andere groep dan de HCID vanuit EIT.

Article C.2 EIT ICT Labs Master School programme Human Computer Interaction Design leading to the diploma

1. Students enrolled for the Human Computer Interaction and Design (HCID) programme of the EIT ICT Labs Master School take a 60 EC course programme in Human Media Interaction, which is completed to a full 120 EC course programme at one of the other participating institutions.
 - a. First year HCID students in HMI take a 60 EC programme in HMI as outlined in item 2 below. These students continue with a second year specialization At KTH, [UniTN](#), Aalto University, UPS, TU Berlin, or UCL
 - b. Second year HCID students have completed 60 EC (a first year) at Aalto University, KTH, or UPS before they start their 60 EC programme in HMI as outlined in item 3 below.
 - c. Both first and second year HCID students will take a double degree, one of their diplomas is the HMI diploma.
2. The HMI course programme for students with an entry year at the University of Twente need to include the mandatory courses of Article C2.1 supplemented with electives (see art. 4.2 - 4.5) to add up to 60 EC.
3. The HMI course programme for exit year students need to include the mandatory units of Article C2.2.

Commented [MvG35]: Voor zover ik weet is dit nog steeds mogelijk. Aangezien HCID echter buiten het research intership dat de research topics vervangt geen aanvullende eisen stelt aan het programma kunnen we denk ik hiermee volstaan en lijkt het me ook geen probleem om op te nemen.

Article C2.1 Entry year: mandatory courses

Human Media Interaction (30 EC)	Quarter
201000113 User Centred Design of New Media (5 EC)	1
201100126 Human Computer Interaction (5 EC)	3
192166100 Human Media Interaction project (10 EC)	1+2 of 3+4
2016XXXXX Designing Interactive Experiences (5 EC)	?
2016XXXXX Trends in Human-Robot Interaction Research (5 EC)	?

Commented [MvG36]: Was links de UT invulling van de de HCID general programme guidelines (rechts)? En kan ik dus gewoon het rechter programma opnemen? Of moet dit anders?

Commented [M37]: Ja, links was HMI invulling van HCID programma rechts, ik zou dus deze vakken opnemen die er nu staan.

Commented [M38]: Ja

I&E general

I&E UT (24 EC)	Quarter
201500289 Innovation and Entrepreneurship Theory (5 EC) ⁸	1
201500505 Business Development Lab (10 EC)	2
194105070 Information Systems for the Financial Services Industry (5 EC) ⁹	4
Summer School (4 EC)	-

I&E for students with an UT Bachelor's degree in Creative Technology

I&E UT (24 EC)	Quarter
201500065 New Technology Business Development (15 EC)	2
194105070 Information Systems for the Financial Services Industry	4
2015XXXXX Summer School (4 EC)	-

Commented [MvG39]: Vakcode bij Barbara checken

⁸ In 2015-2016 is dit in Osiris geregistreerd als 201400054 Introduction to Entrepreneurship (5 EC) + 191810880 Management of Innovation (5 EC)...

⁹ In 2015-2016 gevolgd door Martijn Bout en Thomas Beelen [-nog vragen naar hun ervaringen](#). Meer vakken van Jos van Hilleegersberg toevoegen als electives? (Zodat er ook echt enige keuze is!)

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Entry year at the University of Twente: mandatory courses

Quarter 1

201000113 User Centred Design of New Media (5 EC)
201500289 Innovation and Entrepreneurship Theory (5 EC)*
Elective (5 EC)

Quarter 2

VERPLICHT

201500505 Business Development Lab (10 EC)*
OR 201500065 New Technology Business Development (15 EC)**
Elective (5 EC)

Quarter 3

201100126 Human Computer Interaction (5 EC)
192166100 Human Media Interaction project part 1 (5 EC)
(Media & Technology / Trends in Human-Robot Interaction)

Quarter 4

192166100 Human Media Interaction project part 2 (5 EC)
194105070 Information Systems for the Financial Services Industry (5 EC)***
Media & Technology / Trends in Human-Robot Interaction

Media & Technology en Trends in Human-Robot Interaction moeten dus in kwartiel 3 en 4. Tenminste als we rekening willen houden met de ex-CreaTe studenten, die kwartiel 2 15 EC aan I&E moeten doen. In elk geval is er in kwartiel 2 geen ruimte voor zowel Media Technology als Trends in Human Computer Interaction!

* Not for students with an UT Bachelor's degree in Creative Technology

** Only for students with an UT Bachelor's degree in Creative Technology

*** or other Business course elective

Commented [M40]: Hier staat hetzelfde als op de vorige pagina, alleen per kwartiel gesorteerd. Kan dus weg.

Commented [MvG41R40]: Terecht, maar heb ze even allebei opgenomen, om te kijken welke de betere/meest overzichtelijke is.

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Article C2.2 Exit year: mandatory courses

Students in the exit year of the HCID programme need to include the following courses:

Quarter 1	Quarter 2	Quarter 3 +4
specialization courses (15 EC)	I &E minor thesis (6 EC) ¹⁰ Research Topics (5 EC) ¹¹ specialization course (5 EC)	Master thesis project (30 EC) ¹²

HMI-vakken (oude namen/codes)	HCID "Intelligent Systems" specialization courses (20 EC)	
2016XXXXX Natural Language Processing 192166310 Speech and Language Processing 1 (5 EC)	Human Signal Processing (10 EC)	
2016XXXXX Speech Processing 192166320 Speech and Language Processing 2 (5 EC)		
191210910 Image Processing and Computer Vision (5 EC) ZIT IN KWARTIEL 3!		
201000078-2016XXXXX Brain Computer Interfacing (15 5 EC)		
2016XXXXX Advanced Research Project in Brain Computer Interfacing (5EC) ZIT NU IN KWARTIEL 3+4!!		
2016XXXXX Introduction to Machine Learning (5EC)		
2016XXXXX Advanced Machine Learning (5EC)		
ook Machine Learning zou hier passen, maar zit ook in kwartiel 3+4!!		
192166100 Human Media Interaction Project (10 EC) ¹³		Human Media Interaction project (10 EC)
192320601 Multi-Agent Systems (5 EC)		Designing Synthetic Environments (10 EC)
192850800 Virtual Reality - Capita Selecta (5 EC)		
2016XXXXX Information Retrieval (5EC)	Information Foraging and Retrieval (10 EC)	
2016XXXXX Advanced Research Project in Information Retrieval 9(5EC) 2160400 Information Retrieval (10 EC)		
201400180 Multisensory Design (5 EC)	Research Methods for Multimodal Interaction (10 EC)	
2 Misschien ook: 201500133 Embodied Interaction (5 EC) ¹⁴		

¹⁰ Deze wordt vanaf 2016-2017 (waarschijnlijk) losgekoppeld van het afstudeerproject en in semester 1 gedaan. Dit is een EIT-brede maatregel.

¹¹ Als we de I&E minor thesis loskoppelen blijft een Research Topics van 5 EC over. Let op: uitzondering op de normale master-eisen; dient vermeld te worden in de OER! Aangezien final project een semester in beslag neemt (30 EC) moet Research Topics wel in q2 gedaan worden. In de praktijk doet niemand dat!

¹² ~~the Final project is to be combined with an industry/company internship of at least three months.~~

¹³ Dit is ook een verplicht entry-vak dus hoort eigenlijk niet thuis in het exit year

Commented [M42]: Moet nog een vakcode voor komen (samen met EIT S&P)

Commented [M45]: Hier zit de Research Internship dus bij in

Commented [MvG46R45]: HCIT is een programma in het kader van de Twente Graduate School. HCID is het EIT ICT labs programma. Naar mijn weten twee verschillende dingen.

Commented [M43]: Deze hoeft kennelijk niet meer, dus kan weg.

Commented [MvG44R43]: Zie vorige opmerking. Ik denk dat hij voor EIT studenten nog wel moet, tenzij we daarvan af willen wijken, maar dat heeft dan gewoon tot gevolg dat ze meer moeten doen tijdens hun Thesis project.

Commented [M47]: Deze moeten nog worden vervangen door de nieuwe namen/codes zoals die in sectie 4 staan.

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<p>? Misschien ook- 2016XXXXX Conversational Agents (5EC) 2016XXXXX Advanced Research Project in Conversational Agents (5EC) 192166370 Conversational Agents (10 EC) maar zit nu in k3+4</p>	
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¹⁴ Deze eerste twee vakken zijn meer Design dan Research. Het nieuwe vak Trends in Human-Robot Interaction zou hier denk ik ook goed passen, maar voor de entry studenten zou dit (waarschijnlijk) in kwartiel 3 of 4 gegeven moeten worden.