Teaching and Examination Regulations 2018-2019 Master's degree programmes Biomedical Sciences and Medical Pharmaceutical Sciences

Appendix I Learning outcomes of the degree programme (art. 1.3)

Graduates Biomedical Sciences (BMS) are able to:

- 1 Understand and explain in detail the major underlying principles of biomedical sciences (knowledge).
- 2 Manage and interpret (big) data and demonstrate proficiency in computing technology for biomedical sciences (execution).
- 3 Formulate solutions to biomedical issues both theoretical, technical and in a practical laboratory setting (execution).
- 4 Critically evaluate scientific biomedical data and offer sound arguments to justify a position (judgment and communication).
- 5 Effectively communicate scientific concepts to specialists as well as to a lay audience through oral and written presentations (academic skills).
- 6 Critically appraise the role of 'biomedical sciences' and/or in the dedicated specialisms 'Biology of Ageing' or 'Biology of Cancer and Immune System', 'Biology of Food and Nutrition' and 'Neuroscience' research aiming on supporting healthy ageing (knowledge and academic skills).
- 7 Work independently as well as in a team to solve scientific and societal challenges related to biomedical sciences (academic skills).
- 8 Independently draw conclusion on ethical issues in biomedicine and apply this to scientific or public discussions about the impact of such science on society (ethics).
- 9 Evaluate and reflect on personal capabilities and motivation for a scientific, policy or business career (self-reflection).
- 10 Take personal responsibility for developing an international perspective on up-to-date scientific advances and on-going biological science-related issues (international outlook).

Graduates Medical Pharmaceutical Sciences (MPS) are able to:

- 1 Understand the underlying principles of medical and pharmaceutical sciences in depth and integrate this knowledge to better understand etiology and pathophysiology of disease and the development of more effective and safer drugs (knowledge).
- 2 Formulate hypotheses, design experiments and analyze data to solve pharmaceutical problems (execution).
- 3 Critically evaluate scientific data from experiments or literature, and offer sound arguments to justify a position (judgment and communication).
- 4 Effectively communicate scientific concepts to specialists as well as to a lay audience through oral and written presentations (academic skills).
- 5 Critically appraise the results of research in 'medical pharmaceutical sciences' and/or in the dedicated specialisms 'toxicology and drug disposition', 'pharmaceutical design and engineering' or 'pharmacoepidemiology' (knowledge and academic skills).

- 6 Work independently as well as in a team to solve scientific and societal challenges related to medical pharmaceutical sciences (academic skills).
- 7 Independently draw conclusions on ethical issues in the pharmaceutical sciences and to apply this to scientific or public discussions about the impact of such science on society (ethics).
- 8 Evaluate and reflect on personal capabilities and motivation for a scientific, policy or business career (self-reflection).
- 9 Take personal responsibility for developing an international perspective on up-to-date scientific advances and on-going pharmaceutical science-related issues (international outlook).

Appendix II Tracks/Specializations of the degree programme (art. 2.2)

1. Within the degree programmes, the student chooses one of the Research-tracks/specializations written below (R-track/specialization), or one chooses the Science, Business and Policy-specialization ("**SBP**-specialization "), which prepares for professions in a societal, political and/or commercial context.

2. Within the degree programme Biomedical Sciences, the general **Biomedical Sciences Research** specialization, provides students training as a researcher in various fields of biomedical sciences.

3. Within the degree programme Biomedical Sciences, the R-track **Biology of Ageing**, provides students training as a researcher mainly in the field of ageing and age-related pathologies.

4. Within the degree programme Biomedical Sciences, the R-specialization **Biology of Cancer and Immune System**, provides students training as a researcher mainly in the field of fundamentals and mechanisms of immunology, oncology, cell biology and related pathologies. This specialization is not only focussed on disease but also on how immunity and mammalian cells behave in health.

5. Within the degree programme Biomedical Sciences, the R-specialization **Biology of Food and Nutrition**, provides students training as a researcher mainly in the importance of food for a healthy microbiota in relation to brain function, metabolism and immunity.

6. Within the degree programme Biomedical Sciences, the R-specialization **Neuroscience**, provides students training as a researcher mainly in the field of Neuroscience. The specialization focuses on the role of higher brain functions both in health and in disease.

7. Within the degree programme Medical Pharmaceutical Sciences, the general **Medical Pharmaceutical Sciences Research** specialization, provides students training as a researcher in various fields of medical pharmaceutical sciences.

8. Within the degree programme Medical Pharmaceutical Sciences, the R-track **Toxicology and Drug Disposition**, provides students training as a researcher mainly in the field of adverse drug reactions.

9. Within the degree programme Medical Pharmaceutical Sciences, the R-track **Pharmacoepidemiology**, provides students training as a researcher in the area of pharmacovigilance, database research, observational and trial intervention methodology and utilization studies with specific attention to the role of pharmaceuticals in healthy ageing.

10. Within the degree programme Medical Pharmaceutical Sciences, the R-specialization **Pharmaceutical Design and Engineering**, provides students training as a researcher in the areas of target identification, drug design, biologics, biotechnology, and innovative drug and dosage forms.

Appendix III. Content of the degree programme (art. 2.3)

The degree programme Biomedical Sciences offers the following R-tracks and R-specializations: Biomedical Sciences Research (R-specialization), Biology of Ageing (R-Track), Biology of Cancer and Immune System (R-specialization), Biology of Food and Nutrition (R-specialization) and Neuroscience (R-specialization). The degree programme Medical Pharmaceutical Sciences offers the following R-tracks and R-specializations: Medical Pharmaceutical Sciences (R-specialization), Toxicology and Drug Disposition (R-Track), Pharmacoepidemiology (R-Track) and Pharmaceutical Design and Engineering (R-specialization). Both programmes offer a Science, Business and Policy-specialization (SBP-specialization).

General requirements for all BMS R-Track/specializations:

Course unit	ECTS	Assessment	Practical	Entry
				requirements
research project (RP)	≥ 40	technical and/or laboratory	х	Safe
		skills, written report, oral		Microbiological
		presentation		Technique
				certificate#
research project (RP)	≥ 30	technical and/or laboratory	х	Safe
		skills, written report, oral		Microbiological
		presentation		Technique
				certificate#
colloquium	5	oral presentation	х	RP
essay	5	written report	x	-
master courses	≥ 30	see appendix IV	see app. IV	see appendix
				IV
electives	≤ 10	see appendix IV	see app. IV	see appendix
				IV

[#] Students who have not obtained a Safe Microbiological Technique certificate (VMT in Dutch) have to include the MBS course in the first year of their study programme.

General requirements for all MPS R-Tracks/specializations:

Course unit	ECTS	Assessment	Practical	Entry requirements
research project (RP)	≥ 40	technical and/or laboratory skills, written report, oral presentation	x	Safe Microbiological Technique certificate [#]
research project (RP)	≥ 30	technical and/or laboratory skills, written report, oral presentation	x	Safe Microbiological Technique certificate [#]
colloquium	5	oral presentation	Х	RP
essay	5	written report	Х	-
master courses	≥ 25-26*	see appendix IV	see app. IV	see appendix IV
electives	≤ 10-15*	see appendix IV	see app. IV	see appendix

[#] Students who have not obtained a Safe Microbiological Technique certificate (VMT in Dutch) have to include the MBS course in the first year of their study programme.

* Depending on the specialization or track chosen.

General requirements for the SBP-specialization:

Course unit	ECTS	Assessment	Practical	Entry
				requirements
research project (RP)	≥ 40	technical and/or laboratory	х	Safe
		skills, written report, oral		Microbiologic
		presentation		

				al Technique
				certificate#
colloquium	5	oral presentation	х	RP
master courses	5	see appendix IV	see app. IV	see
				appendix IV
course units: Science & Business and Science & Policy	2x10 = 20	assignment, exam	x	-
internship SBP	40	performance, written report, reflection report	х	RP, course units S&B
				and S&P
electives	≤ 10	see appendix IV	see app. IV	see
				appendix IV

[#] Students who have not obtained a Safe Microbiological Technique certificate (VMT in Dutch) have to include the MBS course in the first year of their study programme, unless the student will conduct a research project that does not involve any laboratory work.

The following rules apply to all programmes:

- the first research project must be performed at the Faculty of Science and Engineering (FSE) or the University Medical Center Groningen, under supervision of one of the appointed examiners for the respective master programme. The grade of the first research project must be registered before a second research project or the SBP-internship can be started.
- the student chooses a study mentor from the list of each master programme to advise and discuss the contents of the individual degree programme, before sending a signed programme proposal for approval to the Board of Examiners. The tracks and specializations Biology of Ageing, Biology of Cancer and Immune system, Biology of Food and Nutrition, Neuroscience, Toxicology and Drug Disposition, Pharmacoepidemiology and Pharmaceutical Design and Engineering have designated mentors, as mentioned on the student portal.
- all elements of the individual programme must be approved by the Board of Examiners before their start. the research projects, colloquium and essay must deal with different research subjects, and must be supervised by different examiners. The subject of the SBP-specialization internship must be clearly related to the scientific domain of the chosen master programme (see Appendix I). To conduct an SBP-internship, you will need 1. an SBP-examiner, and 2. a 'non-SBP examiner'. The colloquium cannot be done in the Science & Society group (or under supervision of an SBP-examiner) in case you follow the SBP-variant.
 electives can be:
 - an extension of a research project with 5 10 (BMS) or 15 (MPS) ECTS. In case a student has
 obtained an odd number of ECTS (due to a non-5 or 10 ECTS course), a research project may also
 be extended with less than 5 ECTS. Propositions for extensions of 10-15 ECTS must be requested
 before the start of the research project. Arrangements for extensions of 5-10 EC may also be made
 during the midterm evaluation.
 - extra master course units, including course units that are especially assigned as possible elective course units (see appendix IV).
 - o bachelor course units to repair specific deficiencies (maximum 10 ECTS).
 - \circ a research assignment of 5 10 (BMS) or 15 (MPS) ECTS.

Additional requirements for Biomedical Sciences

Additional requirements for the general research specialization Biomedical Sciences Research

- 30 ECTS master courses are filled with the following courses:
 - a. Courses (10 ECTS)

Course unit	ECTS
Introduction to Biomedical Sciences	10

b. 20 ECTS of other master courses chosen from the BMS master courses as listed in appendix IV.

Additional requirements for the research track Biology of Ageing:

- topics of both research projects, essay, and colloquium are chosen within the biology of ageing research _ area.
- 30 ECTS master courses are filled with the following courses: _ a. Courses (20 ECTS)

Course unit	ECTS
Introduction to Biomedical Sciences	10
Current Themes in Healthy Ageing	5
Molecular Biology of Ageing and Age- related Diseases	5

b. 5 ECTS from the following list of courses:

Course unit	ECTS
Advanced Metabolism & Nutrition	5
Immunology: from Bedside to Bench and	5
Back	
Neurodegenerative Diseases	5
Stem Cells & Regenerative Medicine	5
Microbiome, Diet & Health and Disease	5

c. 5 ECTS from the following list of courses:

Course unit	ECTS
Advanced Light Microscopy	5
Advanced Imaging Techniques	5
Practical Bioinformatics for Biologists	5
Scientific Writing	5
From Big Data to Personalised Medicine	5
Editing, Regulating and Targeting	5
Genomes with CRISPR-Cas9	

Additional requirements for the research specialization Biology of Cancer and Immune System:

- the subject of one research project (≥40 ECTS) and the subject of either the essay or the colloquium is _ chosen in the field of cancer and immune system research area. _
 - 30 ECTS master courses are filled with the following courses:

а	. Courses (15 ECTS)	iono ming oo
	Course unit	ECTS
	Introduction to Biomedical Sciences	10
	Immunology: from Bedside to Bench and	5
	Back	

15 ECTS from the following list of courses: b.

Course unit	ECTS
Current Themes in Oncology#	5
Cancer Research [#]	5
Stem Cells & Regenerative Medicine	5
Microbiome, Diet & Health and Disease	5
Editing, Regulating and Targeting Genomes with CRISPR-Cas9	5
From Big Data to Personalised Medicine	5
Translational Research in Respiratory Disease	5

choose at least one of these 2 course units

Additional requirements for the research specialization **Biology of Food and Nutrition**:

- topics of both research projects, essay, and colloquium are chosen within the food and nutritional life sciences research area.
- 30 ECTS master courses are filled with the following courses: a. Courses (15 ECTS)

Course unit	ECTS
Introduction to Biomedical Sciences	10
Advanced Metabolism & Nutrition	5

b: 15 ECTS from the following list of courses:

Course unit	ECTS
Nutrition in Medicine	5
Neurobiology of Nutrition	5
Microbiome, Diet & Health and Disease	5
Nutrition, Brain Development and Cognition	5
From Big Data to Personalised Medicine	5

Additional requirements for the research specialization Neuroscience:

- topics of both research projects, essay, and colloquium are chosen within the neuroscience research area.
 - 30 ECTS master courses are filled with the following courses:
 - a. Courses (25 ECTS)

Course unit	ECTS
Introduction to Biomedical Sciences	10
Neurodegenerative Diseases	5
Behavioral Pharmacology	5
Neurobiology of Psychiatric Disorders	5

b. 5 ECTS from the following list of courses:

Course unit	ECTS
Advanced Imaging Techniques	5
Nutrition, Brain Development and	5
Cognition	
Molecular Biology of Ageing and Age-	5
related Diseases	

Additional requirements for Medical Pharmaceutical Sciences:

The course unit Drug Development: from Design to Evaluation is compulsory for all MPS students.

Additional requirements for the general research specialization Medical Pharmaceutical Sciences Research:

- 25 ECTS master courses are filled with the following courses:

а	a. Courses (5 ECTS)	
	Course unit	ECTS
	Drug Development: from Design to	5
	Evaluation	

b. 20 ECTS of other master courses chosen from the MPS master courses as listed in appendix IV.

Additional requirements for the research track <u>Toxicology and Drug Disposition</u>:

- the subject of one research project (≥40 ECTS) and the subject of either the essay or the colloquium is chosen in the field of toxicology and/or drug disposition.
- 25 ECTS master courses are filled with the following courses:
 a. Courses (15 ECTS):

Course unit	ECTS
Drug Development: from Design to	5
Evaluation	
Molecular Toxicology	5
Advanced Pharmacokinetics	5

b. A minimum of 5 ECTS from the following list:

Course unit	ECTS
Pharmacovigilance	5
Animal and Human Experimentation*	5
Reproductive Toxicology and	5
Epidemiology	
Innovative Dosage Forms	5
Clinical Toxicology	5

* In consultation with the study mentor students can either follow this course or the 4 ECTS course handling laboratory animals (ex. Art.9 Experiments on Animals Act).

c. 5 ECTS of other master courses chosen from the MPS master courses as listed in appendix IV.

Additional requirements for the research track Pharmacoepidemiology:

- the subject of one research project (≥40 ECTS) and the subject of either the essay or the colloquium is chosen in the field of Pharmacoepidemiology.
- 26 ECTS master courses are filled with the following courses:
- a. Courses (26 ECTS):

Drug Development: from Design to 5 Evaluation 2 Medical Statistics 3 Basics in Medicine 8	ECTS
Evaluation Medical Statistics 3 Basics in Medicine 8	from Design to 5
Medical Statistics 3 Basics in Medicine 8	
Basics in Medicine 8	3
	8
Pharmacoepidemiology UK* 5	ogy UK* 5
Pharmacoepidemiology in Practice 5	ogy in Practice 5

* students who accomplished the equivalent course far-epi (= farmacoepidemiologie) in their bachelor programme will be exempted from this requirement. The remaining 5 ECTS should be considered as 5 ECTS extra electives in their master programme.

b. Suggested courses for \leq 14 ECTS electives:

Course unit	ECTS
Advanced Pharmacoepidemiology	5
Advanced Topics in	5
Pharmacoepidemiology	
Pharmaco-economics	5
Pharmacovigilance	5
Reproductive Toxicology and	5
Epidemiology	

Additional requirements for the research specialization Pharmaceutical Design and Engineering:

- the subject of one research project (≥40 ECTS) and the subject of either the essay or the colloquium is chosen in the field of target identification, drug design, biologics, biotechnology, or innovative drug and dosage forms. _
 - 25 EČTS master courses are filled with the following courses:
 - a. Courses (20 ECTS):

Course unit	ECTS
Drug Development: from Design to	5
Evaluation	
Innovative Dosage Forms	5
Pharmaceutical Biotechnology	5
Pharmaceutical Design and	5
Engineering	

b. 5 ECTS of other master courses chosen from the MPS master courses as listed in appendix IV. Suggested master courses and electives are given in de table below:

Course unit	ECTS
Advanced Imaging Techniques	5
Nanomedicine and Nanosafety	5
Pharmaceutical Biology Practical	5
Medicinal Natural Products	10
Non-Sterile Dosage Forms*	6
Solving Problems in Product	6
Technology *	
Biotechnology*	10
Introduction to the Pharmaceutical	6-12
Industry*	
Pharmacology of Chronic Diseases	5
and Ageing*	
Quantitative Bioanalysis*	5

* Courses with an asterisks can only be chosen as electives.

Appendix IV Electives (art. 2.4)

Table 1-3 below list study elements that can be chosen as 'master courses' or 'electives' in BMS, MPS or both. Additional knowledge may be required in specific course units. These requirements will be published on Ocasys. For up to date information regarding the courses, such as assessment, entry requirements and learning objectives, Ocasys is leading.

Table 4 and 5 list courses that can only be chosen as 'electives' in BMS, MPS or both (see column right). After consultation with the study mentor and approval of the Board of Examiners, students may also choose from options available from other departments, other universities in the Netherlands or even abroad.

Table 1:	Master	courses	available	for	BMS
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Course	ECTS	Programme
Advanced Metabolism & Nutrition	5	BMS
Current Themes in Healthy Ageing	5	BMS
Current Themes in Oncology	5	BMS
Immunology: from Bedside to Bench and Back	5	BMS
Molecular Biology of Ageing and Age-related Diseases	5	BMS
Neurodegenerative Diseases	5	BMS
Scientific Writing	5	BMS, MPS
Stem Cells & Regenerative Medicine	5	BMS
Cancer Research	5	BMS
Nutrition in Medicine	5	BMS
Neurobiology of Nutrition	5	BMS
Microbiome, Diet & Health and Disease	5	BMS
Nutrition, Brain Development and Cognition	5	BMS
Editing, Regulating and Targeting Genomes with CRISPR- Cas9	5	BMS
Introduction to Biomedical Sciences	10	BMS
From Big Data to Personalised Medicine	5	BMS, MPS
Translational Research in Respiratory Disease	5	BMS, MPS
Neurobiology of Psychiatric Disorders	5	BMS, MPS

[^]Students who follow the SBP-specialization can only choose this course unit as part of the 'electives' not as part of the 'master courses'.

Table 2: Master courses available for MPS

Course	ECTS	Programme
Advanced Pharmacoepidemiology	5	MPS
Advanced Pharmacokinetics	5	MPS
Drug Development: from Design to Evaluation	5	MPS, BMS
Advanced Topics in Pharmacoepidemiology	5	MPS
Innovative Dosage Forms	5	MPS
Medicinal Natural Products	10	MPS
Molecular Toxicology	5	MPS
Pharmaceutical Biology Practical	5	MPS
Pharmaceutical Biotechnology	5	MPS
Pharmaco-economics	5	MPS
Pharmacoepidemiology in Practice	5	MPS
Pharmacoepidemiology UK*	5	MPS
Pharmacovigilance	5	MPS
Reproductive Toxicology and Epidemiology	5	MPS
Selected topics in Molecular Pharmacology	3	MPS
Clinical Toxicology	5	MPS
Nanomedicine and Nanosafety	5	MPS
Microbiological Safety	1	MPS, BMS
Pharmaceutical Design and Engineering	5	MPS

Table 3: General Life Sciences master courses

Course	ECTS	Programme
Advanced Light Microscopy	5	BMS
Advanced Imaging Techniques	5	BMS, MPS
Advanced Statistics	5	BMS
Animal and Human Experiment.: Design, Practice and Ethics [^]	5	BMS, MPS
Behavioural Pharmacology	5	BMS, MPS
Introduction to the Behavioural and Cognitive Neurosciences	4	BMS
Science & Business#	10	BMS, MPS
Science & Policy#	10	BMS, MPS
Orientation on International Scientific Careers	5	BMS, MPS
Programming in C ⁺⁺ for Biologists	5	BMS
Radioisotopes in Experimental Biology	5	BMS, MPS
Practical Bioinformatics for Biologists	5	BMS

^ In consultation with the study mentor students can either follow this course or the 4 ECTS course handling laboratory animals, (ex. Art.9 Experiments on Animals Act). However, only one of these courses may be chosen as 'master course'.

[#] Students who follow a R-track/specialization may only choose one of these courses as part of the 'electives' not as part of the 'master courses'.

Table 4: Elective master courses organized by other Master Programmes

Course	ECTS	Programme
DNA Micro-array Analysis	5	BMS, MPS
Science Communication Skills	5	BMS, MPS
Introduction to Research in Science Education and Communication	5	BMS, MPS
Science Communication and Journalism	5	BMS, MPS
Science Education and Communication Design	10	BMS, MPS
iGEM (International Genetically Engineered Machine competition)*	20	BMS, MPS
Science and the Public	5	BMS, MPS
Non-Sterile Dosage Forms	6	MPS
Solving Problems in Product Technology	6	MPS
Biotechnology	10	MPS
Introduction to the Pharmaceutical Industry	6-12	MPS
Pharmacology of Chronic Diseases and Ageing	5	MPS
Quantitative Bioanalysis	5	MPS

* Selection for this competition takes place in winter time, an advertisement about application details will be announced via the student portal during the academic year.

Course (max 2 ects per individual programme^)	Half day unit^	Programme
Access basic	5	BMS, MPS
Excel basic	5	BMS, MPS
Excel module draaitabellen	1	BMS, MPS

Table 5: Elective master courses organised by The Donald Smits Center for Information Technology:

[^] A minimum of 5 half day units is required for a study load of 1 ECTS, for 2 ECTS 11 units are needed. These courses have additional costs (low student tariff), which are at the student's own expenses. These courses are not available in Ocasys. Please consult the Center for Information Technology for further information, time schedules, language of instruction and enrolment details.

Appendix V Entry requirements and compulsory order of examinations (art. 3.4)

Course unit	Entry requirement
Research project	Safe Microbiological Technique certificate
Colloquium	Research project
Research project 2	Research project
Internship Science Business & Policy	Research project + courses Science & Business and Science & Policy

Appendix VI Admission to the degree programme and the different track/specializations (art. 5.1.1 + art. 5.2)

1. Requirements for admission to the master degree in Biomedical Sciences

Holders of the following Bachelor's degrees from the University of Groningen are considered to have sufficient knowledge and skills and can be admitted to the Master's degree programme in Biomedical Sciences on that basis:

- a Bachelor's degree in Biology with one of the following majors:
 - > Biomedical Sciences.
 - Behavior & Neurosciences.
 - Molecular Life Sciences plus the minor Biomedical Sciences/Behavior & Neurosciences (including the courses receptor pharmacology, immunology I Molecular Biology & Medical Biology).
- a Bachelor's degree in Life Science & Technology with one of the following majors:
 - > Biomedical Sciences.
 - > Behavior & Neurosciences.
 - Molecular Life Sciences plus the minor Biomedical Sciences/Behavior & Neurosciences (including the courses receptor pharmacology, immunology I Molecular Biology & Medical Biology).
 - Medical Pharmaceutical Sciences plus the courses (pharmaceutical/medical) microbiology and neurobiology.

Students lacking one or two of the above mentioned courses, may sometimes be admitted on the condition of including these courses within the electives of the master programme.

Students with a comparable Bachelor's degree from another Dutch or foreign university, focusing on knowledge and skills at the interface of molecular and cellular biology, organic chemistry and biochemistry, integrative physiology and behaviour, and medical sciences, may also qualify for admission. However, admission is then granted on an individual basis by the Admission Board.

2. Requirements for admission to the master degree in <u>Medical Pharmaceutical Sciences</u>

Holders of the following Bachelor's degrees from the University of Groningen are considered to have sufficient knowledge and skills and will be admitted to the Master's degree programme in Medical Pharmaceutical Sciences on that basis:

- a Bachelor's degree in Pharmacy or Pharmaceutical Sciences.
 - a Bachelor's degree in Life Science & Technology with one of the following majors:
 - > Medical Pharmaceutical Sciences.
 - > Biomedical Sciences including/plus the courses receptor pharmacology and Drugs: from target to use, or the minor Pharmacy.
 - Molecular Life Sciences plus the minor Biomedical Sciences/Behavior & Neurosciences (including courses receptor pharmacology and immunology I), or the minor Pharmacy.
- a Bachelor's degree in Biology with one of the following majors
 - > Biomedical Sciences including/plus the courses receptor pharmacology and Drugs: from target to use, or the minor Pharmacy.
 - Molecular Life Sciences plus the minor Biomedical Sciences/Behavior & Neurosciences (including courses receptor pharmacology and immunology I or the minor Pharmacy.

Students lacking one or two of the above mentioned courses, may sometimes be admitted on the condition of including these courses within the electives of the master programme.

Students with a comparable Bachelor's degree from another Dutch or foreign university, focusing on knowledge and skills at the interface of molecular and cellular biology, organic chemistry and biochemistry, and pharmaceutical sciences, may also qualify for admission. However, admission is then granted on an individual basis by the Admission Board.