Teaching and Examination Regulations

MASTER's Programme Human Movement Sciences: Sport, Exercise & Health (Research)

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Academic year 2014-2015

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Section A: faculty section

1. General provisions

Article 1.1 Applicability of the Regulations

- 1. These Regulations apply to the teaching and examinations for the Master's degree programmes in Human Movement Sciences (hereinafter referred to as: the degree programme) provided by the Faculty of Human Movement Sciences (hereinafter referred to as: the faculty) of VU University Amsterdam.
- 2. These Regulations consist of a faculty section (A) and a programme-specific section (B). Section A contains general provisions and applies to the teaching and examinations of the Master's degree programmes of the Faculty of Human Movement Sciences. Section B contains programme-specific provisions. Together, Sections A and B form the Teaching and Examination Regulations for the programme.
- 3. The Regulations can be declared to apply *mutatis mutandis* to joint degree programmes and units of study, pursuant to Section 7.3c of the WHW, also provided by the faculty.
- 4. These Regulations apply to anyone enrolled in the programme, irrespective of the academic year in which the student was first enrolled in the programme.
- 5. Section B of these Teaching and Examination Regulations contains additional general provisions for the relevant degree programme.

Article 1.2 Definitions

The following definitions are used in these Regulations:

The following definitions are u	
a. EC (European Credit)	an credit with a workload of 28 hours of study;
b. Master's examination:	the final examination of the Master's programme;
c. fraud and plagiarism:	the student's acts or failures to act which aim to make it wholly or partially
	impossible to accurately judge his/her knowledge, understanding and
	skills;
d. joint degree:	a degree awarded by an institution together with one or more institutions
	in the Netherlands or abroad, after the student has completed a degree
	programme (a degree programme, a major or a specific curriculum within
	a degree programme) for which the collaborating institutions are jointly
	responsible;
e. component:	a unit of study of the programme within the meaning of the WHW;
f. period:	a part of a semester;
g. practical exercise:	the participation in a practical training or other educational learning
	activity, aimed at acquiring certain (academic) skills. Examples of
	practical exercises are:
	 researching and writing a thesis
	 carrying out a research assignment
	- taking part in fieldwork or an excursion
	- taking part in another educational learning activity aimed at acquiring
	specific skills or participating in and completing a work placement
h. programme:	the totality and cohesion of the course components, teaching
	activities/methods, contact hours, testing and examination methods
	and recommended literature;
i. thesis:	a component comprising literature research and/or a contribution to
	scientific research, always resulting in a written report;
j. course catalogue:	the guide for the degree programme that provides further details of the
	provisions and other information specific to that programme. The course
	catalogue is available electronically at the VU website.
k. workload:	the workload of the unit of study to which an interim examination applies,
	expressed in terms of credits = EC. (The workload for 1 year (1,680
	hours) is 60 EC credits);
I. academic year:	the period beginning on 1 September and ending on 31 August of the
	following calendar year;
m. examination	an assessment of the student's knowledge, understanding and skills
	relating to a course component. The assessment is expressed in terms of
	a final mark. An examination may consist of one or more partial
	examinations. A resit always covers the same material as the original
	examination;

n. Admissions Board	the committee that assesses, on behalf of the faculty board, whether a candidate meets the requirements for admission to the Master's degree programme of his/her choice. If there is no Admissions Board appointed for the degree programme, the Examinations Board (within the meaning of Section 7.12 of the WHW) functions as Admissions Board;
o. University:	VU University Amsterdam;
p. WHW:	the Dutch Higher Education and Research Act (<i>Wet op het hoger</i> onderwijs en wetenschappelijk onderzoek, WHW);
q. programme charter:	the part of the Student Charter specific to the programme in accordance with Section 7.59 of the WHW.

The other terms have the meanings ascribed to them by the WHW.

2. Previous education and admission

Article 2.1 Previous education

- 1. In order to qualify for enrolment in a Master's degree programme, a Bachelor's degree obtained in academic higher education (WO) is required. The requirements that the Bachelor's degree must meet are specified in Section B.
- 2. In the event that a candidate does not have a Bachelor's degree as referred to in paragraph 1, the Admissions Board of the degree programme will assess suitability for admission to the programme on the basis of the requirements stipulated in Section B.

Article 2.2 Registration and enrolment

- 1. The deadline for registering for the Master's programme is stipulated in Article 3.3 (Section B).
- 2. After registering on time, the student must enrol before 1 September or, if applicable, before 1 February.

Article 2.3 Faculty Admissions Board

The faculty board will establish one or more Admissions Boards.

Article 2.4 Admissions procedure

- 1. The Admissions Board is responsible for admission to the programme.
- 2. With a view to admission to the programme, the Admissions Board assesses the candidate's knowledge, understanding and skills. The Board may request experts within or outside the University to test certain types of knowledge, understanding and skills, in order to supplement written evidence of the programme/programmes the student has already completed. In its assessment, the Board includes proficiency of the language in which the programme will be taught.
- 3. Candidates receive either confirmation of admission or a negative decision. An appeal against a negative decision can be lodged with the Examination Appeals Board within six weeks.

Article 2.5 Refusal or termination of enrolment (unsuitability/judicium abeundi)

- 1. Based on the provisions of Section 7.42a of the WHW, the faculty board or the Examinations Board may, in exceptional cases, ask the Executive Board to terminate or refuse a student's enrolment in a programme, if that student's actions or remarks show that he/she is unsuitable either for practising one or more of the professions for which the programme in question is preparing the student or for the practical preparation for professional practice.
- 2. If a student is suspected of being unsuitable as described in paragraph 1, the Examinations Board or the faculty board will institute an inquiry, of which the student will be informed immediately. The Examinations Board or the faculty board will not issue any recommendation without carefully considering the interests involved and giving the student the opportunity to be heard.

3. Degree programme structure

Article 3.1 Structure of academic year

- 1. Every degree programme will be offered in a year divided into two semesters.
- 2. Every semester consists of three consecutive periods of eight, eight and four weeks.

Article 3.2 Organisation of the programme

- 1. The programme comprises the units of study included in Section B.
- 2. The size of the degree programme in EC is stipulated in Section B.
- 3. A unit of study comprises 6 EC or a multiple thereof.
- 4. By way of exception to paragraph 3, Section B may stipulate that a unit of study comprises 3 EC or a multiple thereof.
- 5. The programme is made up of a compulsory part and a Master's internship thesis or academic work placement and, if applicable, a subject-specific optional component as specified in more detail in the programme-specific section.
- 6. If students must sign up for participation in a unit of study, this will only be possible in the periods designated for that purpose.

4. Examinations

Article 4.1 Signing up for examinations

- 1. Every student must sign up for every examination opportunity. The procedure for signing up is described in the course catalogue and on the faculty website. Participation in the examination may be refused if the student does not sign up or fails to do so in time.
- 2. By way of exception to the provisions of paragraph 1, any student who has correctly signed up for participation in the instruction/classes for a particular course and has been admitted will also be signed up for the subsequent examination, unless the degree programme stipulates a different approach.

Article 4.2 Type of examination

- 1. Section B stipulates the way in which a unit of study is concluded and the form any examination will take.
- 2. At the student's request, the Examinations Board may permit a different form of examination than that stipulated in the course catalogue. If applicable, more detailed regulations on this are included in the Rules and Guidelines for the Examinations Board.
- 3. In the case of a unit of study that is no longer offered, in the academic year following its termination, at least one opportunity will be provided to sit the examination(s) or parts thereof and a transitional arrangement will be included in the programme-specific section for the subsequent period.

Article 4.3 Oral examinations

- 1. Unless otherwise specified for the relevant unit of study in Section B, no more than one student will be examined orally at the same time.
- 2. An oral examination is public unless the Examinations Board or examiner determines otherwise in an exceptional case. A student may submit a reasoned request to the Examinations Board to depart from the public nature of the oral examination. The Examinations Board will balance the interests of the student against the interests of a public examination.
- 3. Unless otherwise specified by the Examinations Board, an oral examination will be taken in the presence of a second examiner.

Article 4.4 Determining and announcing results

- 1. The examiner determines the result (= mark) of a written examination as soon as possible, but at the latest within ten working days. Contrary to the provisions of the first sentence, the marking deadline for papers and for exams in which at least half of the final mark is determined by open-ended questions is no longer than fifteen working days; the marking deadline for theses and final assignments is no longer than twenty working days. The examiner will then immediately ensure that the marks are registered and also ensures that the student is immediately notified of the mark, taking due account of the applicable confidentiality standards.
- 2. The examiner determines the result (= mark) of an oral examination as soon as the examination has finished and informs the student accordingly. The third sentence of the first paragraph applies.
- 3. In the case of alternative forms of oral or written examinations, the Examinations Board determines in advance how and by what deadline the student will be informed of the results.
- 4. Together with the result of an examination, the student's attention will also be drawn to their right to inspect the assessed work and have a post-examination discussion as stipulated in Articles 4.8 and 4.9, as well as his/her option to appeal to the Examinations Appeals Board (Cobex).

5. A student may lodge an appeal against the way in which the result was reached with the Examination Appeals Board within six weeks of the announcement of the result.

Article 4.5 Resits

- 1. There are two opportunities to take examinations in the degree programme in each academic year:
 - a. the first time immediately following the teaching period in which the educational unit is offered;
 - b. the second time during the resit period.
- 2. Paragraph 1 does not apply in the case of a fail for a work placement or a thesis. The options for retaking work placements and theses are detailed in the relevant work placement manual or thesis regulations.
- 3. The most recent mark will apply in the event of a resit.
- 4. The resit for an examination must not take place within ten working days of the announcement of the result of the examination being resat.

Article 4.6 Final marks

- 1. Final marks are given on a scale from 1 to 10 with steps of 0.5.
- 3. By way of exception to paragraph 1, the final mark 5.5 is not awarded. Unrounded marks of 5.5 or higher will be rounded up to 6.0; unrounded marks below 5.5 will be rounded up to 5.0.

Article 4.7 Exemption

- 1. At the written request of the student, the Examinations Board may exempt
 - the student from taking one or more examination components, if the student:
 - a. has passed a course component of a university or higher professional education programme that is equivalent in both content and level; or
 - b. has demonstrated through his/her work and/or professional experience that he/she has sufficient knowledge and skills with regard to the relevant course component.
- 2. This exemption does not apply to the Master's thesis or final assignment.

Article 4.8 Validity period for results

- 1. The validity period of examinations passed and examination exemptions is limited to six years, unless otherwise specified in Section B.
- 2. The validity period of a an interim examination is limited to the academic year in which it was sat or until the end of the course concerned, as stipulated for the relevant units of study in Section B.
- 3. The Examinations Board can extend the limited validity period of an examination or exemption if a student submits a reasoned request to that effect. The Examinations Board can decide to permit the extension of the validity only after the individual making the request has successfully completed a supplementary examination on the relevant subject matter.

Article 4.9 Right of inspection

- 1. For at least twenty working days after the announcement of the results of a written examination, the student can, on request, inspect his/her assessed work, the questions and assignments set, as well as the standards applied for marking.
- 2. The Examinations Board can determine that the inspection or post-examination discussion referred to in paragraph 1 take place exclusively at a specified place and at a specified time. The place and time referred to in the previous clause will be announced at the time of the examination and on VUnet.
- 3. If the student was unable to attend at the place and time referred to in paragraph 2 through no fault of his/her own, an alternative option will be offered.
- 4. If a student intends to appeal against the way in which his/her mark was assessed, he/she can be issued with a copy of the marked work at his/her request.

Article 4.10 Post-examination discussion

- 1. If a collective post-examination discussion has been organised, individual post-examination discussions will be held only if the student has attended the collective discussion or if he/she was unable to attend the collective discussion through no fault of his/her own.
- 2. Students who meet the requirements stipulated in the first paragraph can submit a request for an individual post-examination discussion to the relevant examiner. The discussion will take place at a time and location to be determined by the examiner.

Article 4.11 Master's final examination

- 1. The Examinations Board determines the final examination result and the date on which the student obtains his/her degree after it has been established that the student has passed all the units of study belonging to the programme.
- 2. A diploma can only be awarded after the Executive Board has declared that the student has satisfied all the procedural requirements, including the payment of tuition fees.

Article 4.12 Diplomas and transcripts

- 1. The Examinations Board grants a diploma as proof that the student has passed his/her final examination. The Executive Board sets the model for the diploma. The Examinations Board adds a diploma supplement to the diploma providing information on the nature and content of the degree programme completed. The diploma supplement is drawn up in English and complies with the European format.
- 2. Individuals who have successfully completed one or more components of the programme and who cannot be awarded a diploma as stipulated in paragraph 1 will, on request, receive a statement to be issued by the relevant Examinations Board stating at least the components that have been successfully completed together with the units of study they involved, the number of EC obtained and the way in which the examinations were taken.
- 3. The student can, without needing to provide reasons, request that the Examinations Board not proceed to award a diploma, unless the student him-/herself submitted the request for its issue.

Article 4.13 Fraud and plagiarism

- 1. The provisions of the Rules and Guidelines of the Examinations Board apply in full.
- 2. Electronic detection software programs may be used to detect plagiarism in texts. In submitting a text, the student implicitly consents to the text being entered into the database of the detection program concerned.

5. Study supervision and study progress

Article 5.1 Administration of study progress and academic student counselling

- 1. The faculty board is responsible for the correct registration of the students' study results in VUnet. After the assessment of an examination component has been registered, every student has the right to inspect the result for that component via VUnet and also has a list of the results achieved at his/her disposal in VUnet.
- 2. Enrolled students are eligible for academic student counselling. The types of academic student counselling available are listed in Section B.

Article 5.2 Adaptations for students with a disability

- 1. A student with a disability can submit a written request to the study adviser to qualify for special adaptations with regard to teaching, practical training and examinations. These adaptations will accommodate the student's individual disability as much as possible, but may not alter the quality or degree of difficulty of a course or an examination. In all cases, the student must fulfil the exit qualifications for the degree programme.
- 2. The request referred to in the first paragraph must be accompanied by a recommendation from a student counsellor. The recommendation must be no more than twelve weeks old and must in part be based on a recent statement from a physician or psychologist.
- The faculty board or, on its behalf, the director of education, decides on the adaptations concerning the teaching facilities and logistics. The Examinations Board will rule on requests for adaptations with regard to examinations.
- 4. In the event of a positive decision in response to a request as referred to in paragraph 1, the student will make an appointment with the study adviser to discuss the details of the provisions.
- 5. A request for adaptations will be refused if it would place a disproportionate burden on the organisation or the resources of the faculty or university were it to be upheld.
- 6. If the disability justifies an extension to the time in which the examination may be sat, the Examinations Board will issue a statement testifying to this entitlement to an extension. If a disability justifies other measures being taken, the study adviser can initiate the necessary measures/issue a Disability Provisions Pass. The pass will indicate the provisions to which the individual involved is entitled.
- 7. The statement referred to in paragraph 6 is valid for a maximum period of one year. The period of validity can be extended on the recommendation of a student counsellor.

6. Hardship clause

Article 6.1 Hardship clause

In instances not regulated by the Teaching and Examination Regulations or in the event of demonstrable extreme unreasonableness and unfairness, the faculty board responsible for the degree programme will decide, unless the matter concerned is the responsibility of the Examinations Board.

Section B: Programme-specific section

Programme Human Movement Sciences: Sport, Exercise & Health (Research)

1. General provisions

Article 1.1 Degree programme information

- 1. The programme Human Movement Sciences: Sport, Exercise & Health (Research) CROHO number 60812 is offered on a full-time basis and the language of instruction and examination is English.
- 2. The programme has a workload of 120 EC.
- 3. A unit of study comprises 3 EC or a multiple thereof.

Article 1.2 Intake dates

The programme is offered starting in the first semester of the academic year only (1 September). The intake date mentioned in this paragraph ensure(s) that a programme can be completed within the nominal study duration set for the programme.

2. Programme objectives and exit qualifications

Article 2.1 Programme objective

- 1. The objective of the programme is that, after successful completion, the student:
 - a. has independent, academic thought processes and performance;
 - b. has an independent work attitude;
 - c. is able to tackle multidisciplinary and interdisciplinary questions in human movement sciences and in the clinic;
 - d. is able to conduct translational research, translating fundamental insights into clinical applications and/or clinical experiences into fundamental insights;
 - e. is able to work in a research institute;
 - f. is able to successfully complete a PhD programme.
- 2. The degree programme promotes the academic education of the student, in particular with reference to:
 - a. independent, academic thought processes and performance;
 - b. communicating at an academic level in the English language;
 - c. applying specialist academic knowledge in a wider and/or philosophical and societal context.
- 3. The degree programme focuses attention on the student's personal development, promotes his or her awareness of social responsibility and develops students' skills of expression in the English language.

Article 2.2 Exit qualifications

The final qualifications for the programme are described in appendix I.

3. Further admission requirements

Article 3.1 Admission requirements

- 1. Admission to the Research Master's programme is possible for an individual who can demonstrate that he/she has the following knowledge, understanding and skills at the Bachelor's degree level, obtained at an institution of academic higher education:
 - a. knowledge of the anatomical nomenclature, knowledge and understanding of the conceptual aspects of the structure and function of muscles, knowledge and understanding of form and function of joints;
 - b. knowledge and understanding of the cardiovascular and respiratory system and the human energy systems and basic knowledge of, and skills in, the measurement of energy expenditure;
 - knowledge and understanding of muscle physiology: understanding of the anatomy of skeletal muscle, cross-bridge kinetics, excitation contraction coupling, the basic metabolic changes during exercise (changes in ATP and PCr, glycolysis, oxidative phosphorylation, pH), sarcomere function, twitch, tetanus, length-force, force- and power-velocity, and stimulation frequency-force relations, the size principle of motor unit recruitment, rate coding, fibre type related differences in contractile properties, EMG, electrical stimulation;

- d. basic knowledge and understanding of human psychology (principles on learning, perception, memory and emotion);
- e. basic knowledge and understanding of the neurophysiology of brain processes and neuromuscular control concerning membrane potential, ion channels, ion pumps, between neuron communication, spinal cord circuits and motor units, function of different brain structures, movement control;
- f. knowledge and understanding of mathematics (differential, integral and vector calculus, matrix calculations);
- g. basic knowledge and understanding of biomechanics (translation, rotation, free body diagrams, kinetic energy, work done by forces and moments, power).
- h. basic understanding of, and skills in, statistics (correlation, regression analysis, Student t tests, ANOVA);
- i. understanding of, and skills in, processing digital signals in MATLAB;
- j. knowledge and understanding of, and skills in, common measurement and data processing techniques in human movement sciences (direct and indirect measurement techniques of movement analysis, measuring velocity, acceleration and kinematics, measuring force from force plates and other force transducers, measuring and analysing electromyography).
- 2. The Admissions Board will investigate whether the interested person meets the above admission requirements.
- 3. Eligible are students with a Bachelor's degree or an equivalent degree from a relevant field of study, such as movement sciences, medicine, dentistry, health sciences, medical biology, or biomedical technology.
- 4. In addition to the requirements referred to in paragraph 3.1.1, the Board will also assess requests for admission in terms of the following criteria:
 - a. talent and motivation;

b. interest in and ability to perform research. This requirement will be operationalized as a GPA of 7.5 or more for the Bachelor's, if applicable, a GPA of 7.5 or more for the Pre-master programme, and an 8 or higher for the research project of the Bachelor's.

c. Proficiency in English language should meet the minimal criteria as formulated in Article 3.6.

Article 3.2 Pre-Master's programme

- 1. Students with a Bachelor's degree in a field that corresponds to a sufficient extent with the subject area covered by the Research Master's programme can request admission to the pre-Master's programme.
- 2. The pre-Master's programme comprises 36¹ EC and is made up of the following units of study:
 - a. Wiskunde
 - b. Spierfysiologie
 - c. Verwerken van digitale signalen
 - d. Biomechanica
 - e. Meten van Fysische Grootheden
 - f. Statistiek
- 3. Proof of a successfully completed pre-Master's programme is a prerequisite for admission to the Research Master's programme specified within it in the subsequent academic year.

Article 3.3 Limited programme capacity

The following selection procedure and method apply to programme admissions:

- 1. Admission is limited to a maximum of 30 students per annum.
- 2. Applicants who meet the above quantitative criteria will be invited for a selection interview with the Faculty's board of admission for the Research Master programme. Independent of the quantitative criteria the Admission Board can also admit a student based upon qualitative criteria. During the selection interview the board will assess the candidate's motivation for participation in the Research Master and evaluate the match between the contents and level of previous education, including previously obtained study results, and the requirements for the Research Master. The results of the interview will play a role in the final selection of candidates.
- 3. If more than 30 candidates are found suitable, then the following additional selection criteria will be applied:
 - a. GPA BSc grade;

¹ The maximum number of credits in a pre-master's programme is 30 EC. If a student has to follow the complete premaster's programme of 36 EC to be admitted to the research master's programme, 6 EC have to be paid for separately. The additional costs will be E381,- (E63,50 per credit).

- b. mark(s) for previously completed research project(s);
- c. type of degree;
- d. cultural background and nationality;
- e. the results of the interview with the board of admission.

At least 5 places will be reserved for students with a different background than Human Movement Sciences who meet the criteria, mentioned under 2 and 3, and at least 5 places will be reserved for foreign students or students with a non-western immigrant background. When less than 5 foreign students or students with a non-western immigrant background or less than 5 students with a different background than Human Movement Sciences apply for the Research Master, these places are available for other students.

- 4. Depending on their prior education, admitted students will be selected for either the Human Movement Sciences / Engineering track or the (Para)medical track as defined in article 4. The Human Movement Sciences / Engineering track is meant for students with a Human Movement Science / Engineering background, the (Para)medical track for students with a background in Medicine or Dentistry.
- 5. In case a student does meet the requirements and is admitted but lacks certain skills that are deemed essential for successful completion of the programme, the student is obliged to mitigate these insufficiencies.

Article 3.4 Final deadline for registration

A candidate must submit a request to be admitted to the programme through Studielink before 1 June in the case of Dutch students, before 1 April in the case of foreign students. Under exceptional circumstances, the Examinations Board may consider a request submitted after this closing date.

Article 3.5 Dutch language requirement for Dutch-language premaster programme

1. A student whose previous education was not in a Dutch-speaking country must demonstrate that he/she has sufficient proficiency in Dutch in order to follow academic higher education successfully. This requirement can be met through the successful completion of one of the following examinations:

- a. the state examination for Dutch as a Second Language, examination II (NT2 II);
- b. the CNaVT (Certificate in Dutch as a Foreign Language) examinations PAT and PTHO;
- c. foreign examinations that included Dutch, designated by the VU.

Article 3.6 English language requirement

- 1. The proficiency requirement in English as the language of instruction can be met by the successful completion of one of the following examinations or an equivalent:
 - a. Academic IELTS test: 6.5
 - b. TOEFL paper based test: 580
 - c. TOEFL computer-based test: 237
 - d. TOEFL internet based test: 92-93
 - e. Cambridge Certificate in Advanced English (CAE): A, B or C.
 - f. Cambridge Certificate of Proficiency in English (CPE): A&B
- 2. The following will be deemed to have met the language requirement stated in paragraph 1:
 - a. anyone who has passed all the distinct components of a test referred to in paragraph 1 no longer than two years before commencement of the programme;
 - b. anyone who has met the requirements of the VU University Amsterdam English-language proficiency test, TOEFL ITP, meeting or surpassing the score threshold as stated in paragraph 1;
 - c. anyone who has obtained a Bachelor's degree in an English-speaking country as specified on the relevant pages of VU University Amsterdam's website;
 - d. anyone who has successfully passed the VU premaster assessment.

Article 3.7 Free curriculum

- 1. The student has the option of compiling a curriculum of his/her own choice which deviates from the curricula prescribed by the programme.
- 2. The concrete details of such a curriculum must be approved beforehand by the Examinations Board.
- 3. The free curriculum is put together by the student from the units of study offered by VU University Amsterdam or another institution of higher education, and must at least have the size, breadth and depth of a regular Master's programme.
- 4. A free programme does not give the student the legal status required by the legal profession or judiciary.

4. Curriculum structure

Article 4.1 Composition of programme

- 1. The programme consists of the following components:
 - a. compulsory units of study
 - b. electives
- 2. The level of a course is specialised (400), scientific oriented (500) or highly specialised (600).

Article 4.2 Compulsory units of study

For all courses, the course codes, teaching methods and type of test can be found in the course catalogue.

The compulsory units of study for students of Human Movement Sciences or Engineering are: *Year 1*

Name of course component	EC	Period or semester	Level
Exercise Immunology	6	Period 1	400
Neurosciences	6	Period 2	400
Treating Locomotor Disease	6	Period 3+4	500
Statistics for Experimental Research	3	Period 4	400
Molecular Biology	3	Period 5	400
Advanced methodology	3	Period 5	400
Tissue Engineering and Mechanobiology	3	Period 6	400

The compulsory units of study for (para)medical students are: *Year 1*

Name of course component	EC	Period or semester	Level
Exercise Immunology	6	Period 1	400
Neurosciences	6	Period 2	400
Coordination Dynamics	6	Period 2	400
Digital Signal Processing	6	Period 3	200
Statistics for Experimental Research	3	Period 4	400
Biomechanics	6	Period 4 + 5	100
Molecular Biology	3	Period 5	400
Advanced methodology	3	Period 5	400
Tissue Engineering and Mechanobiology	3	Period 6	400

Year 2 (all students):

Name of course component	EC	Period or semester	Level
Research Internship or	60	Semester 1 + 2	600
or Minor and Major Internships	24/36		

Article 4.3 Electives

The student can take the following electives (30 EC for students of Human Movement Sciences or Engineering, 18 EC for (para)medical students):

Name of course component	EC	Period or semester	Level
Behavioral concepts in HMS	3	Period 1	500
Biophysical concepts in HMS	3	Period 1	500
Energy Flow Models	3	Period 1	500
Maximal Neuromuscular Performance	3	Period 1	400
Rehabilitation: Restoration of mobility	3	Period 1	500
Coordination Dynamics	6	Period 2	400
Perceptual Motor-Learning	6	Period 2	500

Fatigue, Aging and Disuse	6	Period 2	400
Clinical Exercise Physiology	3	Period 3	400
3-D Kinematics	3	Period 4	500
Perception for Action	3	Period 4	500
Electromyography	3	Period 5	400
Mechanical and adaptive Myology	3	Period 5	500
Time Series Analysis	6	Period 5	500
Introduction into the Clinic	6	Period 5	300
Entrepreneurship in HMS	6	Period 5	500
Intermuscular load sharing	3	Period 6	500
Animal Experiments for Human Movement Sciences	6	Period 6	500
Advanced statistics (FALW)*	6		500
Writing research grant proposal (FALW)	6		600
Short Literature Review	6	Semester 1/2	600
Studentbegeleiding	6	Semester 1/2	

* course should be followed during the second year

Approval by the Examination Board is required beforehand for all free choice components which are not listed in the table Electives. The maximum for free choice components which are not listed in the table Electives is 9 EC. By means of an assessment form the student should file a request for approval of components other than those listed above, at least 2 months before the student wishes to enter the final examination. The Examination Board makes a final decision on the request. In the case of a request being filed at a later date, the Examination Board can decide that the exam should be taken at a later date.

Article 4.4 Sequence of examinations

Not applicable.

Article 4.5 Validity period for results

The validity period of examinations and exemptions from examinations is limited to six years.

Article 4.6 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. If it is a joint degree, this will also be stated on the diploma.

5. Transitional and final provisions

Article 5.1 Amendments and periodic review

- 1. Any amendment to the Teaching and Examination Regulations will be adopted by the faculty board after taking advice from the relevant Board of Studies. A copy of the advice will be sent to the authorised representative advisory body.
- 2. An amendment to the Teaching and Examination Regulations requires the approval of the authorised representative advisory body if it concerns components not related to the subjects of Section 7.13, paragraph 2 sub a to g and v, as well as paragraph 4 of the WHW and the requirements for admission to the Master's programme.
- 3. An amendment to the Teaching and Examination Regulations can only pertain to an academic year that is already in progress if this does not demonstrably damage the interests of students.

Article 5.2 Transitional provisions

Notwithstanding the current Teaching and Examination Regulations, the following transitional provisions apply for students who started the programme under a previous set of Teaching and Examination Regulations:

If a subject in the compulsory degree programme is discontinued, a further two opportunities will be offered after the final class to sit the examination in the subject.

Article 5.3 Publication

- 1. The faculty board 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 and deemed to be included in the course catalogue.

Article 5.4 Effective date

These Regulations enter into force with effect from 1 September 2014.

Advice from Board of Studies, Research Master Opleidingscommissie on April 3, 2014

Approved by GV on June 2, 2014

Adopted by the faculty board on July 14, 2014.

Appendix I Final Qualifications

Dublin descriptor: Knowledge and u	Inderstanding
Qualifications	End terms
have demonstrated knowledge	1. Knowledge of and insight into current research questions with
and understanding that is	regard to biological, biomechanical, (neuro) physiological and
founded upon and extends and/or	psychological aspects of healthy and pathological human
enhances that typically	movement, including their historical background
associated with Bachelor's level,	2. The ability to formulate plans, including set-ups, methods,
and that provides a basis or	procedures and analyses, for tackling fundamental and clinical
opportunity for originality in	research questions
developing and/or applying ideas,	3. The ability to perform complex analyses of kinetic, kinematic and
often within a research context	physiological data derived from human movement
	4. The ability to apply and to write or customize computer
	programmes to collect, order and analyze human movement data
	5. Knowledge of advanced research techniques and methods used
B 1 1 1 1 1 1 1 1 1 1 1	in the study of human movement
Dublin descriptor: Applying knowled	
can apply their knowledge and	6. The ability to integrate knowledge from different disciplines (e.g.,
understanding, and problem	biology, biomechanics, functional morphology, physiology,
solving abilities in new or	neuroscience and psychology) relevant for fundamental and clinical
unfamiliar environments within	human movement sciences
broader (or multidisciplinary)	7. The ability to apply knowledge from fundamental and clinical
contexts related to their field of	human movement sciences to frame and answer research questions
study; have the ability to integrate	relevant to this field of study
knowledge and handle complexity	8. The ability to design and conduct experimental research in the
	field of fundamental and clinical human movement sciences
Dublin descriptor: Making judgeme	
can formulate judgements with	9. The ability to evaluate the methods used and the results obtained
incomplete or limited information,	in studies on human movement
but that include reflecting on	10. Insight into the scientific relevance and societal value of
social and ethical responsibilities	research achievements in the field of study
linked to the application of their	11. The ability to reflect on social and ethical issues pertaining to the
knowledge and judgements	dissemination
Dublin descriptor: Communication	
can communicate their	12. The ability to comprehensively and appealingly present results
conclusions, and the knowledge	and interpretations thereof to a specialist and non-specialist
and rationale underpinning these,	audience.
to specialist and non-specialist	13. The ability to write a scientific report in the form of a scientific
audiences clearly and	(peer-reviewed) paper
unambiguously	14. The ability to contribute to scientific discussions about research
	plans and results
	15. The ability to communicate with experts from different disciplines
	and to form links between disciplines
	16. The ability to work in an interdisciplinary and intercultural
	research environment
Dublin descriptor: Learning skills	
have the learning skills to allow	17. The ability to reflect on one's own learning skills and abilities
them to continue to study in a	18. The ability to evaluate one's functioning, and to formulate final
manner that may be largely self-	aims
directed or autonomous	19. Working experience in a research environment and awareness
	of one's own scientific weaknesses and strengths
	20. Working experience in a clinical environment and awareness of
	one's own weaknesses and strengths
	21. The ability to autonomously collect scientific information and to
	analyze and evaluate this information critically

Appendix II Research Internship

The second year of the Research Master's programme includes an internship comprising a total of 60 EC. Alternatively, students can opt for the combination of a minor and a major Internship of 24 and 36 EC, respectively. Students must have completed 2/3 (40 EC) of the first year of the Research Master programme before they can start with their Research Internship. The following rules for the research internships apply:

- a. As a rule, the internship takes no longer than 12 months, including final grading.
- b. The primary supervisor has to be a scientist affiliated with the MOVE Research Institute Amsterdam. That scientist must have demonstrated experience in supervising PhD project(s). Other scientists can be involved in the project but have only an advisory role regarding the formal assessment of the internship.
- c. At the start of the internship the student and supervisor have to invite a second, independent assessor to participate in the assessment. This includes a first intake (within the first week of the internship; this define the formal starting date of the internship), proposal grading (not later than 10 weeks after intake), and final grading (not later than 12 month after intake). Student, supervisor, and second assessor have to sign an application form, which has to be approved by the educational director.
- d. Within the first 10 weeks the internship, the student has to submit a research proposal that contains a tentative title and abstract, a introduction containing objective(s), research question(s), and general approach. The proposal should also enclose the intended method(s) and procedure(s) including a timetable (research plan) as well as expected result(s) and conclusion(s). Furthermore the proposal must include at least 10 annotated references, i.e. a list of papers with (self-written) summary and motivation as to why every paper is considered relevant for the proposed study.

The research proposal will be assessed and commented by the supervisor and by the second assessor. Innovative elements in the proposal will be considered essential for assessment. If grades of the two assessors differ by more than 1 point both proposal and ratings will be forwarded to the educational director in his/her function of mediator.

The evaluation of the proposal also leads to a "go/no-go" decision for the continuation of the internship. In the "no-go" case, a new internship needs to be designed, possibly with another supervising/assessing team; this will also reset schedule.

- e. The grading of the final report should be finalized within the 12-month period after intake. Report assessment is similar to a review process of a scientific paper.^[2] That is, after first submission, the student will receive comments and suggestions from both the supervisor and the assessor. This procedure is laborious for both student and assessors and will require additional time. The first version of the final report should hence be handed in not later than 40 days before the 12-month completion date. The student will get the opportunity of revise the report accordingly. The revised version will be graded. Given proper assessment requires sufficient time, the report has to be submitted to both the supervisor and the second assessor 15 working days before the 12-month completion date. If grades of the two assessors differ by more than 1 point both report and ratings will be forwarded to the educational director in his/her function of mediator. If necessary a third assessor has been consulted.
- f. The following systematics are used to get the final grade (0-10):
 - Grade proposal: 20%
 - Grade final report: 40%
 - Grade for the process: 30%
 - Grade for the end-presentation: 10%
 - All assessments will be based on the relevant Dublin descriptors.
- g. The following files are available on Blackboard: (i) intake-form/contract; (ii) template for the research proposal, (ii) scoring sheet for the research proposal; (iii) template for the final report; (iv) scoring sheet for the final report.

^[2] Student and supervisor are encouraged to submit (parts of) the manuscript to a scientific journal. However this must remain independent of the internship assessment to avoid a conflict of interest of the supervisor. That is, final grading must precede a submission to a scientific journal.