

***Programme-specific appendix to the programme  
section of the student charter including the  
education and examination regulations for the  
master of science programme of Health Sciences***

**(art. 7.13 and 7.59 WHW)**

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**Preamble**

1. The rules and regulations in this appendix apply to the full-time master of science programme of Health Sciences.
2. Together with the General Section (TNW160085/vdh), this appendix constitutes the programme part of the Student Charter including the education and examination regulations of the master of sciences programme of Health Sciences of the Faculty Science & Technology.
3. The rules and regulations established by the Board of Examiners of the master of science programme of Health Sciences regarding its duties and responsibilities according to article 7.12b WHW have been included in the 'Board of Examiners' Rules of the Health Sciences master's programme.

Kenmerk: TNW170063/wd/sk/vdh  
Datum: 26 April 2017

## Article 1 Definitions

Terms used in this regulation and common to the law on Higher Education and Research act (WHW) are defined according to the law.

## Article 2 Aims and attainments of the programme

The specific focus of the Health Sciences programme at the University of Twente is on the impact of new (medical) technology on healthcare and the innovation of healthcare processes by using technology and other tools. Health Sciences students must therefore learn about the effects of medical technology and organizational change on the quality and efficiency of healthcare, the multi-dimensionality of health technology assessment, and the optimization of healthcare processes in terms of quality and efficiency.

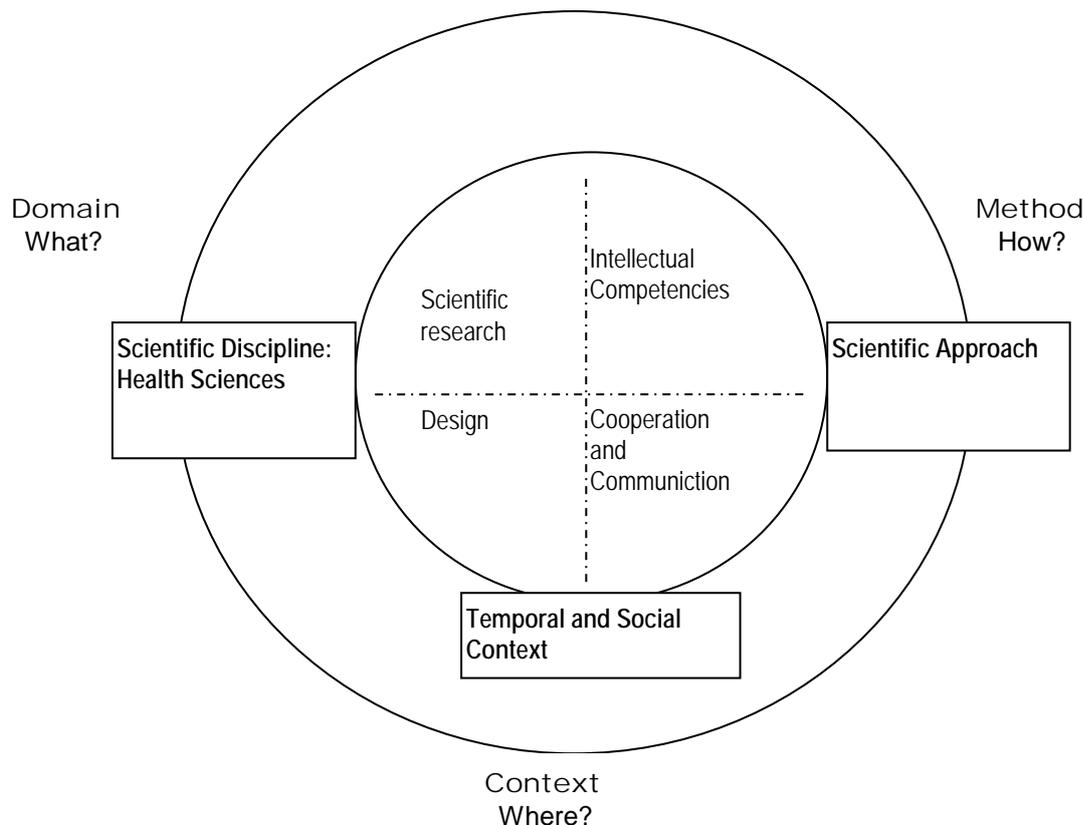
Health scientists are trained to acquire knowledge of and insight into multi-agency, sequenced healthcare (meso-level). The Master's programme devotes a great deal of attention to the international comparison of healthcare systems and to a high level of complexity in knowledge and insights.

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

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

### **Final attainment targets of the programme**

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



### **SD - Scientific Discipline: Health Sciences**

The student can...

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

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

The student can...

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

### **DES - Design**

The student can...

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

### **SA – Scientific Approach**

The student can...

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

### **IC - Intellectual Competencies**

The student can...

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

### **C&C – Cooperation and Communication**

The student can...

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

### **TMP - Temporal and Social Context**

The student can...

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

### **Other programme-specific characteristics**

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

### **Article 3 Admission committee**

1. The Dean of the TNW Faculty establishes an admission committee for the purpose of admitting students to the Master's programme for whom the Master's programme in question is not a follow-on Master's as stipulated in article 7.30a of the Act.

2. The committee, as stated in clause 1, has been authorised by the Executive Board (reference S&C/387.191/lk) to admit or reject applicants.

3. The admission committee consists of a minimum of two members, including:

- a) the Programme director;
- b) the professor or a delegated representative of the Chair where the student wishes to graduate;
- c) in the case of international students, the internationalisation coordinator;
- d) in the case of HBO (university of applied sciences)-students, the HBO-coordinator;

The Programme Director is the chairperson of the admission committee.

If the chairperson of the committee deems it necessary, the programme manager and/or study advisor and/or board of examiners' secretary may be added to the committee.

The admission committee may ask the Board of Examiners for advice.

### **Article 4 Admission to the programme**

1. Direct admission to the programme can be obtained by:

- a) A Health Sciences bachelor's degree from the University of Twente
- b) A Health Science bachelor's degree from another Dutch University

2. All other candidates will be reviewed by the Admission committee

3. If a pre-master programme is required for admission to the master, the content of the pre-master programme will be decided by the admission committee.

### **Article 5 Language of teaching and exams**

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

The report of the Master's project will be written and defended in English. Students are free to make a translation or summary in Dutch once this is necessary for the dissemination of the research results, but the final grade will be based on the original version in English.

## Article 6 The masters' exam

| TRACK   | Q1   | Q2   | Q3 Q4   |
|---|--|--|---|
| Human centered eHealth and healthcare services design (eHealth) | 201600024 (15 EC)<br><b>Methods for Early Health Technology Assessment</b> | 201600027 (5 EC)<br><b>eHealth Development: A Holistic Approach</b>              | 201600036 (30 EC)<br><b>Master Assignment</b> |
|   |  | 201600028 (5 EC)<br><b>Telemedicine and Data Analysis for Monitoring</b>         |   |
|   |  | 201600029 (5 EC)<br><b>Monitoring &amp; Persuasive Coaching</b>                  |   |
| Innovation and Optimization of Healthcare Processes (IOHP)      |  | 201600030 (5 EC)<br><b>Optimizing Healthcare Processes</b>                       | 201600036 (30 EC)<br><b>Master Assignment</b> |
|   |  | 201600025 (5 EC)<br><b>Finance &amp; Healthcare Purchasing</b>                   |   |
|   |  | 201600032 (5 EC)<br><b>Quality Management in Healthcare</b>                      |   |
| Innovation in Public Health                                     |  | 201600033 (5 EC)<br><b>Public Health innovations</b>                             | 201600036 (30 EC)<br><b>Master Assignment</b> |
|   |  | 201600034 (5 EC)<br><b>Public Health: Dynamics in policy, law and regulation</b> |   |
|   |  | 201600026 (5 EC)<br><b>Health Economics: Maximizing Societal Welfare</b>         |   |

Elective options and requirements to elective:

The Master's programme HS offers its students elective choices, by choosing one of three tracks:

- Human centered eHealth and healthcare services design (eHealth)
- Innovation and Optimization of Healthcare Processes (IOHP)
- Innovation in Public Health

The choice for one of the tracks requires the student to follow all subjects of that track. It is not permitted to make a mix from subjects from each track. Subjects from a different track can only be chosen as an additional subject within the individual study programme

The first quartile (Q1) is a shared course.

In quartile 2 (Q2) the student can choose specialization or 'track' courses.

An additional (individual) accent in the programme may result from the student's choice of the subject for his Master's thesis (Q3 and 4).

It is not possible to make a mix of subjects from different tracks.

## Article 7 Transitional regulations

1. If the study programme included in article 6 of this annex is amended, or if one of the articles in the general section or in this programme specific appendix is amended, the programme director will stipulate and publish transitional regulations.
2. The conditions which transitional regulations must meet are stipulated in article 8.4 of the general section.
3. The transitional regulations are published on the programme's Blackboard page.

## **Article 8      Safety**

There are safety requirements for working in a laboratory<sup>1</sup>, hospital or other health institutions. Students are obliged to inform themselves of these rules and adhere to them.

## **Article 9      Sequence of units of study**

In order to start with the Master thesis you are required to have acquired 20 EC of the Master programme.

## **Article 10     Flexible programme**

Notwithstanding the provisions in article 6 of this annex the student can submit a request to the Board of Examiners to follow a flexible programme as referred to in art. 7.3d of the WHW. The Board of Examiners will assess whether the flexible programme, fits the domain of the masters programme, is coherent, and of a sufficient level in light of the aims and attainments of the programme.

## **Article 11     Student counselling**

1. For the purpose of student counselling the programme director appoints a study advisor. The study advisor has a duty to advise and guide individual students regarding all aspects of their studies and academic progress. The study advisor is also tasked to inform and advise the staff of the programme regarding educational policies in relation to individual students. These tasks and duties are defined in the policy document "Leidraad studiebegeleiding Gezondheidswetenschappen" (in Dutch).
2. The study advisor will provide solicited and unsolicited advice to the Board of Examiners regarding decisions that affect individual students. The study advisor and Board of Examiners will ensure that information about the student is kept confidential.

## **Article 12     Commencement and amendments**

These rules and regulations will come into effect on May 1<sup>st</sup> 2017 and replace the rules and regulations of September 1<sup>st</sup> 2015.

Enacted by the Dean of the Faculty of Science and Technology, having obtained recommendations from the Faculty Council and programme committee.

Enschede, 26 April 2017.

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<sup>1</sup> See the 'Health & Safety and Environmental Regulations' ('Arbo- en Milieureglement') on <http://www.tnw.utwente.nl/intra/diensten/amh/> and the TNW laboratory practice group information on [http://www.tnw.utwente.nl/onderwijs\\_overig/practica/](http://www.tnw.utwente.nl/onderwijs_overig/practica/).