

Teaching and Examination Regulations

MASTER's Degree Programme
Human Movement Sciences: Sport, Exercise & Health;
Research master Human Movement Sciences:
Sport, Exercise & Health;
Musculoskeletal Physiotherapy Sciences.

A. Faculty section

Academic year 2017-2018

Vrije Universiteit Amsterdam
Faculty of Behavioural and Movement Sciences

Section A: Faculty section

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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 (Research) Master's degree programmes:
 - Human Movement Sciences: Sport, Exercise & Health
 - Human Movement Sciences: Sport, Exercise & Health (Research)
 - Musculoskeletal Physiotherapy Sciences(Hereinafter referred to as: the degree programme) provided by the Faculty of Behavioural and Movement Sciences (hereinafter referred to as: the faculty or FGB) of Vrije Universiteit 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 Research Master's degree programmes of the faculty. 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 the 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 may contain additional general provisions for the relevant degree programme.

Article 1.2 Definitions

The following definitions are used in these Regulations:

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|-----------------------------|---|
| a. EC (European Credit) | a credit with a workload of 28 hours of study; |
| b. 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; |
| c. final examination: | the final examination of the Master's programme; |
| 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: <ul style="list-style-type: none">○ researching and writing a thesis○ carrying out a research assignment○ taking part in fieldwork or an excursion○ participating in and completing a work placement; |
| h. programme: | the totality and cohesion of the 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. Master Research Project: | a contribution to scientific research, resulting in a written report; |
| k. SAP-SIcM: | student information system; |
| l. the student / he: | every person studying at Vrije Universiteit Amsterdam; |

m. 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 www.vu.nl/en/study-guide ;
n. workload:	the workload of the unit of study to which an examination applies, expressed in terms of credits (The workload for 1 year (1,680 hours) is 60 EC);
o. academic year:	the period beginning on 1 September and ending on 31 August of the following calendar year;
p. semester:	the first (September – January) or second half (February – August) of the academic year;
q. 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 Examination Board (within the meaning of Section 7.12 of the WHW) functions as Admissions Board;
r. University:	Vrije Universiteit Amsterdam;
s. VUnet:	student and employee web portal;
t. WHW or the Act:	the Dutch Higher Education and Research Act (<i>Wet op het hoger onderwijs en wetenschappelijk onderzoek</i> , 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.

Article 2.3 Faculty Admissions Board

The faculty board will establish one or more Admissions Boards. The faculty board will appoint its members after consultation with the programme directors and Examination Boards of the relevant degree programmes.

Article 2.4 Admissions procedure

1. The Admissions Board is responsible for admission to the programme.
2. In view of 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 knowledge 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 Examination 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 Examination Board or the faculty board will institute an inquiry, of which the student will be informed immediately. The Examination 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. The Executive Board has to give permission for this.
5. The programme is made up of a compulsory part and an individual Master's thesis and/or academic work placement and, if applicable, a subject-specific optional component as specified in more detail in the programme-specific section.
6. If the student wishes to choose a different unit of study than those stipulated in Section B as part of his/her electives, prior permission is required from the Examination Board.

4. Examinations

Article 4.1 Signing up for examinations

1. Every student must sign up to participate in the Master's programme and, if registration is required for participation, every student must sign up for examinations and resits. Signing up may only take place in the designated periods. The procedure for signing up is described in an annex to the Student Charter, which can be found at VUnet.
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 Examination Board may permit a different type 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 Examination 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 Examination Board or examiner determines otherwise in an exceptional case. A student may submit a reasoned request to the Examination Board to depart from the public nature of the oral examination. The Examination Board will balance the interests of the student against the interests of a public examination.
3. Unless otherwise specified by the Examination 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 exams consisting for more than 50% of open end questions is no longer than 15 working days, and for theses 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 possible after the examination 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 Examination 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. A student may also request a re-evaluation from the examiner of the course. A request for re-evaluation does not suspend the term for lodging an appeal.

Article 4.5 Examination opportunities

1. An opportunity will be offered to take a resit in the degree programme once in each academic year.
2. Paragraph 1 does not apply in the case of a fail for a work placement, paper, assignment, practical exercise or a thesis. The options for retaking work placements, papers, assignments, practical exercises and theses are detailed in the relevant manuals or regulations.
3. The most recent mark will apply in the event of a resit. A retake is allowed for both passed and failed units of study.
4. The student will be assessed as soon as his presence at the resit has been established.
5. The resit for an examination must not take place within ten working days of the announcement of the result of the examination in question.

Article 4.6 Marks

1. Marks are given on a scale from 1 to 10 with no more than one decimal point.
2. The final marks are given in whole or half points.
3. Final marks between 5 and 6 will be rounded off to whole numbers: between 0.1 - 0.4 rounded down; between 0.5 - 0.9 rounded up. To pass a course, a 6 or higher is required
4. Final grades, potentially composed of multiple sub-grades, with a rough score higher or equal to 4.75 and lower than 5.5 will be rounded up or down to 5.0. Final grades with a rough score higher than or equal to 5.5 and lower than 6.25 will be rounded up or down to 6.0
5. For assessment the grades have the following meaning:
 - 10 Excellent
 - 9 Very Good
 - 8 Good
 - 7 Satisfactory
 - 6 Sufficient

- 5 Below sufficient
 - 4 Insufficient
 - 3 Very Insufficient
 - 2 Poor
 - 1 Very Poor
5. Symbols may be used rather than numbers (e.g. P-F = Pass–Fail)

Article 4.7 Exemption

1. At the written request of the student, the Examination Board may exempt the student from taking one or more examination components, if the student:
 - a) has passed a component that is at least 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 component.
2. The Examination Board will make a decision within twenty working days of receiving the written request.
3. This exemption does not apply to the Master's thesis or the Master Research Projects.

Article 4.8 Validity period for results

1. The validity period of examinations passed and examination exemptions is unlimited unless otherwise specified in Section B.
2. The validity period of a partial examination is limited to the academic year in which it was sat unless otherwise specified in Section B
3. When in part B a validity period of results is limited, the validity period for successfully completed examinations will be extended in case of special circumstances mentioned in article 7.51, second member WHW, with at least the term from the received financial support based on article 7.51, first member WHW.

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 Examination Board can determine that the inspection or post-examination debriefing 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 the digital learning environment (Canvas) site for the course.
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 (debriefing)

1. If a collective debriefing discussion has been organised, individual debriefings will be held only if the student has attended the collective debriefing or if he/she was unable to attend the collective debriefing 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 debriefing to the relevant examiner. The debriefing will take place at a time and location to be determined by the examiner.

Article 4.11 Master's final examination

1. The Examination 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 Examination 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 Examination 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 Examination 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 Examination Board does 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 for the Examination 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 SAP/SLcM. After the assessment of an examination component has been registered, every student has the right to inspect the result for that component in SAP/SLcM and also has a list of the results achieved at his/her disposal via 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, at the moment of submission to VUnet, or at a later instance, submit a 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 statement from a doctor or psychologist. If possible, an estimate should be given of the potential impact on the student's study progress. In case of a chronic disability a single (one time) request suffices.
3. In the case of dyslexia, the statement must come from a BIG, NIP or NVO registered testing agency.
4. The faculty board or, on its behalf, the College/Graduate School director or the programme director decides on the adaptations concerning the teaching facilities and logistics. The Examination Board will rule on requests for adaptations with regard to examinations.
5. 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.
6. A request for adaptations will be refused if it would place a disproportionate burden on the organization or the resources of the faculty or university were it to be upheld.
7. If the disability justifies an extension to the time in which the examination may be sat, the Examination Board will issue a statement testifying to this entitlement to an extension. If other provisions are required due to the specific nature of a disability, then the study adviser may initiate appropriate actions.
8. The statement referred to in member 7 may specify a limited validity of the special adaptations.

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 Examination Board.

7. Transitional and final provisions

Article 7.1 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 7.2 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:

1. 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.
2. If a subject is not taught in a given academic year, at least one opportunity to sit an interim examination in that subject will be offered during the course of that year.

Article 7.3 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 7.4 Effective date

These Regulations enter into force with effect from 1 September 2017

Thus drawn up by the faculty board Behavioural and Movement Sciences on 29 June 2017

Advice from Board of Studies,
Human Movement Sciences, date 23 May 2017
Research masters programmes FGB, date 24 April 2017

Advice from Examination Board
Psychology, date 30 May 2017
Human Movement Sciences, date 30 May 2017

Approved by authorised representative advisory body on 20 June 2017

Section B: Programme-specific section

Programme Human Movement Sciences: Sport, Exercise & Health

1. General provisions

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5. Transitional and final provisions

- Article 5.1 Amendments and periodic review
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APPENDICES

- Appendix I Final Qualifications Msc. Programme
- Appendix II Master's Research Project

1. General provisions

Article 1.1 Degree programme information

1. The programme Human Movement Sciences: Sport, Exercise & Health CROHO number 66950 is offered on a full-time basis and the language of instruction and examination is English.
2. The programme has a workload of 60 EC.
3. A unit of study comprises 6 EC or a multiple thereof. Exceptions are:
 - Clinical Exercise Physiology (3 EC)
 - Exercise and Health (3 EC)
 - Maximal Neuromuscular Performance (3 EC)
 - Energy Flow Models (3 EC)
 - Talent Identification and Development (3 EC)
 - 3D-kinematics (3 EC)
 - Perception for action (3 EC)
 - Sport and Performance Dietetics (3 EC)
 - Electromyography (3 EC)
 - Special topics in Sports Engineering(3 EC)

Article 1.2 Intake date

The programme is only offered starting in the first semester of the academic year (1 September). The intake date mentioned in this paragraph ensures 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

The programme aims to achieve the following:

- a. to prepare the student to practice professionally in the field of Human Movement Sciences;
- b. to teach the student specialized knowledge, skills and understanding in the field of Human Movement Sciences and dependent on their specialization mainly focusing on sport or health; and
- c. to teach the student communicating at an academic level in the English language;
- d. to prepare the student for academic work in the field of Human Movement Sciences and dependent on their specialization mainly focusing on sport or health;
- e. to promote the academic education of the student, in particular with reference to:
 - (1) independent, academic thought processes and performance;
 - (2) applying specialist academic knowledge in a wider and/or philosophical and societal context;
- f. to stimulate the attention on the student's personal development, promote his or her awareness of social responsibility.

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 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;
 - c. knowledge and understanding of muscle physiology: understanding of the anatomy of skeletal muscle, sarcomere function, twitch, tetanus, length-force, force- and power-velocity, and stimulation frequency-force relations, the size principle of motor unit recruitment, rate coding, EMG, electrical stimulation, fibre type related differences in contractile properties, cross-bridge kinetics, excitation contraction coupling, the basic metabolic changes during exercise (changes in ATP and PCr, glycolysis, oxidative phosphorylation, pH);
 - d. basic knowledge and understanding of human psychology (principles on learning, perception, memory and emotion);
 - e. knowledge and understanding of mathematics (differential, integral and vector calculus, matrix calculations);
 - f. basic understanding of and skills in statistics (correlation, regression analysis, Student's t-tests, ANOVA);
 - g. understanding of and skills in processing digital signals in MATLAB;
 - h. knowledge and understanding of and skills in common measurement and data processing techniques related to human movement sciences.
2. Responsibility for admitting students to the degree programme, including the distinct programmes, has been delegated to the Admissions Board for the degree programme by the Faculty Board.
 3. Students will be admitted to the degree programme if they hold a certificate of admission, issued by or on behalf of the Faculty Board because they have demonstrated that they meet the knowledge, understanding and skills requirements reflecting the final level of attainment in an academic Bachelor's degree programme, i.e.:
 - a. knowledge, understanding and skills in the subject Human Movement Sciences;
 - b. knowledge, understanding and skills in the subject Health Sciences, with major Movement Sciences.
 4. Holders of a Bachelor's degree certificate in Human Movement Sciences from Vrije Universiteit Amsterdam will be deemed to have the knowledge and skills referred to in the first paragraph and will be admitted to the programme on that basis.
 5. Applicants who have successfully completed the Premaster's programme designated for this Master's programme and have received a certificate of admission as proof thereof, can also be admitted.
 6. The certificate of admission relates exclusively to the academic year following the academic year in which the application for the certificate was submitted, unless the Faculty Board decides otherwise.

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 Master's programme can request admission to the pre-Master's programme.
2. The standard pre-Master's programme comprises 30 EC and consists of the following units of study:
 - a. Wiskunde
 - b. Biomechanica
 - c. Verwerken van digitale signalen
 - d. Measuring Movement
 - e. Statistiek

Students who wish to specialize in Sports Psychology with a Bachelor's degree in Psychology do not have to follow a fixed pre-Master's programme but any deficiency in physiology should have been eliminated before the start of the programme.

This can be achieved for example by following the unit of study 'Functionele Anatomie' (6 EC) from the Ba Human Movement Sciences, or 'Humane Anatomie en Fysiologie' (6 EC) at the Faculty of Earth and Life Sciences.

3. Proof of a successfully completed pre-Master's programme serves as proof of admission to the Master's programme specified within the subsequent academic year.

Article 3.3 Final deadline for registration

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

Article 3.4 English language requirement for English-language Master's programmes

1. International applicants are required to pass an English language proficiency test. 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. Exemption is granted from the examination in English referred to in the first paragraph to students who, within two years of the start of the program:
 - met the requirements of the VU test in English language proficiency TOEFL ITP, with at least the scores specified in paragraph 1, or
 - had previous education in secondary or tertiary education in an English-speaking country as listed on the VU website, or
 - have an English-language 'international baccalaureate' diploma, or
 - have an English-language diploma of a Bachelor or Master degree programme which has been accredited by the NVAO in the Netherlands.

4. Curriculum structure:

Article 4.1 Composition of programme:

1. The programme consists of the following components:
 - a. compulsory units of study (30 EC)
 - b. electives inside master programme (21-30 EC)
 - c. electives outside master programme (max. 9 EC)
2. The level of an unit of study is specialised (400), science oriented (500) or highly specialised (600).

Article 4.2 Compulsory units of study

The unit of study code, teaching method and type of test can be found in the online study guide www.vu.nl/en/study-guide.

Assessments of all written assignments may take into account the quality of the student's written language

The compulsory units of study are:

Name of unit of study	EC	Period or semester	Level
Concepts in HMS	6	Period 1	500
Research Project*	24	Semester 2	600

* for more information refer to Appendix II

Article 4.3 Electives inside the programme

When a student follows at least 21 EC of one of the following tracks, the track name and description will be mentioned on the student Master certificate supplement. However a student can also choose to do a free track. The free track must have a total of 21 EC of units of study from the Master Human Movement Sciences. A second track will only be mentioned on the student's Master certificate supplement when a student:

- Completed all compulsory units of study;
- Met the criteria for two tracks mentioned below;
- Performed a second 24 EC Research Project.

Track: Rehabilitation (21 EC)

Name of unit of study	EC	Period or semester	Level
Topics in Rehabilitation	6	Period 1	500
Coordination Dynamics: Principles and Applications	6	Period 2	400
Applied Biomechanics	6	Period 2	500
Clinical Exercise Physiology*	3	Period 3	400
Exercise and Health*	3	Period 3	400

* In period 3 the student chooses at least one out two units of study.

Track: Biophysics in Sport (21 EC)

Name of unit of study	EC	Period or semester	Level
Maximal Neuromuscular Performance	3	Period 1	400
Energy Flow Models	3	Period 1	500
Training, Aging and Disuse	6	Period 2	400
Applied Biomechanics	6	Period 2	500
Clinical Exercise Physiology	3	Period 3	400

Track: Sport Psychology (21 EC)

Name of unit of study	EC	Period or semester	Level
Current issues in Sport and Exercise Psychology	6	Period 1	500
Perceptual Motor Learning	6	Period 2	500
Sport Psychology: from Evidence to Application	6	Period 2	500
Talent Identification and Development	3	Period 3	400

Track: High Performance Coaching (21 EC)

(A maximum of 20 students can be admitted per year; selection based on letter of motivation.)

Name of unit of study	EC	Period or semester	Level
Current issues in Sport and Exercise Psychology	6	Period 1	500
Applied Biomechanics	6	Period 2	500
Perceptual Motor learning*	6	Period 2	500
Sport Psychology: from Evidence to Application*	6	Period 2	500
Talent Identification and Development*	3	Period 3	400
Clinical Exercise Physiology*	3	Period 3	400

* In period 2 and in period 3 the student chooses at least one out of two units of study

Optional courses for all students:

Name of unit of study	EC	Period or semester	Level
3D-kinematics	3	Period 4	500
Perception for action	3	Period 4	500
Sport and Performance Dietics	3	Period 4	400
Electromyography	3	Period 5	400
Special topics in Sports Engineering	3	Period 5	500
Neuromechanics	3	Period 5	400
Entrepreneurship in HMS	6	Period 6	400

Article 4.4 Electives outside the programme

The student can choose 6 EC in the elective part of the program. The student is allowed to do extra units of study from the table above or choose one of the units of study in the table below. He can also choose as electives master units of study from other programmes as long as they widen or deepen the students program/ at least have the scope, breadth and depth of a regular Master's program.

Name of units of study	EC	Period or semester	Level
Practical Internship	6	Semester 1 + 2	N.A.
Docentenopleiding*	6 (30)	Semester 1 + 2	N.A.
Short Literature Review	6	N.A.	N.A.
Extension Master Research Project**	6	N.A.	600

* The unit of study Docentenopleiding is taught in Dutch and comprises 30 EC, of which 6 EC can be used in the elective part of the programme.

** The extension of the Master Research Project has to be approved by the Examination Board and supervisor before the start of the internship.

Approval by the Examination Board will be required for the proposed study components. This approval can only be obtained through the submission of an Approval Form, available on VUnet, at least 2 months before the student wishes to enter the final examination. In the case of a request being filed at a later date, the Examination Board can decide that the final examination should be taken at a later date.

Article 4.5 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.

Article 4.6 Validity period for results

1. The validity period for examinations and exemptions from examinations is limited to a period of 6 years.
2. De geldigheidsduur van deelresultaten en vrijstellingen voor deeltentamens is beperkt, en zijn uitsluitend geldig in het collegejaar waarin het deelresultaat of vrijstelling voor deelresultaat is behaald. De geldigheidsduur van deelresultaten voor werkstukken en practica is niet beperkt, tenzij dit in de betreffende onderwijshandleiding anders is geregeld.
3. The Examination Board can extend the limited validity period of an examination or exemption if a student submits a reasoned request to that effect. The Examination 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.

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 authorized representative advisory body.
2. An amendment to the Teaching and Examination Regulations requires the approval of the authorized representative advisory body if it concerns components not related to the subjects of Section 7.13, paragraph 2 sub a to g and v of the WHW and the requirements for admission to the Master's programme and insofar it doesn't concern the guidelines of the Executive Board
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

Not applicable

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.

Article 5.4 Effective date

These Regulations enter into force with effect from September 1, 2017

Adopted by the Faculty Board on June 29, 2017

Advice from Board of Studies, Human Movement Sciences on May 23, 2017

Advice from Examination Board on May 30, 2017

Approved by the GV on June 20, 2017

Appendix I Final Qualifications MSc. Programme:

Dublin-descriptor Knowledge and understanding:	
Provides a basis or opportunity for originality in developing or applying ideas often in a research context	<ol style="list-style-type: none"> 1. Has knowledge of the current theories and insight in the present research questions in the fields of Sport, Exercise and Health. 2. Can collect scientific information efficiently and is able to correctly interpret knowledge concerning specific topics in the fields of Sport, Exercise and Health. 3. Can develop a research plan in which design, execution and analysis of the study are properly described. 4. Has knowledge of advanced research methods and techniques relevant for the field
Dublin-descriptor: Applying knowledge and understanding:	
[through] problem solving abilities [applied] in new or unfamiliar environments within broader (or multidisciplinary) contexts	<ol style="list-style-type: none"> 5. Has mastered experimental and analysis methods to plan, set-up and execute applied research, particularly in the fields of sport, exercise and health. 6. Can apply HMS related knowledge on societal questions, particularly regarding sport, exercise and health. 7. Can lay links between data coming from several fields of research. 8. Can think interdisciplinary, has insight in relevant disciplines
Dublin-descriptor: Making judgements:	
[demonstrates] the ability to integrate knowledge and handle complexity, formulate judgements with incomplete data	<ol style="list-style-type: none"> 9. Can critically evaluate methods and results of research. 10. Has insight in the scientific and social relevance of the current research in the fields of sport, exercise and health.
Dublin-descriptor: Communication:	
[of] their conclusions and the underpinning knowledge and rationale (restricted scope) to specialist and non-specialist audiences (monologue) ..	<ol style="list-style-type: none"> 11. Can transmit scientific knowledge orally, using modern presentation techniques and coordinated on the public concerned. 12. Can present results of research in writing at the level of a professional journal and uses references correctly. 13. Is able to contribute content wise to scientific discussions concerning the planning of research and interpreting the results. 14. Is able to communicate at level with experts from several fields hereby contributing to linking these fields. 15. Can cooperate in interdisciplinary composed teams.
Dublin-descriptor: Learning skills:	
study in a manner that may be largely self-directed or autonomous	<ol style="list-style-type: none"> 16. Is able to reflect on obtained knowledge and skills. 17. Is capable of evaluating its own functioning and setting own learning aims, both by self-reflection and in conversation with others. 18. Has gained practical experience in doing research during a scientific research project and knows own strengths and weaknesses. 19. Can independently acquire information on the basis of scientific and professional literature and analyse and critically evaluate this information. 20. Has the skill to learn new knowledge and skills independently in a future situation within the framework of lifelong learning.

Appendix II Master Research Project

The Master Research Project should abide to the following rules:

- All Master Research Projects, also those carried out outside the faculty, must be carried out under supervision of an academic staff member of the faculty. This supervisor has the final responsibility for the Research Project.
- Within two months after starting the Research Project, a research proposal must be approved by the supervisor.
- The Master Research Project thesis consists of a research report containing extensive descriptions of methods and results.
- Students have to attend at least 12 seminars organized at the faculty, in which students present their Research Project. Students can start attending the seminars during the last Bachelor year or the Pre-master's programme of the Faculty of Behavioural and Movement Sciences.
- If a student fails to attend 12 seminars, an additional assignment will be given by the coordinator of the seminars

Section B Research master Human Movement Sciences: Programme-specific section

1. General provisions

- Article 1.1 Definitions
- Article 1.2 Degree programme information
- Article 1.3 Intake dates

2. Programme objectives and exit qualifications

- Article 2.1 Programme objective
- Article 2.2 Exit qualifications

3. Further admission requirements

- Article 3.1 Admission requirements
- Article 3.2 Pre-Master's programme
- Article 3.3 Limited programme capacity
- Article 3.4 Final deadline for registration
- Article 3.5 English language requirement for English-language Master's programmes

4. Curriculum structure

- Article 4.1 Composition of programme
- Article 4.2 Compulsory units of study
- Article 4.3 Electives
- Article 4.4 Validity period for results
- Article 4.5 Degree
- Article 4.6 Validity period for results

5. Transitional and final provisions

- Article 5.1 Amendments and periodic review
- Article 5.2 Transitional provisions
- Article 5.3 Publication
- Article 5.4 Effective date

Appendix I Final Qualifications

Appendix II Research Project

Section B: Programme-specific section

1. General provisions

Article 1.1 Definitions

See part A.

Article 1.2 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 6 EC or a multiple thereof. Exemptions are:
 - Molecular Cell Biology (3 EC)
 - Tissue Engineering and Mechanobiology (3 EC)
 - Scientific Communication (3 EC)
 - Energy Flow Models (3 EC)
 - Maximal Neuromuscular Performance (3 EC)
 - Clinical Exercise Physiology (3 EC)
 - 3-D Kinematics (3 EC)
 - Perception for Action (3 EC)
 - Mechanical and adaptive Myology (3 EC)
 - Electromyography (3 EC)
 - Neuromechanics (3 EC)
 - Imaging (master MPS, 3 EC)
 - Histology (master MPS , 3EC)

Article 1.2 Intake date

The programme is only offered starting in the first semester of the academic year (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 objectives

1. The objective of the programme is that, after successful completion, the student:
 - a. shows independent, academic skills and performance;
 - b. has an independent work attitude to do research;
 - c. is able to tackle multidisciplinary and interdisciplinary questions in human movement sciences and in applied settings;
 - d. is able to conduct translational research, translating fundamental insights into clinical and/ or sports related applications and vice versa;
2. The degree programme promotes the academic education of the student, in particular with reference to:
 - a. independent, academic skills and performance and to do research independently;
 - 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 on the student's personal development, promotes his or her awareness of social responsibility and scientific integrity 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;
 - c. 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's 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.
 - c. a GPA of 7.5 or more for the Bachelor's programme and if applicable an 8 or higher for the research project of the Bachelor's. If applicable, a GPA of 7.5 or more for the premaster's programme.
 - d. Proficiency in English language should meet the minimal criteria as formulated in Article 3.5.

Article 3.2 Premaster'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 premaster's programme.
2. The premaster's programme comprises maximal 30 EC and consists of the following units of study:
 - a. Wiskunde
 - b. Verwerken van digitale signalen
 - c. Biomechanica
 - d. Measuring Movement
 - e. Statistiek
3. Proof of a successfully completed premaster'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:

2. Admission is limited to a maximum of 30 students per annum.
3. 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.
4. If more than 30 candidates are found suitable, then the following additional selection criteria will be applied:
 - a. GPA BSc grade;
 - 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.

In case a student does meet the entry 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 and before 1 April in the case of foreign students. Under exceptional circumstances, the Admission Board may consider a request submitted after this closing date.

Article 3.5 English language requirement for English-language Master's programmes

1. International applicants are required to pass an English language proficiency test. 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:
 - g. Academic IELTS test: 6.5
 - h. TOEFL paper-based test: 580
 - i. TOEFL computer-based test: 237
 - j. TOEFL internet-based test: 92-93
 - k. Cambridge Certificate in Advanced English (CAE): A, B&C
 - l. Cambridge Certificate of Proficiency in English (CPE): A&B

2. Exemption is granted from the examination in English referred to in the first paragraph to students who, within two years of the start of the program:
 - a. met the requirements of Vrije Universiteit Amsterdam English-language proficiency test, TOEFL ITP, meeting or surpassing the score threshold as stated in paragraph 1 or;
 - b. have completed a previous education in secondary or tertiary education in an English-speaking country as listed on the VU website, or;
 - c. have an English-language 'international baccalaureate' diploma.
 - d. have an English-language diploma of a Bachelor or Master degree programme which has been accredited by the NVAO in the Netherlands.

4. Curriculum structure:

Article 4.1 Composition of programme:

1. The programme consists of the following components:
 - a. compulsory units of study (93 EC)
 - b. electives inside the programme (min.18 EC)
 - c. electives outside the programme (max. 9 EC)
2. The level of a unit of study is specialised (400), science oriented (500) or highly specialised (600).

Article 4.2 Compulsory units of study

The unit of study code, teaching method and type of test can be found in the online study guide www.vu.nl/en/study-guide.

Assessments of all written assignments may take into account the quality of the student's written language

The compulsory units of study are:

Year 1:

Name of unit of study	EC	Period or semester	Level
Exercise and Clinical Immunology	6	Period 1	400
Neurosciences	6	Period 2	400
Treating Locomotor Disease	6	Period 3 + 4	500
Molecular Cell Biology	3	Period 4	400
Advanced Methodology	6	Period 5	400
Tissue Engineering and Mechanobiology	3	Period 6	400
Scientific Communication	3	Period 6	400

Year 2:

Name of unit of study	EC	Period or semester	Level
Research Project RM* or Minor and Major projects*	60 24/36	Semester 1 + 2	600

* see Appendix II

Article 4.3 Electives

The student can take the following electives:

Name of unit of study	EC	Period or semester	Level
Concepts in HMS	6	Period 1	500
Energy Flow Models	3	Period 1	500
Maximal Neuromuscular Performance	3	Period 1	400
Topics in Rehabilitation	6	Period 1	500
Coordination Dynamics	6	Period 2	400
Perceptual Motor-Learning	6	Period 2	500

Training, Aging and Disuse	6	Period 2	400
Applied Biomechanics	6	Period 2	500
Clinical Exercise Physiology	3	Period 3	400
3-D Kinematics	3	Period 4	500
Perception for Action	3	Period 4	500
Mechanical and adaptive Myology	3	Period 4	500
Electromyography	3	Period 5	400
Time Series Analysis	6	Period 5	500
Entrepreneurship in HMS	6	Period 5	500
Neuromechanics	3	Period 5	500
Imaging (master MPS)*	3	Period 4	400
Histology (master MPS)*	3	Period 5	400
Advanced statistics (FALW)**	6		500
Writing research grant proposal (FALW)	6		600

* only in case capacity allows it

** unit of study 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 Approval form available on VUnet the student should file a request for approval of components other than those listed above.,

Article 4.4 Validity period for results

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

Article 4.5 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.

Article 4.6 Validity period for results

1. The validity period for examinations and exemptions from examinations is limited to a period of 6 years.
2. De geldigheidsduur van deelresultaten en vrijstellingen voor deeltentamens is beperkt, en zijn uitsluitend geldig in het collegejaar waarin het deelresultaat of vrijstelling voor deelresultaat is behaald. De geldigheidsduur van deelresultaten voor werkstukken en practica is niet beperkt, tenzij dit in de betreffende onderwijshandleiding anders is geregeld.
3. The Examination Board can extend the limited validity period of an examination or exemption if a student submits a reasoned request to that effect. The Examination 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.

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 authorized representative advisory body.
2. An amendment to the Teaching and Examination Regulations requires the approval of the authorized representative advisory body if it concerns components not related to the subjects of Section 7.13, paragraph 2 sub a to g and v of the WHW and the requirements for admission to the Master's programme and insofar it doesn't concern the guidelines of the Executive Board

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](#)

Not applicable.

[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 VUnet.

[Article 5.4 Effective date](#)

These Regulations enter into force with effect from September 1, 2017

Adopted by the Faculty Board on June 29, 2017

Advice from Board of Studies, Research Master Program Committee on May 21, 2017

Advice from the Examination committee on May 23, 2017

Approved by the representative advisory body: on June 20, 2017

Appendix I Final Qualifications

Intended learning outcomes of the Research Master
<i>1. Knowledge of and insight into current research questions with regard to biological, biomechanical, (neuro)physiological and psychological aspects of healthy and pathological human movement, including their historical background</i>
<i>2. The ability to formulate plans, including set-ups, methods, procedures and analyses, for tackling research questions</i>
<i>3. The ability to perform complex analyses of kinetic, kinematic and physiological data derived from human movement</i>
<i>4. The ability to apply and to write or customize computer programs to collect, order and analyse human movement data</i>
<i>5. Knowledge of advanced research techniques and methods used in the study of human movement</i>
<i>6. The ability to integrate knowledge from different disciplines (e.g., biology, biomechanics, functional morphology, physiology, neuroscience and psychology) relevant to human movement sciences</i>
<i>7. The ability to apply knowledge of human movement sciences to frame and answer research questions relevant to this field of study</i>
<i>8. The ability to design and conduct experimental research in the field of human movement sciences</i>
<i>9. The ability to evaluate the methods used and the results obtained in studies on human movement</i>
<i>10. Insight into the scientific relevance and societal value of research achievements in the field of study</i>
<i>11. The ability to reflect on social and ethical issues pertaining to the dissemination and application of research results</i>
<i>12. The ability to comprehensively and appealingly present results and interpretations thereof to a specialist and non-specialist audience</i>
<i>13. The ability to write a scientific report in the form of a scientific (peer-reviewed) paper</i>
<i>14. The ability to contribute to scientific discussions about research plans and results</i>
<i>15. The ability to communicate with experts from different disciplines and to form links between disciplines</i>
<i>16. The ability to work in an interdisciplinary and intercultural research environment</i>
<i>17. The ability to reflect on one's own learning skills and abilities</i>
<i>18. The ability to evaluate one's functioning, and to formulate one's own personal aims</i>
<i>19. Working experience in a research environment and awareness of one's own scientific weaknesses and strengths</i>
<i>20. The ability to autonomously collect scientific information and to analyse and evaluate this information critically</i>
<i>21. The ability to acquire new skills and knowledge</i>

Appendix II Research Project RM

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

- a. As a rule, the project takes no longer than 12 months, including final grading.
- b. The primary supervisor has to be a scientist affiliated with the department of Human Movement Sciences. 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 project.
- c. At the start of the project 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 project; this defines the formal starting date of the project), 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 of the project, the student has to submit a research proposal that contains a tentative title and abstract, an 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 project. In the “no-go” case, a new project 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. 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 will be 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. Students have to attend at least 5 colloquia and 5 -seminars organized at the faculty per academic year, with the one in August being mandatory in which students present

^[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.

their Research Project. Students can start attending the seminars during the last Bachelor year or the Premaster's programme of the Faculty of Behavioural and Movement Sciences.

- h. The following files are available on the electronic learning environment (Canvas) (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.

Section B: Master Musculoskeletal Physiotherapy Sciences: Programme-specific section

1. General provisions

- Article 1.1 Definitions
- Article 1.2 Degree programme information
- Article 1.3 Intake dates

2. Programme objectives and exit qualifications

- Article 2.1 Programme objective
- Article 2.2 Exit qualifications

3. Further admission requirements

- Article 3.1 Admission requirements
- Article 3.2 Pre-Master's programme
- Article 3.3 Final deadline for registration
- Article 3.4 English language requirement for English-language Master's programmes

4. Curriculum structure

- Article 4.1 Composition of programme
- Article 4.2 Compulsory units of study
- Article 4.3 Electives inside the programme
- Article 4.4 Validity period for results
- Article 4.5 Degree
- Article 4.6 Validity period for results

5. Transitional and final provisions

- Article 5.1 Amendments and periodic review
- Article 5.2 Transitional provisions
- Article 5.3 Publication
- Article 5.4 Effective date

APPENDICES

- Appendix I Learning Outcomes
- Appendix II Master's Research Project

Section B: Programme-specific section

1. General provisions

Article 1.1 Definitions

See section A.

Article 1.2 Degree programme information

1. The programme Musculoskeletal Physiotherapy Sciences CROHO number 69317 is offered on a full-time basis and the language of instruction and examination is English.
2. The programme has a workload of 60 EC.
3. A unit of study comprises 6 EC or a multiple thereof. Exceptions are:
 - Translational Research part 1 (3 EC)
 - 3D-kinematics (3 EC)
 - Imaging (3 EC)
 - Electromyography (3 EC)
 - Histology (3 EC)

Article 1.3 Intake date

The programme is offered starting in the first semester of the academic year only (1 September). The intake date mentioned in this paragraph ensures 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

2. The programme aims to achieve the following:
 - a) to prepare the student to practice professionally in the field of biophysical research in musculoskeletal physiotherapy;
 - b) to teach the student specialized knowledge, skills and understanding in the field of biophysical research in musculoskeletal physiotherapy; and
 - c) to prepare the student for academic work in the field of translational research in musculoskeletal physiotherapy.
3. The degree programme also 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.
4. The degree programme focuses attention on the student's personal development, promotes his or her awareness of social responsibility and develops student's 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 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) 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;
 - c) knowledge and understanding of muscle physiology: understanding of the anatomy of skeletal muscle, sarcomere function, twitch, tetanus, length-force, force- and power-velocity relations;
 - d) knowledge and understanding of mathematics (differential, integral and vector calculus, goniometry, matrix calculations);
 - e) basic knowledge and understanding of biomechanics in 2D (rigid body kinematics, forces, moments, free body diagrams, mechanical work and power done by forces and moments, kinetic energy and its time derivative, momentum and angular momentum)
 - f) basic understanding of and skills in statistics (correlation, regression analysis, Student t tests, ANOVA);
 - g) understanding of and skills in processing digital signals in MATLAB;
 - h) knowledge and understanding of and skills in common measurement and data processing techniques related to human movement sciences.
2. Responsibility for admitting students to the degree programme, including the distinct programmes, has been delegated to the Admissions Board for the degree programme by the Faculty Board.
 3. Students will be admitted to the degree programme if they hold a certificate of admission, issued by or on behalf of the Faculty Board because they have demonstrated that they meet the knowledge, understanding and skills requirements reflecting the final level of attainment in an academic Bachelor's degree programme, i.e.:
knowledge, understanding and skills in the subject Human Movement Sciences;
 4. Holders of a Bachelor's degree certificate in Human Movement Sciences with a clear affinity for musculoskeletal physiotherapy from Vrije Universiteit Amsterdam will be deemed to have the knowledge and skills referred to in the first paragraph and will be admitted to the programme on that basis.
 5. Applicants who have successfully completed the Pre-master's programme designated for this Master's programme and have received a certificate of admission as proof thereof, can also be admitted.
 6. The certificate of admission relates exclusively to the academic year following the academic year in which the application for the certificate was submitted, unless the Faculty Board decides otherwise.

Article 3.2 Pre-Master's programme

- 1 Applicants who have a (non-)university Bachelor's degree in a field that sufficiently corresponds to the field of the Master's programme may request admission to the pre-Master's programme to complement their acquired knowledge and skills with those required to enter the Master's programme. The content of the premaster program is individually determined based on individual deficiencies.
2. The pre-Master's programme is worth 30 credits and consists of the following units of study:
 - a. Wiskunde
 - b. Verwerken van digitale signalen
 - c. Biomechanica
 - d. Statistiek
 - e. Measuring Movement
3. Successful completion of the pre-Master's programme secures admission to the Master's programme in the following academic year.

Article 3.3 Final deadline for registration

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

Article 3.4 English language requirement for English-language Master's programmes

1. International applicants are required to pass an English language proficiency test. 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:
 - m. Academic IELTS test: 6.5
 - n. TOEFL paper-based test: 580
 - o. TOEFL computer-based test: 237
 - p. TOEFL internet-based test: 92-93
 - q. Cambridge Certificate in Advanced English (CAE): A, B&C
 - r. Cambridge Certificate of Proficiency in English (CPE): A&B
2. Exemption is granted from the examination in English referred to in the first paragraph to students who, within two years of the start of the program:
 - e. 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 or;
 - f. Had previous education in secondary or tertiary education in an English-speaking country as listed on the VU website or;
 - g. Have an English-language 'international baccalaureate' diploma.
 - h. have an English-language diploma of a Bachelor or Master degree programme which has been accredited by the NVAO in the Netherlands

4. Curriculum structure:**Article 4.1 Composition of programme:**

1. The curriculum consists of the programme components stated below.
 - a. compulsory units of study (54 EC)
 - b. electives (6 EC)
2. The level of a course is specialised (400), scientific oriented (500) or highly specialised (600).

Article 4.2 Compulsory units of study

The unit of study code, teaching method and type of test can be found in the online study guide www.vu.nl/en/study-guide.

Assessments of all written assignments may take into account the quality of the student's written language

The compulsory units of study are:

Name of unit of study	EC	Period or semester	Level
Research methodology in musculoskeletal physiotherapy I	6	Period 1	500
Topics in Musculoskeletal Physiotherapy Sciences	6	Period 1	400
Research methodology in musculoskeletal physiotherapy II	6	Period 2	500
Biomechanical analysis of human movement	6	Period 2	500
Translational Research, part 1	3	Period 3	600
Master Research Project (including part 2 of Translational Research)*	27	Period 3+4+5+6	600
Study components mentioned in A and B	Max. 6		
Total:	60		

* For more information please refer to appendix II

Article 4.3 Electives

A. The student can take the following optional units of study inside the Master's programme:

Name of unit of study	EC	Period or semester	Level
3-D Kinematics	3	Period 4	500
Imaging	3	Period 4	400

Electromyography	3	Period 5	500
Histology	3	Period 5	400
Extension Research Project*	6	Semester 2	600

* The extension of the Research Project has to be approved before the start of the research project by the examination board and the supervisor.

B. Optional units of study from outside the Master's programme

Name of unit of study	EC	Period or semester	Level
Entrepreneurship in Human Movement Sciences (FEWEB)	6	Period 5	400
Docentenopleiding*	6 (30)	Semester 1 + 2	n.a.
Other courses, after approval by the Examination Board			

* The unit of study Docentenopleiding is taught in Dutch and comprises 30 EC, of which 6 EC can be used in the elective part of the programme.

Prior to the start of the programme, approval of the Examination Board will be required for the proposed study components. This approval can only be obtained through the submission of an Approval Form, available on VUnet, at least 2 months before the student wishes to enter the final examination. A final decision on the request is made by the Examination Board. 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 Validity period for results

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

Article 4.5 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.

Article 4.6 Validity period for results

1. The validity period for examinations and exemptions from examinations is limited to a period of 6 years.
2. De geldigheidsduur van deelresultaten en vrijstellingen voor deeltentamens is beperkt, en zijn uitsluitend geldig in het collegejaar waarin het deelresultaat of vrijstelling voor deelresultaat is behaald. De geldigheidsduur van deelresultaten voor werkstukken en practica is niet beperkt, tenzij dit in de betreffende onderwijshandleiding anders is geregeld
3. The Examination Board can extend the limited validity period of an examination or exemption if a student submits a reasoned request to that effect. The Examination 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.

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 authorized representative advisory body.
2. An amendment to the Teaching and Examination Regulations requires the approval of the authorized representative advisory body if it concerns components not related to the subjects of Section 7.13, paragraph 2 sub a to g and v of the WHW and the requirements for admission to the Master's programme and insofar it doesn't concern the guidelines of the Executive Board
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](#)

Not applicable.

[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.

[Article 5.4 Effective date](#)

These Regulations enter into force with effect from September 1, 2017

Adopted by the Faculty Board on June 29, 2017

Advice from Board of Studies, Master Program Committee on March 30, 2017

Advice Examination Committee: May 23, 2017

Approved by the Representative advisory body on June 2, 2017

Appendix I Intended learning outcomes

Dublin-descriptor Knowledge and understanding MSc Programme:	
Provides a basis or opportunity for originality in developing or applying ideas often in a research* context	<ol style="list-style-type: none"> 1. Knowledge of and insight into current research with regard to causes, prevention, diagnosis, treatment (especially physiotherapy management) and prognosis of movement and musculoskeletal disorders 2. Knowledge of advanced research methods and techniques relevant to musculoskeletal physiotherapy research
Dublin-descriptor: Applying knowledge and understanding MSc Programme:	
[through] problem solving abilities [applied] in new or unfamiliar environments within broader (or multidisciplinary) contexts	<ol style="list-style-type: none"> 3. The ability to apply advanced research techniques and methods used to investigate the musculoskeletal system 4. The ability to formulate (clinically) relevant research questions and to design plans, methods, procedures and analyses to answer these questions and implement the results in a clinical or community setting 5. The ability to collect, analyse and interpret scientific data concerning causes, prevention, diagnosis, treatment (especially physiotherapeutic management) and prognosis of movement and musculoskeletal disorders 6. The ability to apply theories and models from human movement, physiotherapy and related sciences to formulate and answer clinical research questions relevant to this field of study 7. The ability to integrate information originating from several fields of research and clinical physiotherapy practice
Dublin-descriptor: Making judgements MSc Programme:	
[demonstrates] the ability to integrate knowledge and handle complexity, formulate judgements with incomplete data	<ol style="list-style-type: none"> 8. The ability to think along interdisciplinary lines and to have insight in relevant disciplines involved in movement and musculoskeletal disorders 9. The ability to critically evaluate methods and results of research 10. Insight in the scientific, clinical and social relevance of current research in the field of movement and musculoskeletal disorders 11. The ability to reflect on social and ethical issues related to research, and to promote responsible conduct in research and academia (research integrity)
Dublin-descriptor: Communication MSc Programme:	
[of] their conclusions and the underpinning knowledge and rationale (restricted scope) to specialist and non-specialist audiences (monologue)	<ol style="list-style-type: none"> 12. The ability to contribute to scientific discussions about research in the field of musculoskeletal physiotherapy 13. The ability to comprehensively present research in a professional manner to a scientific, clinical, and lay audience 14. The ability to present research in writing at the level of a scientific and professional journal 15. The ability to communicate with experts from different disciplines and to build exchange and collaboration within and between disciplines
Dublin-descriptor: Learning skills MSc Programme	
study in a manner that may be	16. The ability to evaluate and reflect critically on his/her own

largely self-directed or autonomous	functioning according to the guidelines of good clinical practice 17. The ability to work in an interdisciplinary (research) environment 18. The ability to largely autonomously collect scientific information and to analyse and evaluate this information critically
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Appendix II Master Research Project

The Research Project should abide by the following rules:

- All Research Projects, also those carried out outside the faculty, must be carried out under supervision of an academic staff member of the faculty. This supervisor has the final responsibility for the project.
- Within one month after starting the Research Project, the study design must be approved by the principle supervisor and intended examiners of the final report.
- The end product of the Master Research Project consists of a report in the form of a scientific paper, and an essay translational research, possibly extended with appendices containing more extensive descriptions of methods and results.
- Students have to attend at least 80% of all Capita Selecta meetings organised within the programme Musculoskeletal Physiotherapy Sciences. If a student fails to meet this criterion, an additional assignment given by the coordinator of the Capita Selecta will need to be conducted.
- The final grade for the Research project is composed of four components: research report (40%), essay translational research (20%), research process (30%), and oral presentation (10%)