

# Teaching and Examination Regulations (OER)

## Master program Personalized Medicine (research)

Amsterdam UMC - location VU University Medical Center

Faculty of Medicine VU Amsterdam

Academic Year 2024-2025

A. Faculty section

B1. program specific section - general provisions

B2. program specific section - content of program

Opdrachtgever:	Raad van Bestuur Amsterdam UMC	
Datum vaststelling:	19 maart 2024	
Vastgesteld door:	mw. prof. dr. C. Boer, vice-decaan onderwijs locatie VU  Namens: de decaan	
Status:	Vastgesteld	

**Index**

**Section A: Faculty section**..... 4

**1. General provisions** ..... 4

Article 1.1 Applicability of the regulations.....4

Article 1.2 Definitions .....4

**2. Study program structure** ..... 5

Article 2.1 Structure of academic year and educational components .....5

**3. Assessment and Examination** ..... 5

Article 3.1 Signing up for education and interim examinations .....6

Article 3.2 Type of examination.....6

Article 3.3 Oral interim examinations .....6

Article 3.4 Determining and announcing results.....6

Article 3.5 Examination opportunities .....6

Article 3.6 Marks .....7

Article 3.7 Exemption .....7

Article 3.8 Validity period for results .....7

Article 3.9 Right of inspection and post-examination discussion.....7

**4. Academic student counseling and study progress**..... 8

Article 4.1 Administration of study progress and academic student counseling .....8

Article 4.2 Adaptations for students with a disability .....8

**5. Hardship clause** ..... 8

**Section B1: Program specific section - General Provisions** ..... 9

**6. General program information and characteristics**..... 9

Article 6.1 Study program information .....9

Article 6.2 Teaching formats used and modes of assessment .....9

Article 6.3 Academic student counseling .....9

Article 6.4 Indecent behavior during the program .....9

**7. Further admission and requirements** ..... 9

Article 7.1 Intake date .....9

Article 7.2 Admission requirements .....9

Article 7.3 Selection criteria..... 10

Article 7.4 Pre-Master’s program ..... 10

**8. Interim examinations and results** ..... 11

Article 8.1 Sequence of examinations..... 11

Article 8.2 Validity period of results ..... 11

**Section B2: Program specific section - content of program** ..... 12

**9. Program objectives, specializations and exit qualifications** ..... 12

Article 9.1 Workload program ..... 12

Article 9.2 Specializations..... 12

Article 9.3 Program objectives ..... 12

Article 9.4 Program competences..... 12

Article 9.5 Language of instruction ..... 13

**10. Curriculum Structure**..... 13

Article 10.1 Composition of the program .....	13
Article 10.2 Compulsory units of the program .....	14
Article 10.3 Elective educational components.....	16
Article 10.4 Practical exercise.....	16
Article 10.5 Participation in practical exercise and tutorials .....	16
Article 10.6 Maximum exemption .....	17
<b>11. Evaluation and transitional provisions .....</b>	<b>17</b>
Article 11.1 Evaluation of the education .....	17
Article 11.2 Transitional provisions .....	17

## Section A: Faculty section

### 1. General provisions

#### Article 1.1 Applicability of the regulations

1. These regulations apply to anyone enrolled in the program, irrespective of the academic year in which the student was first enrolled in the program.
2. These Regulations enter into force on 1 September 2024.
3. An amendment to the Teaching and Examination Regulations is only permitted to concern an academic year already in progress if this does not demonstrably damage the interests of students.

#### Article 1.2 Definitions

The following definitions are used in these Regulations:

- a. admission board: the committee that assesses on behalf of the dean whether a candidate meets the requirements to be admitted to the master's program of their choice;
- b. academic year: the period beginning on the 1<sup>st</sup> of September and ending on the 31<sup>st</sup> of August of the following calendar year;
- c. Canvas: Digital information system for students and teachers
- d. Course: a unit of study of the programme within the meaning of the WHW. Art. 7.3 unit of education)
- e. Cursys: Student information system for master Epidemiology
- f. EC (European Credit): A course credit with a workload of 28 hours of study;
- g. examination: an assessment of the student's knowledge, understanding and skills relating to a unit of education. 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 program. An examination can be completed in writing, orally or in another way;
- h. final examination: A master's program consists of a master's examination;
- i. internship: period spent working in professional practice as part of a study programme;
- j. period: a part of a semester;
- k. practical exercise: the participation in a practical training or other educational learning activity, aimed at acquiring certain (academic) skills. Examples of practical exercises are:
  - o researching and writing a thesis or dissertation
  - o carrying out a research assignment
  - o taking part in fieldwork or an excursion
  - o taking part in another educational learning activity aimed at acquiring specific skills, or
  - o participating in and completing a work placement;
- l. pre-Master's enrollee: person enrolled in a pre-Master's program, who is not a student from a legal perspective;
- m. program: the totality and cohesion of the course components, teaching activities/methods, contact hours, testing and examination methods and recommended literature;
- n. SAP/SLM: the student information system (*Student Lifecycle Management*);
- o. semester: the first (September - January) or second half (February - August) of an academic year;

- p. specialization optional route of study within a degree program indicating a deepening of the (inter/multi) disciplinary context of the program;
- q. student: 'studying'. The term 'student' is intended to be gender-inclusive, because this term has traditionally been used in regulations and is seen as a professional term.
- r. student statute: sets out the rights and responsibilities of students on the one hand, and of Vrije Universiteit Amsterdam on the other hand, including those derived from the law and those derived from university regulations. The Executive Board (CvB) officially confirms the student statute once its completeness has been approved by the University Student Council (USC).
- s. study guide: the guide for the study program that provides further details of the courses, provisions and other information specific to that program. The Study Guide is available electronically at: <https://studiegids.vu.nl/en>;
- t. study monitor: dashboard for students and academic advisors with data of the student and that provides insight into the student's study progress;
- u. track a study pathway within a broader Bachelor's or Master's degree program, such as a fully English-language study pathway within a Dutch-language Bachelor's or Master's degree;
- v. thesis: a component comprising research into the literature and/or contributing to scientific research, always resulting in a written report;
- w. unit of education: a unit of study of the program within the meaning of the WHW; Vrije Universiteit Amsterdam
- x. university: Vrije Universiteit Amsterdam;
- y. WHW: the Dutch Higher Education and Research Act (*Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek*);
- z. workload: the workload of the unit of study to which an interim examination applies, expressed in terms of credits = EC credits (ECTS = European Credit and Transfer Accumulation System). The workload for 1 year (1.680 hours) is 60 EC credits.

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

## 2. Study program structure

### Article 2.1 Structure of academic year and units of educational

1. The study program will be offered in a year divided into two semesters.
2. Every semester consists of three consecutive periods of eight, eight and four weeks
3. An educational component 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. The Faculty Board requests permission of the Executive Board.
  - a. 2.1.1 and 2.1.2 do not apply for the master Medicine. The schedule of the academic year is described in Section B.
  - b. For the postgraduate programs Epidemiology and Higher Healthcare Education (HGZO), article 2.1 does not apply. The schedule of the academic year is described in Section B.

## 3. Assessment and Examination

### Article 3.1 Signing up for education and interim examinations

1. Every student must sign up to participate in the educational components of the program, the examinations and retakes. The procedure for signing up is described in an annex to the Student Statute.
  - a. For the Master Medicine different rules apply for the signing up procedure (see Canvas).
  - b. For the Master Epidemiology different rules apply for the signing up procedure (see [www.epidm.nl](http://www.epidm.nl)).
  - c. For the Master HGZO different rules apply for the signing up procedure (see <https://www.vumc.nl/educatie/onze-opleidingen/opleidingsdetail/master-docent-hoger-gezondheidszorg-onderwijs.htm>).
2. Signing up may only take place in the designated periods.

### Article 3.2 Type of examination

1. At the examiner's request, the Examinations Board may allow a different form of interim examination than that stipulated in the study guide.

### Article 3.3 Oral interim examinations

1. No more than one student will be examined orally at a time, unless specified otherwise in part B for the relevant unit of education.
2. A second examiner is present when an oral examination is being held, unless the Examination Board has determined otherwise. The oral examination takes place at a time and location to be determined by the examiner within the regular timetable, on campus or online. At the request of the student, and with the approval of the examiners, an audio recording can be made. Should the second examiner not be available unexpectedly, an audio recording of the oral exam can be made. This audio recording is retained by the university for the retention period applicable for examinations.

### Article 3.4 Determining and announcing results

1. The examiner determines the result (= mark) of a written examination at the latest within ten working days. Contrary to the provisions of the first sentence, the marking deadline for either essays, papers or exams consisting of more than 50% of open-ended questions is no longer than fifteen working days, while for theses and final assignments the marking deadline is no longer than twenty working days after submission of the thesis/assignment. The examiner will then immediately ensure that the marks are registered and also ensures that the student is immediately notified of the mark, taking into account of the applicable confidentiality standards.
  - a. For the Master program Medicine an exception is made for Article 4.4.1 for the National Progression Test (Interuniversitaire Voortgangstoets, iVGT) the results will be determined after 25 working days.
2. The examiner determines the result (i.e. mark) of an oral examination as soon as possible [but at the latest within 48 hours] after the examination has finished and informs the student accordingly. The third clause of the first paragraph applies.
3. In the case of assessments other than oral or written examinations, the Examination Board determines in advance how and by what deadline the student will be informed of the results.

### Article 3.5 Examination opportunities

1. Per academic year, two opportunities to take examinations will be offered for each unit of education.
  - a. By way of exceptions to 1., the options for retaking practical components, work placements and theses are detailed in the relevant work placement manual, course manual or teaching regulations.

2. The most recent mark will apply in the event of a resit. A retake is allowed for both passed and failed units of study.
3. The resit for an interim examination must not take place within ten working days of the announcement of the result of the examination being resat.
4. The Examination Board may allow a student an extra opportunity to sit an examination if that student
  - a. is lacking only those credits to qualify for their degree;
  - b. has failed the examination during all the previously offered attempts unless participation in an examination was not possible for compelling reasons.The extra opportunity can only be offered if it concerns a written examination, a paper or a take home examination. This provision excludes the practical assignments and the Master's thesis. Requests for an additional examination opportunity must be submitted to the Examination Board no later than 1 August. If necessary, the method of examination may deviate from the provisions in the study guide.
5. Retaking practical components, work placements and theses is not allowed in case a grade > 5.5 was obtained.
6. If an educational component is no longer offered in the academic year following its termination, at least one opportunity will be provided to sit the interim examination(s) or parts thereof and a transitional arrangement will be included in the program-specific section for the subsequent period.

#### Article 3.6 Marks

1. Grades are given on a scale from 1 to 10 with no more than one figure after the decimal point.
2. A final mark between 5 and 6 will be rounded to the nearest whole number: up to 5.50, rounded down; 5.50 and higher than 5.50, rounded up. All other final marks will be expressed in whole or half marks.
3. To pass a given course or unit, a final mark of 6 or higher is required.
4. The Examination Board can allow to use symbols rather than numbers.

#### Article 3.7 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 course component of a university or higher professional education program that is equivalent in terms of content and level;
  - b. has demonstrated through their work and/or professional experience that they have sufficient knowledge and skills with regard to the relevant course component.
2. One or more educational components with examinations are excluded from this option of exemption, see Section B.

#### Article 3.8 Validity period for results

1. The validity period of interim examinations passed and exemption from interim examinations is unlimited, unless otherwise specified in Section B.

#### Article 3.9 Right of inspection and post-examination discussion

1. Within twenty working days after the announcement of the results of a written examination, but at least ten working days before the resit opportunity for that examination, the student can submit a request to review their graded examination.
2. Students can view the questions and assignments set in the written examination, and the standards applied when assessing the examination, within the period specified in 3.9.1.

3. The examiner determines whether the inspection takes place collectively or individually. In all cases, the time and place of the inspection is announced in the course manual or learning environment.

#### 4. Academic student counseling and study progress

##### Article 4.1 Administration of study progress and academic student counseling

1. The Dean is responsible for the correct registration of the students' study results. After the assessment of an educational component has been registered, every student has the right to inspect the result of that component and also has a list of the results achieved at their disposal in VU.nl.
  - a. For the postgraduate Master degree Epidemiology the registration takes place in CurSys.
2. Enrolled students are eligible for academic student counseling. Academic student counselling is in any case provided by:
  - a. The Student Counsellor
  - b. Student psychologists
  - c. Faculty academic advisors

##### Article 4.2 Facilities for students with a disability or impairment

1. A student with a disability or impairment, can at the moment of submission to VU.nl, or at a later instance, submit a request to qualify for special adaptations with regard to teaching, practical training and interim examinations. These adaptations will accommodate the student's individual disability or impairment as much as possible, but may not alter the quality or degree of difficulty of a unit of study or an examination. In all cases, the student must fulfil the exit qualifications for the study program.
2. The request referred to in the first paragraph must be accompanied by a statement by 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. Students who have been diagnosed with dyslexia must provide a statement by a BIG, NIP or NVO registered professional.
4. The program director or the responsible person on behalf of the faculty board, decides on the adaptations concerning the teaching facilities and logistics. The Examination Board will decide on requests for facilities 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 can make an appointment with the study adviser to discuss the details of the provisions.
6. A request for adaptations can be refused if it would place a disproportionate burden on the organization or the resources of the faculty or university where it upheld. Any such refusal will be substantiated.
7. If the disability or impairment justifies an extension of the interim examination time, the responsible person on behalf of the Examinations Board will register in SAP this entitlement to an extension. If a disability or impairment justifies other measures to be taken, the academic adviser can take the necessary measures. The student can consult the study monitor to check which facilities have been granted to them.
8. The decision as referred to in paragraph 5 may specify a limited validity of the facilities granted.

#### 5. Hardship clause

In instances not regulated by the Teaching and Examination Regulations or in the event of disproportionate unreasonableness and unfairness, the Dean responsible for the degree program will decide, unless the matter concerned is the responsibility of the Examination Board.



## Section B1: Program specific section - General Provisions

### 6. General program information and characteristics

#### Article 6.1 Study program information

1. The program Personalized Medicine (CROHO 66586) is offered on a full-time basis.
2. The full-time program has a nominal study duration of 2 years.

#### Article 6.2 Teaching formats used and modes of assessment

1. The program uses the teaching formats as described in the study guide.
2. The modes of assessment used per educational component are specified in the study guide and in Section B2 of this OER.

#### Article 6.3 Academic student counseling

1. The program offers the following counselling in addition to the student counseling mentioned in Section A
  - a. Program coordinator
  - b. Mentor system which is part of the Academic Core.

#### Article 6.4 Indecent behavior during the program

1. Master Personalized Medicine students should, in the context of their program, behave like a good Master student befits (Student Statute - article 10. VU Amsterdam Rules of Conduct). This applies to the program as a whole and in particular in cases where a student, in the context of their program, or as student Personalized Medicine has contact with people, who are present and/or employed at the VU, Amsterdam UMC or the healthcare institution wherein they attend part of the program. Indecent behavior in this context includes: discriminating, insulting, offensive or otherwise negative remarks, impolite expressions, violence, no or too little respect, decency or hygiene, violation of confidentiality, acting deceitfully, forgery of documents, fraud, deliberate deception among other things, as well as unacceptable behavior including sexual intimidation, and acting towards a third person against their wish. Additionally, one is referred to the Student Statute 2024-2025 of the VU.
2. In case, at any time during the program, a teacher, fellow-student or someone not directly involved in the program states an action of indecent behavior by a student, this person (the teacher, fellow-student or person not-directly involved in the program), after having informed the student in question, reports in writing and justified to the dean. A *notification of an incident of order* will be made. Subsequently, the notification will be handled in accordance with the *Procedure notification of an incident of order*. Additionally, one is referred to the Student Statute 2024-2025 of the VU.

### 7. Further admission requirements

#### Article 7.1 Intake date

1. The program starts on September 1.

#### Article 7.2 Admission requirements

1. The admission requirements will be published on the websites of the master program from the 1<sup>st</sup> of October onwards before the start of the next academic year. Admission to the Master's program is possible for an applicant who has obtained a (bio)medical, Life Sciences or related Bachelor's degree obtained at an institution of academic higher education, which meets the following requirements:

- a. Well-developed academic skills including writing and presenting skills, the ability to evaluate and apply knowledge, and the ability to engage in critical thinking.
  - b. A clear motivation and talent for participation in the program.
  - c. Basic knowledge of Molecular Biology, Immunology, Human Anatomy, Physiology and Pathology.
  - d. Preferably a minimum grade-point average of 7.5 (or international equivalent, e.g. a B+, or a GPA of 3.4); and a minimum grade of 8 (or international equivalent, e.g. an A, or a GPA of 4.0), for the Bachelor's thesis. If students have lower grades, they are also invited to apply for the program.
  - e. Pass the admission assessment test of the program.
2. An applicant should show that they have sufficient level of proficiency in English by meeting at least one of the following standards, no more than two (2) years before the start of the program at the VU:
- a. (academic) IELTS (>6.5)
  - b. TOEFL paper-based test and TOEFL-ITP (> 580)
  - c. TOEFL internet-based test (> 92)
  - d. Cambridge Certificate of Proficiency in English (CPE) or the Cambridge Certificate of Advanced English (CEA) Score C
3. The requirements referred to in paragraph 2 do not apply to an applicant who:
- a. completed an English-taught secondary or higher education degree in Canada, the United States, the United Kingdom, Ireland, New Zealand or Australia or
  - b. have earned a Bachelor's or Master's degree in an English-taught program accredited by NVAO in the Netherlands, or
  - c. have earned a Bachelor's or Master's degree in an accredited English-taught program in another member state of the European Union
  - d. have earned a VWO diploma or equivalent diploma in which English of a comparable level is required.
4. Dutch degree holders must have passed the English courses in their previous education. In case the admission board decides that the level of English proficiency is not sufficient based on the previous education and/or admission assessment test, students will be asked to provide a VU-test English-language proficiency: TOEFL-ITP certificate (> 580).

### Article 7.3 Selection criteria

1. In addition to the admission requirements referred to in Article 7.2, the Faculty board also sets (at least two of) the following selection criteria:
  - a. talent and motivation for the program, demonstrated by a letter in which is stated the motivation for the program as well as two reference letters from teachers and/or supervisors;
  - b. proficiency in methods and techniques, demonstrated through a minimum grade of 8 for the bachelor thesis or similar;
  - c. level of relevant knowledge and understanding, demonstrated by passing the admission assessment test and interview;
  - d. academic attitude and critical thinking, demonstrated through a pass for the admission assessment test and interview;

### Article 7.4 Pre-Master's program

1. The master program Personalized Medicine has no pre-Master's program.

## 8. Interim examinations and results

### Article 8.1 Sequence of examinations

1. Students may participate in interim examinations [or practical exercises] of the components below only if they have passed the interim examination or examinations for the components mentioned hereinafter:
  - a. Minor Internship after passing 24 EC of compulsory courses;
  - b. Major Internship after passing the minor Internship;
2. When the master program would like to give a student the opportunity to start earlier with a minor internship or major internship thesis due to certain circumstances, the Examination Board Science Masters is allowed to make an exception for 8.1 a and b.

### Article 8.2 Validity period of results

1. The validity period of the interim examinations and exemptions from interim examinations below, is limited as follows:
  - a. The period of validity of interim examinations is 3 years, as of the subsequent academic year in which the interim examination has been taken.
  - b. The period of validity for exemptions is 3 years, as of the year the interim examination is granted.
  - c. The Examination Board can extend the validity of an examination or exemption when the student files a motivated request. When the standardized knowledge of the examination is clearly outdated, or if the qualifying skills are clearly outdated, the Examination Board can impose an additional examination, impose an alternative examination or refuse the validity period.
  - d. The validity period of a partial examination is limited to the academic year in which it was sat.

## Section B2: Program specific section - content of program

### 9. Program objectives, specializations and exit qualifications

#### Article 9.1 Workload program

1. The program has a workload of 120 EC.

#### Article 9.2 Specializations

Students that started the master Personalized Medicine before 2022-2023 will continue their program and graduate from the master Personalized Medicine in the track Cardiovascular Sciences. Students that started in 2022-2023 will continue and graduate in the master Personalized Medicine at the Vrije Universiteit. See Article 11.2 Transitional Provisions.

Students have to choose a specialization in year 1 of the study, see article 10.1 and 10.2.

#### Article 9.3 Program objectives

The aim of this master program is to train and educate students with a biomedical or Life Sciences or related Bachelor's degree to obtain a Master's degree.

The final program qualifications (assessment criteria) are focused on the ability to address complex research questions and to perform independent state-of-the-art research in the field of clinical life sciences. This is a research master program; therefore the program qualifications should comply to a research standard for what we call an "early stage researcher": a scientist at the start of a full academic career, and we therefore developed a profile with end qualifications. Within this master program, four roles for an early stage researcher have been defined that are based on the CanMEDS (Canadian Medical Education Directions for Specialists) system, and have been adapted for research. The four roles in order of importance are "scholar", "collaborator", "communicator" and "manager". Each role requires distinct competences (Article 9.4, Table 1). These competences are employed as the final qualifications of this master program.

#### Article 9.4 Program competences

1. In all events, a graduate of the degree program will have the attainment level as described in Table1.

**Table 1: Roles of the early stage researcher.**

Role 1 Scholar	
<b>The early stage researcher keeps their own knowledge and skills up-to-date and transfers scientific knowledge to others. The early stage researcher works independently in a professional manner in the process of drafting, implementing and evaluating areas of research. The early stage researcher steers their own professional development.</b>	
1.1	The early stage researcher keeps their own knowledge up-to-date.
1.2	The early stage researcher performs research independently.
1.3	The early stage researcher efficiently familiarizes themselves with a new area of research.
1.4	The early stage researcher exhibits adequate professional behavior.
1.5	The early stage researcher is able to steer their own professional development.
Role 2 - Collaborator	
<b>The early stage researcher participates effectively and appropriately in a multidisciplinary research team and in the inter-collegial peer review processes. The early stage researcher is able to build a network of contacts and to use them adequately.</b>	
2.1	The early stage researcher participates effectively in a multidisciplinary research team.
2.2	The early stage researcher makes adequate use of networks in the research field.
2.3	The early stage researcher participates in the inter-collegial peer review process.
Role 3 - Communicator	

<b>The early stage researcher gives oral and written reports of the research to colleagues in their own discipline and to other stakeholders. The early stage researcher participates in scientific discussions and debates and takes a position in such discussions and debates.</b>	
3.1	The early stage researcher provides verbal and written reports of the research to colleagues in their own discipline and to other stakeholders.
3.2	The early stage researcher participates in scientific discussions on research.
3.3	The early stage researcher participates in the public debate on research.
<b>Role 4 - Manager</b>	
<b>The early stage researcher organizes their own research adequately within the applicable quality and financial frameworks, in order to achieve the set goals.</b>	
4.1	The early stage researcher can organize and manage scientific research.
4.2	The early stage researcher understands the financial aspects of research.
4.3	The early stage researcher contributes to the quality improvement of research and of the research institute.

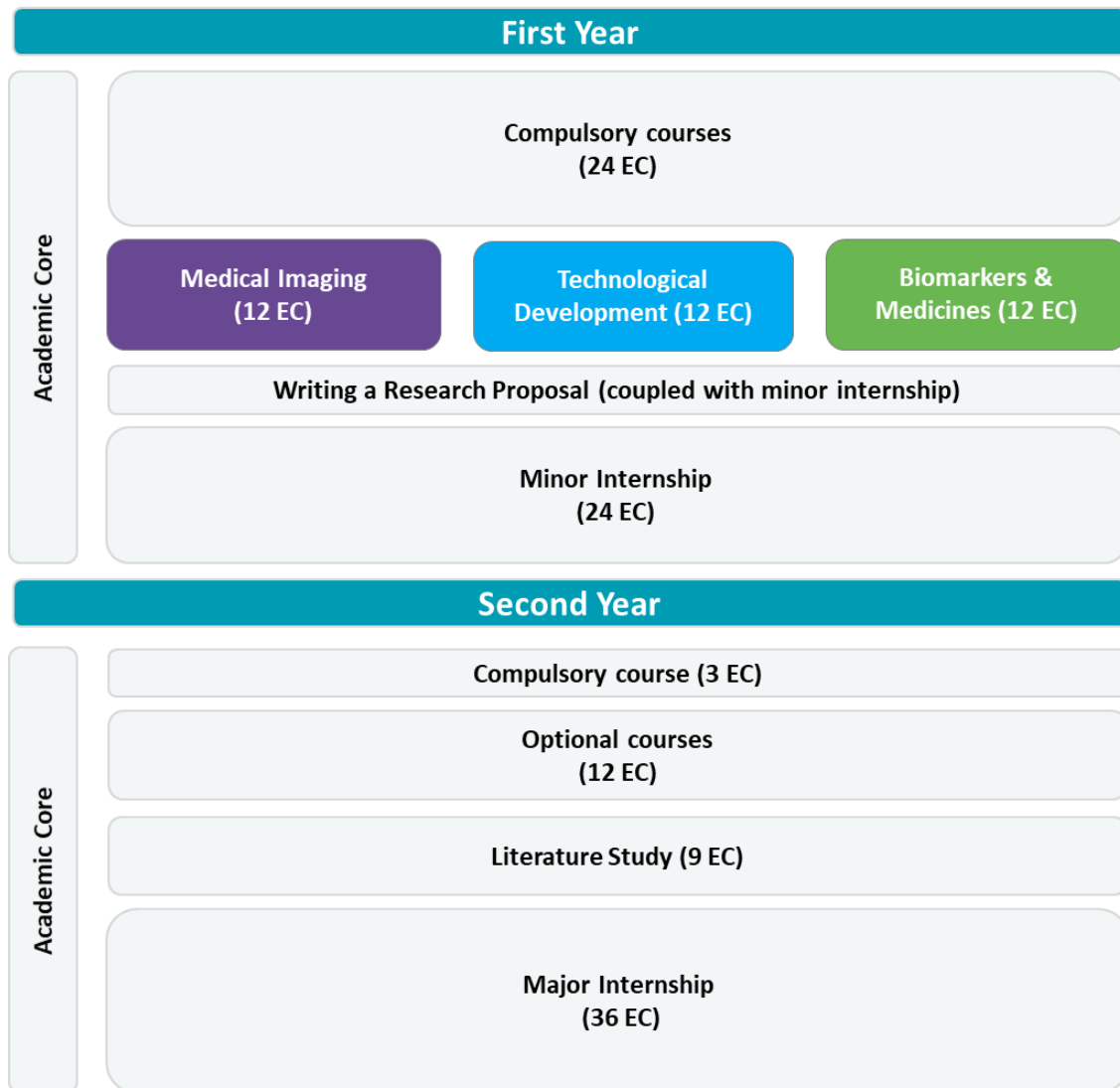
#### Article 9.5 Language of instruction

1. The language of instruction is English. All components of the master program should be taught and performed in English.
2. The 'Gedragscode vreemde taal' (code of conduct foreign languages) applies.

### 10. Curriculum Structure

#### Article 10.1 Composition of the program

1. The program consists of the following components as shown in Figure 1:
  - a. Compulsory units of study (39 EC)
  - b. Optional units of study (12 EC) (minimum level 400, English taught)
  - c. Minor / Major Internship (24 and 36 EC respectively)
  - d. Literature Study (9 EC)
2. Educational components are categorized as specialized (400), research oriented (500) and highly specialized (600) level.



**Figure 1:** Composition of the master program Personalized Medicine (research) .

#### Article 10.2 Compulsory units of the program

1. The compulsory units of the program are:

Title	Code	Number of EC	Period	Teaching method	Test type	Level
<b>Year 1</b>						
Personalized Medicine	M_CPM22	6	Period 1	Lectures, workgroups, selfstudy	Examination, assignments	400
Data Science & Bioinformatics	M_CDSBI23	6	Period 1	Lectures, workgroups, selfstudy	Examination, assignments	500
Basics of Clinical Research and Regulations	M_CBCRR22	6	Period 2	Lectures, workgroups, selfstudy	Examination, assignments	500

Imaging Principles	M_CIP22	6	Period 2	Lectures, workgroups, selfstudy	Examination, assignments	500
Scientific Writing in English	M_CWARP23	0	Semester 2	Lectures, workgroups, selfstudy	Assignments	500
Academic Core	M_CACCO123	0	Semester 1 - 2	Lectures, workgroups, selfstudy	Lectures, workgroups, selfstudy	500
Minor Internship	M_CMINORI23	24	Semester 2	Practical work, work discussion	Report, presentation, practical work	400
<b>Specialization Medical Imaging*</b>						
Medical Imaging I	M_CMEIM123	6	Period 3	Lectures, workgroups, selfstudy	Assignments	500
Medical Imaging II	M_CMEIM223	6	Period 4	Lectures, workgroups, selfstudy	Assignments	500
<b>Specialization Technological Development*</b>						
Technological Development I	M_CTD123	6	Period 3	Lectures, workgroups, selfstudy	Assignments	500
Technological Development II	M_CTD223	6	Period 4	Lectures, workgroups, selfstudy	Assignments	500
<b>Specialization Biomarkers &amp; Medicines*</b>						
Biomarkers & Medicines I	M_CBMM124	6	Period 3	Lectures, workgroups, selfstudy	Assignments	500
Biomarkers & Medicines II	M_CBMM224	6	Period 4	Lectures, workgroups, selfstudy	Assignments	500
<b>Year 2</b>						
Partners in Innovation	M_CPIIN23	3	Period 1	Lectures, workgroups, selfstudy	Assignments	500
Academic Core	M_CACCO223	0	Semester 1 - 2	Lectures, workgroups, selfstudy	Assignments	500
Literature Study	M_CLITSTU16	9	Semester 1-2	Work discussions	Report, presentation	500
Major Internship	M_CMAJORI16	36	Semester 1-2	Practical work, work discussion	Thesis, presentation, practical work	500

\*Students choose one of the different specializations

To pass a compulsory unit, students must obtain a minimal grade of 5.50 for all test types that are part of this compulsory unit. More information about the compulsory units are described in the study guide.

### Article 10.3 Elective educational components

1. The Faculty of Medicine VU Amsterdam offers the following electives:

Title	Code	Number of EC	Period	Teaching method	Test type	Level
Biobusiness course	M_OBIOBUS10	3	3-4	Lectures, Work groups, Self-study	Assignments	500
Proteomics in Biomedical Sciences	M_CPROTBIO09	3	3-4	Lectures, Laboratory project, Literature presentation, Self-study	Exam	500
Cardiac Development	M_CCARDE18	3	Semester 1	Lectures, Work groups, Self-study Practicals	Exam	500
Student Education Qualification (StOK)	M_FSTOK24	12	Semester 1 & 2	Lectures, practical work, workgroups, self-study	Assignments	400
Extension Internship	M_CEXINT23	3-6	Semester 2-4	Practical work, work discussion	Thesis, presentation, practical work	500

For optional courses, students need to obtain permission in advance from the Examination Board. Students can also apply for courses at other faculties or universities, for which they need to provide the program of the course, the level, the examination and their own study plan including results thus far. The optional courses must be taught in English. The total amount of EC for the optional courses is 12 EC.

### Article 10.4 Practical exercise

1. Practical exercises are described in Section B2 Article 10.2 of this OER.

### Article 10.5 Participation in practical exercise and tutorials

1. In the case of a practical training, the student must attend 100% of the practical sessions. Should the student attend less than 100%, the student must repeat the practical training, or the Examination Board may have one or more additional assignments issued.
2. In the case of tutorials with assignments, the student must attend 100% of the tutorials. Should the student attend less than 100%, the student must repeat the study group, or the Examination Board may have one or more additional assignments issued.
3. In exceptional circumstances, the Examination Board may, at the request of the student, permit an exemption (a maximum of 30 EC) from this requirement if it is evident that the intended skills have been acquired.



#### Article 10.6 Maximum exemption

1. A maximum of 30 EC of the curriculum can be accumulated through granted exemptions by the Examination Board. This exemption does not apply to the Major Internship (Master's Thesis).

### 11. Evaluation and transitional provisions

#### Article 11.1 Evaluation of the education

1. The education provided in this program is evaluated in accordance with the evaluation plan which is published on CANVAS. The faculty evaluation plan offers the framework.

#### Article 11.2 Transitional provisions

1. By way of derogation from the Teaching and Examination Regulations currently in force, the following transitional provisions apply for students who started the program under a previous set of Teaching and Examination Regulations:
  - a. For students registered before 2022-2023, the course codes M\_CHCBP16, M\_CCDMDT16, M\_CDVDMDT16 and M\_CFAISC16 still apply.
  - b. For students registered before 2023-2024, the course codes M\_CACCOREB14, M\_FBIOSTAT16, M\_FWRP18, M\_CMINORI16, M\_CDTN22 and M\_CMAJORI16 still apply.

Advice and approval by the Program Committee, on 7 December 20023

Approved by the Faculty Joint Assembly, on 27 February 2024

Adopted by the board of the Faculty, on 19 March 2024.