

# Study guide

## Bachelor's Degree Programme in Medicine

### 2024-2025



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# Table of contents

Introduction .....	6
Bachelor's Degree Programme in Medicine .....	7
Organisation.....	7
Causes of Diseases .....	8
Competency Development.....	9
Knowledge Development (progress test) .....	10
Standardised schedule per week (modelweek) .....	11
How do I study?.....	11
Bachelor's degree year 1 .....	12
Causes of Diseases .....	12
1.1 Development and metabolic diseases .....	12
1.2 Endocrine regulation, blood and neoplasms.....	12
1.3 Infection and immune system .....	13
1.4 Ischemia.....	13
1.5 Trauma (ABCDE) .....	13
1.6 Degeneration, vulnerability and disease.....	14
Practical sessions.....	14
Assessment.....	15
Competency Development.....	15
Learning pathway Professional Development.....	15
Learning pathway Medical Consultation .....	15
Learning pathway Healthy Ageing.....	16
Learning pathway Scientific Training.....	16
Assessment.....	16
Binding Study Advice (BSA).....	17
Vaccination programme .....	18
Bachelor's degree year 2.....	19
Causes of Diseases .....	19
2.1 Systemic diseases .....	19

2.2 Dyspnea and fatigue .....	19
2.3 Digestive tract and neoplasms .....	20
2.4 Endocrinology and reproduction.....	20
2.5 Women and child's health.....	21
2.6 Growth and development .....	21
Practical sessions.....	22
Assessment.....	22
Competency development.....	22
Learning pathway Professional Development.....	22
Learning pathway Medical Consultation .....	22
Learning pathways Healthy Ageing en Scientific Training.....	23
Profile education .....	23
Statistics.....	23
Assessment.....	24
Bachelor's degree year 3.....	25
Causes of Disease .....	25
3.1 Sensation and react.....	25
3.2 Brain and cognition .....	25
3.3 Psychiatric health and disease.....	26
3.4 Acute medicine I .....	26
3.5 Acute medicine II.....	27
Practical sessions.....	27
Assessment.....	27
Competency Development semester 3.1 .....	28
Learning pathway Professional Development.....	28
Learning pathway Medical Consultation .....	28
Learning pathway Healthy Ageing.....	28
Learning pathway Scientific Training.....	28
Assessment 3.1.....	28
Competency Development semester 3.2: the Bachelor's Project.....	29
Assessment 3.2.....	29
Information for recidivists.....	30

Frequently Asked Questions about restarts .....	30
Flowcharts.....	31
JSM and Honours.....	33
Continuation with Master’s degree in Medicine.....	34
Practical information.....	35
Contact information .....	35
Enrolment .....	35
Timetable .....	35
Book list .....	36
Brightspace .....	36
Scorion.....	36
OnStage.....	36
Progress .....	36
Video registration lectures .....	37
Study guidance .....	37
Student well-being and support .....	37
Evaluation of education .....	37
Student representation.....	38
Useful websites .....	38
Map.....	39
Important documents .....	40
Framework for Undergraduate Medical Education 2020 .....	40
Student Charter .....	40
TER, Assessment plan, Rules&Regulations en Examination Requirements.....	40

# Introduction

Dear student,

Welcome to the Bachelor's Degree Programme in Medicine at the University of Groningen (RUG), the first phase in becoming a doctor. This phase of your training provides the foundation for both the knowledge and the competencies you will need as a future medical doctor.

Our programme is characterized by, education aimed at acquiring knowledge on one hand (education units Causes of Diseases and Knowledge Progression) and education aimed at acquiring the competencies on the other hand (education units Competency Development) which are necessary to perform well as a doctor. It may seem as if there is a separation between these two components, but in reality knowledge and competencies continuously overlap.

Another feature of our programme is that many education is provided in small-scale form. In small groups you will be studying the study material yourself. In addition, there are of course larger-scale educational forms (lectures) that support the learning material, such as the patient lectures, the starting point of every new subject.

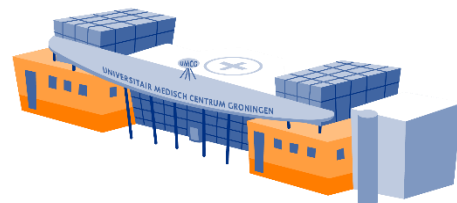
You will be following the Bachelor's Degree Programme in Medicine together with other students who are in the same Learning Community as you. The educational content is largely the same for the different Learning Communities. However, there are some accents that match the focus of the community.

In this study guide you will find all the information you need to successfully complete the Bachelor's Degree Programme in Medicine. We hope you can find your way through this easily and would like to hear from you if anything is missing.

We wish you success during the first years of your medical training!

Kind regards,

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# Bachelor's Degree Programme in Medicine

The aim of the G2020 Bachelor's and Master's degree programmes in Medicine is to train students to become healthcare professionals with qualifications as described in the 2020 Framework for Undergraduate Medical Education. The learning outcomes for the healthcare professional are formulated as competencies in different domains based on the CanMEDS framework. The purpose of the courses Competency Development is the acquisition of the Framework competencies at Bachelor level.

In G2020, in accordance with the Framework, the following competency domains are used:

1. Medical expertise
2. Communication
3. Collaboration
4. Scientific Training
5. Leadership
6. Management in Social Context
7. Professionalism

## Organisation

The G2020 Bachelor's degree programme consists of the following courses:

- Causes of Diseases (CoD)
- Competency Development including four Learning Communities (LCs)
- Knowledge Development (interfaculty progress test)

Year 1	CoD 1.1 (5)	CoD 1.2 (7)	CoD 1.3 (6)		CoD 1.4 (5)	CoD 1.5 (5)	CoD 1.6 (7)	BSA 45/60
	Competency Development 1.1 (10)				Competency Development 1.2 (11)			
	Progress test (4)							
Year 2	CoD 2.1 (5)	CoD 2.2 (6)	CoD 2.3 (7)		CoD 2.4 (5)	CoD 2.5 (5)	CoD 2.6 (8)	
	Competency Development 2.1 (10)				Competency Development 2.2 (10)			
	Progress test (4)							
Year 3	CoD 3.1 (6)	CoD 3.2 (6)	CoD 3.3 (6)		CoD 3.4 (4)	CoD 3.5 (4)	Competency Development 3.2:	BSc 180
	Competency Development 3.1 (10)				Bachelor Project (20)			
	Progress test(4)							

Figure 1 Bachelor's Degree Programme in Medicine.

Each academic year is divided into two semesters including two or three courses Causes of Diseases and one course Competency Development per semester. The course Knowledge

Development takes place the entire academic year and exists of four tests per year. Figure 1 provides an overview of the current Bachelor's Degree Programme in Medicine including European Credits per course in brackets. Please be aware of the binding study advice (BSA) in the first year, which means that first-year students must earn at least 45 ECTS to continue to the second year. Upon earning 180 credits after three years of study, you will receive the Bachelor of Science (BSc) diploma.

## Causes of Diseases

In the Causes of Diseases courses students build up knowledge of basic subjects as well as clinical subjects. Education focusses on the competency domain Medical expertise. Explicitly programming the knowledge in these courses makes it recognizable for students. Within each Causes of Diseases course, one health symptoms is highlighted. Symptoms are clustered into themes of several weeks in order to prevent fragmentation and to provide structure.

Each week is organized according to a set cycle (see Figure 2). Each week begins with a patient lecture, where a patient's problem is discussed. In a tutor group of 10-12 students, you study the basic knowledge needed to understand the patient's issue together with other students. You examine which complaints are associated with the symptoms of a disease. Then, you explore various aspects of the symptom(s) and the disease(s): molecular background, etiology, pathogenesis, and symptomatology, including what happens at anatomical, physiological, cellular, molecular, and psychological levels, and how treatment can address these issues. This small-scale tutorial education is supported by lectures, seminars, and practical sessions from various disciplines. In this way, basic subjects are integrated with clinical content.



Figure 2. Cycle of learning activities within Causes of Diseases.



In this way, you build a solid and broad foundation of knowledge over the three years. The integration of both basic and clinical subjects ensures a holistic approach to medical knowledge, preparing you well for your future career in healthcare.

### Competency Development

In the Competency Development, you learn to apply your (medical) knowledge, skills, and professional attitude in assignments, training sessions, and presentations (see figure 3). You do this within the context of a Learning Community (LC), a learning environment where you actively engage with assignments to acquire competencies, learn to collaborate with others, and develop academically.

G2020 offers three Dutch-speaking Learning Communities and one English-speaking one.

The Dutch-speaking LCs are:

LC Sustainable Care (SC)

LC Intramural Care (IC)

LC Innovative Healthcare (IH)

The English-speaking Learning Community is LC Global Health (GH)

Since the entire year group is divided into four LCs, you collaborate more frequently with the same students and become familiar with the programme more quickly. You work together in coach groups and work groups of 10-12 students. The large-scale lectures that support the assignments are often attended together with students from the other LCs.

### WHAT DOES MY COMPETENCY DEVELOPMENT EDUCATION LOOK LIKE?

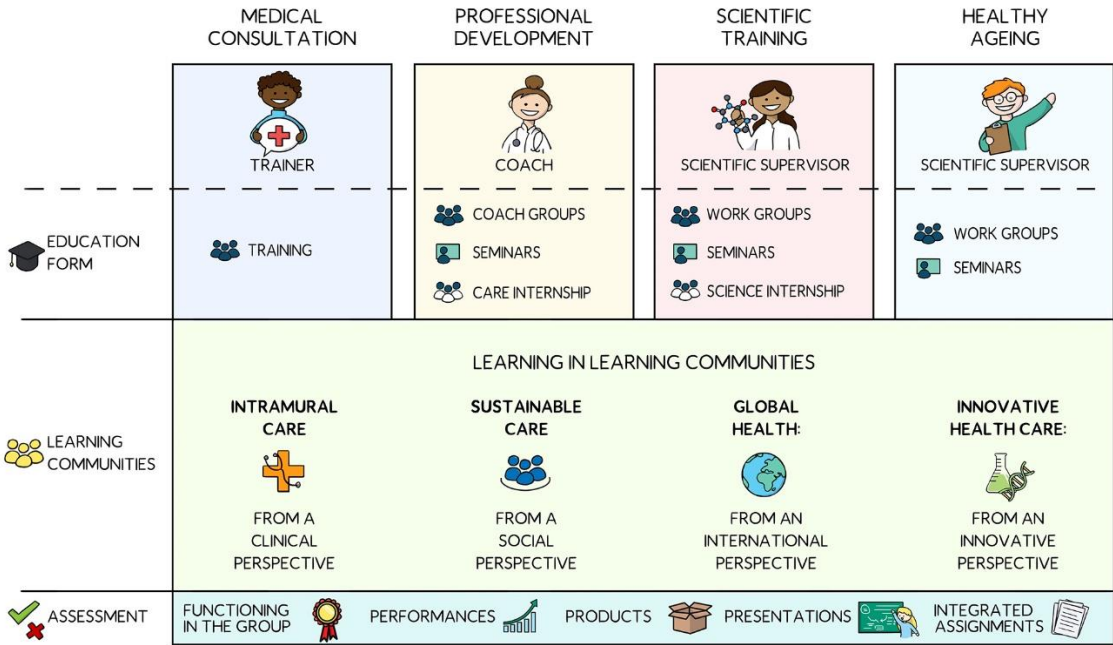


Figure 3. Competency Development Bachelor's degree programme in Medicine

In Competency Development, we work with longitudinal learning pathways that span from year 1 to year 3. There are four learning pathways, each with its own theme, which together form the foundation for competency-based education:

- Learning pathway Professional Development
- Learning pathway Medical Consultation
- Learning pathway Healthy Ageing
- Learning pathway Scientific Training

The focus of the Professional Development pathway is on your growth in the competency domains of Professionalism, Leadership, and Collaboration. This pathway emphasizes both observable professional behaviour, such as being reliable in commitments, preparing work well, and giving and receiving constructive feedback, as well as developing critical thinking and justifying decisions.

In the Medical Consultation pathway, you will develop your communication skills as a future physician. Skills for conducting a good consultation are essential to understanding the patient's care needs and building a trusting relationship. The ability to communicate with other professionals, both within and outside of healthcare, is also important.

In the Healthy Ageing pathway, the competency of Social Responsibility is central. This pathway focuses on promoting health (both at the individual and population levels) and preventing illness, or, when necessary, managing limitations and ensuring optimal participation in society.

In the pathway Scientific Training, you learn to handle (medical) information objectively and wisely and to investigate it using scientific sources. Additionally, conducting scientific research is part of this pathway.

These learning pathways are identical for every LC, but the context in which you achieve the learning objectives aligns with the perspective of the Learning Community you have chosen. For example, take an assignment on vulnerable groups in year 1. This assignment examines the influence of the physical environment on the resilience and vulnerability of people through neighbourhood analyses. LC Sustainable Care (SC) focuses on the vulnerability of elderly people with psychiatric conditions living at home, LC Intramural Care (IC) examines the vulnerability of elderly hospital patients with multiple chronic diseases, LC Innovative Healthcare (IH) explores the situation of patients undergoing home dialysis, and LC Global Health (GH) focuses on patients with a migration background.

## Knowledge Development (progress test)

In the Knowledge Development courses, knowledge development is assessed using the Interfaculty Progress Test. The progress test is an objective instrument to measure students' knowledge and development in knowledge. This test is administered among all medical students

form all eight medical faculties four times a year. It is not the curriculum that is tested, but rather what students learn during the study of Medicine. The progress test is about applying acquired knowledge. The difference in knowledge level is reflected in the difference in test results. All students, from year 1 through year 6, take the same exam which is always an adaptive multiple-choice test. It is expected that an individual student will achieve a higher score on each test than on previous tests as a result of knowledge acquired in the teaching programme. Most likely, an individual student will achieve a higher score on each test than on previous tests as a result of knowledge acquired in the teaching programme.



*Figure 4. Knowledge Development course.*

### Standardised schedule per week (modelweek)

Each week, the different educational activities are planned in a certain order, which we call the 'model week'. This provides clarity and structure. The model week starts with an introductory and a patient lecture. On the days, there are tutorials and practicals. The tutor education of Causes of Diseases is in the evening. In year 1, this is on Wednesday and Monday evenings, in year 2 on Tuesday and Thursday evenings. You must take this into account when planning activities outside your studies, because the tutor education is compulsory. Competence development is usually on the programme in the afternoon. These educational activities can change per week.

### How do I study?

The e-learning modules in [Learning to study](#) guide you through the G2020 curriculum. These modules offer information, tips and tricks for a flying start and a successful continuation of your studies. Our advice is: participate in all the education offered (including the non-compulsory education such as lectures) and prepare for it. Active participation in education ensures that knowledge is better anchored in your brain and is easily accessible later in your studies. This prevents stress at the deadline for an assignment or test.

# Bachelor's degree year 1

## Causes of Diseases

### 1.1 Development and metabolic diseases

This course focuses on development. Disorders in early development, sometimes caused by a genetic defect, have significant consequences for normal development. The following topics are addressed: chromosomal abnormalities as well as (abnormalities in) embryonic development, protein metabolism, and energy metabolism.

This course lasts five weeks and the following disciplines will be covered:

- Anatomy
- Cell biology
- Pharmacology
- Physiology
- Histology
- Clinical genetics
- Paediatrics/paediatric neurology

### 1.2 Endocrine regulation, blood and neoplasms

This course focuses on how (neuro)endocrine signals regulate physiological processes in the body. Additionally, several hematological disorders will be addressed, and an introduction to oncology will be provided using breast cancer as an example.

This course lasts seven weeks and the following disciplines will be covered:

- Anatomy
- Cell biology
- Endocrinology
- Ethics
- Physiology
- Genetics
- Haematology
- Oncology
- Pathology
- Radiology
- Social medicine

### **1.3 Infection and immune system**

This course focuses on infection and immunity. The various sources of infection, such as bacteria and viruses, will be addressed, and simultaneously, it will be explained how the immune system can defend itself against these infections. Additionally, some issues with the immune system will be addressed, including autoimmune diseases and allergies

This course lasts six weeks and the following disciplines will be covered:

- Allergology
- Bacteriology
- Histology
- (clinical) Immunology
- Infectious disease
- Microbiology
- Virology

### **1.4 Ischemia**

This course focuses on ischemia. This is defined as a shortage of blood in organs and tissues, leading to insufficient delivery of oxygen and nutrients and inadequate removal of waste products. The oxygen supply of the blood is a crucial part of respiration, and situations where this becomes more challenging than usual (shortness of breath) will be discussed. Additionally, arrhythmias and abnormalities of both heart valves and peripheral vessels will be addressed as manifestations of problems with blood supply

This course lasts three weeks and the following disciplines will be covered:

- Anatomy
- Cardiology
- Physiology
- Histology
- Pulmonology

### **1.5 Trauma (ABCDE)**

This course focuses on a systematic approach to life-threatening conditions according to the ABCDE principle will be central. To understand what to look for in this context, knowledge of respiration, the cardiovascular system, and renal regulatory mechanisms is required. The underlying anatomy and physiology will also be addressed in detail.

This course lasts four weeks and the following disciplines will be covered:

- Anatomy
- Pharmacology

- Physiology
- GP medicine
- Intensive Care
- Radiology
- Trauma surgery

## **1.6 Degeneration, vulnerability and disease**

This course focuses on the process of aging, with attention to questions such as: Is old age inherently associated with vulnerability? Or, if not, how do you accurately assess vulnerability? This topic will build on the (neuro)physiological, anatomical, and histological knowledge covered so far. Additionally, the relationship with the patient will be explored through the discussion of various conditions such as osteoarthritis and osteoporosis, addressing aspects like stress, the experience of illness, and coping.

This course lasts seven weeks and the following disciplines will be covered:

- Anatomy
- Pharmacology
- Physiology
- Geriatrics
- Medical history
- Histology
- Gastro-enterology and liver diseases (MDL in Dutch)
- Medical psychology
- Orthopedic surgery
- Medical law
- Rehabilitation medicine
- Social medicine

## **Practical sessions**

The purpose of practical sessions is to enhance your medical knowledge and skills and apply them in practice. This includes skills such as conducting interviews, performing physical examinations, and gaining insight into anatomy and physiology in the dissection room. It is mandatory to register in advance for each practical session. This is to ensure the preparation and ordering of necessary materials as well as arranging for simulation patients. More information can be found at [Brightspace](#).

## **Assessment**

Each course is concluded with a single (digital) knowledge test. For each course, there is also one opportunity for retaking the test. The curriculum development includes formulating learning objectives for each course, determining the study material (derived from the Framework Plan), and establishing the grading method. All tests are entirely multiple-choice and consist of closed and open-book questions. The tests are administered at the designated location, and the timing of the tests is included in the faculty's annual schedule and in the [timetable](#).

## **Competency Development**

### **Learning pathway Professional Development**

The education in this learning pathway consists of lectures, assignments, coach group meetings led by a doctor, and personal development workshops. The workshops focus on personal values and goals. Additionally, you will spend a (part of the) day in practice with your coach. The assignment in the first semester is 'The Good Doctor,'. You will write an essay about what you consider to be a good doctor and what kind of doctor you want to become. In the second semester, you will complete a two-week care clerkship, where you will get acquainted with patient care and other healthcare professionals.

Every semester, you will have a progress and a final interview with your coach. The progress interview in the second semester is optional.

### *Care clerkship*

The care clerkship is part of the Competency Development for all first-year medical students and lasts for a period of two weeks. The care clerkship alternates with the scientific internship in the schedule. It is an intensive introduction to patient care and institutional healthcare, making it an important step in the development of becoming a medical professional. You will work for two weeks alongside the nursing or care staff of a department in a hospital, nursing home, or home care setting at the level of a nursing student in an orientating clerkship. During the care clerkship, you are not allowed to perform technical medical or nursing procedures. The focus is on getting to know the patient's position in healthcare as well as understanding the organization of that care. Central to this is the care provided to patients by nurses. Additionally, during the care clerkship, you will interview a patient or client.

### **Learning pathway Medical Consultation**

During the first year, you will learn basic communication skills for medical consultations. Each semester consists of four training sessions. In the first semester, you will start developing communication skills that are important for active and empathetic listening. You will apply these skills in the second semester when helping to develop a healthy lifestyle through motivational interviewing a peer student.

## **Learning pathway Healthy Ageing**

In the first semester, the assignment is to create an infographic on Healthy Ageing. You will choose a health issue, propose an intervention, and supporting this in a separate document. You will also individually write a reflection report on Healthy Ageing within your own Learning Community. In the second semester, you will investigate the complex relationship between health and the physical (living) environment in the assignment "Resilience and Vulnerability." In the "Pain" assignment, each subgroup will prepare a referral for the patient to a healthcare professional needed to for additional healthcare.

## **Learning pathway Scientific Training**

### *Statistics*

In the first semester, you will learn some basic skills of evidence-based medicine (EBM): reading, interpreting, assessing and presenting scientific literature. For this, you need knowledge of the most important epidemiological and statistical concepts that you encounter in medical-scientific literature. Therefore, the statistics and epidemiology education starts in this semester. The lectures and compulsory statistics practicals lay the foundation for the scientific internship in the second semester. The statistics component is tested separately by means of an exam with multiple-choice questions.

### *Scientific internship*

In the second semester, during the scientific internship, you will go through a number of steps of a scientific study, in simplified form, together with your internship group and your group partner. The data that you will use and analyze for the internship and to answer a research question, come from an available database or you will receive them via your internship supervisor. As a duo (together with your group partner), you will then write a report according to the standard of a scientific framework based on the analysis of the research question and a corresponding literature study. You will learn to use and work with literature search engines for scientific research.

## **Assessment**

In the Competency Development course, the assessment of the competencies is based on your functioning and the completion of various assignments. These assessments lead to a final mark and advice. Via the digital portfolio system Scorion you will submit your assignments for assessment. Subsequently, you will receive narrative feedback and a summative grade (4-10) from your trainer, coach or scientific supervisor. Based on all these grades, an average grade for each competency domain will be calculated. On this basis, the examiner determines the final grade for the Competence Development.

The tutors provide feedback on your performance in the tutor group. This feedback is in principle to learn from. Only when there is doubt about your final mark for competence development, this



feedback can be used by the examiner and possibly be decisive in this.

## Binding Study Advice (BSA)

For students of the University of Groningen, the Faculty BSA regulation applies to Bachelor students. The minimum requirement for the BSA is 45 ECTS in the first year of enrollment. The final study advice is given at the end of the first academic year, no later than July 31, and it can be either positive (if you have obtained at least 45 ECTS from the first year of the programme) or negative (if you have earned less than 45 ECTS from the first year of the program).

Within the Faculty of Medical Sciences, the Faculty BSA Committee handles this regulation. The BSA committee administers the binding study advice (BSA). Throughout the academic year, the BSA committee provides various recommendations to you as student and determines whether you qualify for an exception to the BSA (BSA deferral) in cases of exceptional personal circumstances. If you experience any such personal circumstances, please notify your study advisor promptly and/or contact us via [bsa@umcg.nl](mailto:bsa@umcg.nl).

### What is the 1 March scheme?

The March 1st deadline is an important moment for withdrawing if the BSA requirements are unlikely to be met. If a first-year student withdraws from the medical program via Studielink before March 1st, no BSA will be issued, and the student is allowed to start the program again the following year. Selection or lottery will no longer apply in that case. Previously achieved study results will remain valid. After withdrawal, tuition fees will be refunded for the months in which the student is no longer registered as an RUG student; from March through August. More information can be found [here](#).

### What is the 1 February scheme?

If someone wants to permanently stop studying in higher education, the 1 February scheme of DUO applies. This means that utilized DUO provisions (e.g. public transport product and grant) will be converted into a gift if one withdraws via Studielink before February 1st. Normally, such provisions are granted after obtaining a diploma. Since those who stop without a diploma are unable to meet this requirement, the 1 February scheme offers a financial solution with DUO. After withdrawal, the RUG refunds the tuition fees for the period from February to August of the enrolled year. More information can be found [here](#).

### How do you use these two schemes?

Very simple: you deregister as a medical student before the above dates via Studielink. Let the degree programme know that you are going to stop (temporarily) as well. Tell your tutor and/or coach and/or academic supervisor and send your decision by email to [g2020-basic1@umcg.nl](mailto:g2020-basic1@umcg.nl) and [g2020-comp1@umcg.nl](mailto:g2020-comp1@umcg.nl)

## Vaccination programme

Through your study activities, you may soon come into contact with human materials from patients and fellow students. You are therefore at risk of exposure to bacteria and viruses; to catch or spread an infectious disease. Healthcare institutions have also established infection prevention policies and if a student does not comply, the student is not welcome and cannot attend education. We want to prevent all this as much as possible. More information can be found on the [Vaccinations medical bachelors course](#)

# Bachelor's degree year 2

## Causes of Diseases

### 2.1 Systemic diseases

This course focuses on systemic diseases, which are typically autoimmune diseases affecting multiple organs and tissues as the immune system turns against the body itself. These diseases, which can cause skin issues, joint problems, general systemic symptoms sometimes including a butterfly-shaped rash, and potential kidney problems, will be addressed. Additionally, specific infectious diseases (bacterial or viral) that can simultaneously impact multiple organ systems will be covered.

This course lasts five weeks and the following disciplines will be covered:

- Dermatology
- Pharmacology
- Physiology
- Medial history
- Histology
- (clinical) Immunology
- Internal medicine
- Medical Microbiology (MMB in Dutch)
- Nefrology
- Pathology
- Rheumatology

### 2.2 Dyspnea and fatigue

This course can be separated into two parts. On one hand, heart failure, shortness of breath (in chronic lung conditions), and lung cancer will be covered. On the other hand, breast cancer, leukemia, and lymphomas will be addressed. Additionally, a comprehensive focus will be given to various aspects surrounding death, including both the cellular biological (basic) principles and the psychosocial impact.

This course lasts seven weeks and the following disciplines will be covered:

- Cardiology/cardiogenetics
- Cell biology
- Surgery
- Pharmacotherapy
- Social medicine
- Physiology
- Medial history

- Haematology
- GP medicine
- Pulmonology
- Oncology
- Palliative care
- Pathology
- Radiology
- Radiotherapy

### **2.3 Digestive tract and neoplasms**

This course focuses on (malignant conditions of) the digestive tract. The topics addressed include: swallowing difficulties, acid reflux, jaundice, and blood in the stool. The entire digestive tract will be reviewed along with associated disease conditions. Additionally, attention will be given to skin cancer, prostate cancer, and bone tumors.

This course lasts seven weeks and the following disciplines will be covered:

- Anatomy
- Surgery
- Dermatology
- Epidemiology
- Pharmacotherapy
- Physiology
- Histology
- GP medicine
- ENT
- Gastro-enterology and liver diseases (MDL in Dutch)
- Oncology
- Orthopaedic surgery
- Pathology
- Radiology
- Rehabilitation medicine
- Social medicine
- Urology

### **2.4 Endocrinology and reproduction**

This course focuses on hormones. Hormones are signaling molecules that transmit messages within and between cells. Many processes in the body are regulated by these hormones. Topics addressed include endocrinology (e.g., diabetes) as well as the hormonal menstrual cycle, contraception, and subfertility/infertility.

This course lasts five weeks and the following disciplines will be covered:

- Anatomy
- Endocrinology
- Pharmacology
- Pharmacotherapy
- Physiology
- Gynaecology
- GP medicine
- Oncology
- Social medicine

## **2.5 Women and child's health**

This course focuses on pregnancy/giving birth as well as fetal development. Topics addressed include: (un-)complicated pregnancy, birth (including cesarean sections), and fetal growth/development. Additionally, attention will be given to the pelvic area, including issues such as incontinence and prolapse, as well as some gynecological malignancies.

This course lasts five weeks and the following disciplines will be covered:

- Abdominal surgery
- Anatomy/embryology
- Physiology
- Gynaecology
- Oncology
- Psychiatry
- Social medicine
- Obstetrics

## **2.6 Growth and development**

This course focuses on the child. Both growth and development as well as some common childhood conditions will be addressed. This includes among other delayed growth, abnormal gait, slow development, and behavioral problems. Additionally, we will focus on healthy development, a process that begins even before birth. The conditions covered include jaundice in infants, cyanotic conditions, fever in children, and respiratory distress in children

This course lasts nine weeks and the following disciplines will be covered:

- Anatomy/embryology
- Cardiology
- Dermatology

- Pharmacology
- (medical) Physiology
- GP medicine
- Paediatrics/paediatric cardiology/paediatric surgery/paediatric pulmonology- and allergology/paediatric orthopaedic surgery/paediatric-gastro-enterology and liver diseases/peadiatric neurology/paediatric urology
- Child and adolescent psychiatry
- Clinical genetics
- Neonatology
- Social medicine

### **Practical sessions**

More information about practical sessions can be found in chapter [Bachelor's degree year 1](#).

### **Assessment**

More information about assessment can be found in chapter [Bachelor's degree year 1](#).

## **Competency development**

### **Learning pathway Professional Development**

In the second year of the Bachelor's degree programme, Professional Development focuses on the relationship between physicians and society. Through various topics and concepts, we explore how the role of the physician evolves alongside society, and we address the knowledge and skills needed to navigate this dynamic.

The education include lectures, coach group meetings, personal development workshops, and Profile Education. The personal development workshops cover topics such as Maintaining a balance between study and personal life, as well as Identifying strengths and weaknesses. Additionally, you will have the opportunity to shadow your coach this year. Each semester concludes with an individual conversation with your coach.

### **Learning pathway Medical Consultation**

In the second year, each semester consists of three training sessions. During these sessions, you apply basic communication skills in the various phases of a medical consultation. In the first semester, you learn to apply these skills in the initial three phases of a medical consultation, specifically during the anamnesis. This involves taking a medical history, clarifying the patient's chief complaint and exploring their main symptoms. By doing so, you learn to establish a connection with the patient while simultaneously initiating the process of clinical reasoning. In

the second semester, you focus on the final phases of the medical consultation: the diagnostic and treatment conversation.

### **Learning pathways Healthy Ageing en Scientific Training**

In the second year, scientific skills are integrated into the assignments from the Healthy Ageing pathway. In the assignment 'Lifestyle and health', you work out a health problem in the form of a PICO research question (Patient-Intervention-Comparison-Outcome). This is a scientific way to substantiate the best treatment for a patient. For the assignment 'Quality of life and death', you write an 'Advanced Care Plan' a care plan for a patient in the palliative phase. In addition to the patient's treatment wishes, treatment limits are also discussed. You justify choices made, based on scientific sources.

In the second semester, for the assignment 'Reproductive Health,' you will study a specific question about reproduction following the principles of Evidence-Based Medicine. You will search the literature using a PICO-CAT (Patient Intervention Comparison Outcome - Critically Appraised Topic). You will prepare a simulated interprofessional meeting (IPO), where various healthcare professionals collaborate to develop a treatment plan.

In the final assignment of year two, you will study the concept of the first 1000 days. You will explore health issues during this period and translate one of these issues into a proposal for a fictional scientific study.

### **Profile education**

The elective profile projects are designed to help you discover and develop your own profile within the various physician profiles. The faculty offers profile projects in different formats. Ideally, you will take advantage of a customized option in the form of an individual profiling project, where you create your own plan that you can follow after approval. If that's not possible, there are ready-made courses and projects available for which you can register as an alternative.

At [Brightspace](#) you will find the manual with general information. In addition, there is a syllabus available that lists the various courses and projects you can register for. For questions, you can email [profiling.geneeskunde@umcg.nl](mailto:profiling.geneeskunde@umcg.nl).

### **Statistics**

In support of the research proposal as preparation for the Bachelor's project in year three, four statistics practicals are scheduled in the second semester of year 2. The theory and application of linear regression models will be covered: you will explore how a continuous response variable can be explained or predicted using multiple explanatory variables. For this, you will use SPSS.

The statistics module will again conclude with a graded exam as part of the scientific training within Competency Development.

### **Assessment**

More information about assessment can be found in chapter [Bachelor's degree year 1](#). Within Bachelor's degree year 2, students do not have a separate academic supervisor within Competency Development courses.



# Bachelor's degree year 3

## Causes of Disease

### 3.1 Sensation and react

This course focuses on both the peripheral nervous system and senses. Nerves are involved in both muscle control (output) and sensation (input). In addition to the nervous system, attention will be given to muscle weakness, loss of sensation, dizziness (and/or hearing loss), and eye diseases. All topics include a significant clinical focus while still covering the foundational subjects. Finally, there will be a broad discussion on pain (and related complaints).

This course lasts five weeks and the following disciplines will be covered:

- Anatomy
- Anesthesiology
- Pharmacology
- Physiology
- GP medicine
- ENT
- Neurology
- Ophthalmology
- Rehabilitation medicine
- Social medicine

### 3.2 Brain and cognition

This course focuses on frequent issues within neurology. Topics covered include: headaches, unilateral paralysis, movement disorders, consciousness/coma, fainting, forgetfulness (dementia), and delirium.

This course lasts seven weeks and the following disciplines will be covered:

- Anatomy
- Cardiology
- Pharmacology
- Physiology
- Genetics
- Geriatrics
- Medical history
- Medical law
- GP medicine
- Neurosurgery
- Neurology

- Neuropsychology
- Psychiatry
- Radiology
- Rehabilitation medicine
- Social medicine

### **3.3 Psychiatric health and disease**

This course focuses on psychiatry. Acute psychiatry will be addressed through case studies involving confused individuals (in public spaces). Attention is given to mood disorders, anxiety disorders, and psychotic disorders. Additionally, issues of addiction, personality disorders, and developmental problems will be addressed. Finally, Persistent Somatic Symptoms (ALK in Dutch) is addressed during this course.

This course lasts seven weeks and the following disciplines will be covered:

- Ethics
- Pharmacology
- GP medicine
- Medical law
- Development psychology
- Children's and youth's psychiatry
- Neurobiology
- Neurology
- Psychiatry
- SEH
- Addiction care

### **3.4 Acute medicine I**

This course focuses on making (well-supported) decisions based on alarm symptoms and decision rules according to the principles of ATLS (Advanced Trauma Life Support) for patients with potentially life-threatening conditions. The following topics will be addressed: multiple injuries (polytrauma), prolonged loss of consciousness and injury, infections, and wounds.

This course lasts three weeks and the following disciplines will be covered:

- Surgery
- Neurology
- Orthopaedic surgery
- Emergency medicine
- Trauma surgery

### **3.5 Acute medicine II**

This course focuses on making (well-supported) decisions based on alarm symptoms and decision rules according to the principles of ATLS (Advanced Trauma Life Support) for patients with potentially life-threatening conditions. The following topics will be addressed: acute abdominal emergencies (e.g., peritonitis and bowel obstruction), acute vascular emergencies (e.g., aneurysm), acute pulmonary emergencies (e.g., exacerbations), and acute cardiogenic emergencies (e.g., coronary artery disease).

This course lasts five weeks and the following disciplines will be covered:

- Abdominal surgery
- Anatomy
- Radiology
- Cardiology
- Gynaecology
- IC-physiology
- Pulmonology
- Thorax surgery
- Vascular surgery

#### **Practical sessions**

More information about practical sessions can be found in chapter [Bachelor's degree year 1](#).

#### **Assessment**

More information about assessment can be found in chapter [Bachelor's degree year 1](#).

## Competency Development semester 3.1

### **Learning pathway Professional Development**

In the third year of the program, Professional development consists of lectures, coach group meetings, and personal development workshops. The personal development workshops focus on 'Setting Boundaries' and 'Collaboration'. The pathway concludes with an individual final interview with your coach

### **Learning pathway Medical Consultation**

In the third year, you will practice motivational interviewing in a medical context. The theory of motivational interviewing is covered, and a connection is made with to how you apply this in the medical context. There are three training sessions. You will apply your consultation skills in a session with a training's actor.

### **Learning pathway Healthy Ageing**

In the first semester of the third year, two assignments are covered. In the first assignment, you will analyse a Planetary Health issue and develop a proposal for a concrete, feasible, and realistic intervention formulated using SMART criteria. You will present this in the form of a pitch and poster at the LC conference. In the second assignment, you will write an advisory report on how communication with the relatives of people with (or at risk of) a specific mental health problem can be improved.

### **Learning pathway Scientific Training**

In the first year, you learned about so-called univariate statistics: the focus was on the relationship between one explanatory (or independent) variable and a response variable (also known as the dependent or outcome variable), and many tests for different situations were covered. In the second year, the theory and applications of linear regression models were introduced: you explored how a continuous response variable could be explained or predicted using multiple explanatory variables. This year, we will focus on regression models for binary outcomes (logistic regression), practice sample size calculations, and learn to model survival data. In preparation for the statistics used in the Bachelor's project, all these techniques will be practiced.

### **Assessment 3.1**

More information about assessment can be found in chapter [Bachelor's degree year 1](#).

## Competency Development semester 3.2: the Bachelor's Project

The [Bachelorproject \(BP\)](#), performed in year 3, bridges the gap between the theoretical knowledge obtained during the bachelor education and the practical skills needed during the master education. For the BP, you will work in teams of 3 to 5 students as well as individually and develop competencies in the domains of scientific practice, professionalism, and cooperation. Preparation for the BP begins in semester 3.1, with seminars and practical's. In the Bachelor's project, all four pathway's come together

In *semester 3.1*, you will need to form a team, formulate a relevant research question, and submit a research proposal, which will be assessed.

At [OnStage](#) you will find a range of Bachelor project offerings from departments, organizations, and individual supervisors. Some are flexible, while others are more clearly defined. The key feature is that the final form is determined between the supervisor and the students. It is also possible to do a Bachelor project abroad. In addition to a local supervisor, a faculty supervisor is required.

In the second semester, there are additional seminars and practicals, and you will continue working on your Bachelor project, culminating in a thesis, product, product pitch, and reflection on the study process, which will all be assessed. At the conclusion of the BP in semester 3.2, a ceremony will be organized, and prizes will be awarded for the best thesis, product, and pitch.

### **Learning pathway Professional development**

In addition to writing a thesis, developing a product, and pitching this product, three assignments must be completed for the Professional Development pathway. In a collaboration report, you will reflect with your BP team and incorporate the input from a collaboration workshop. Additionally, you will interview a person in the hospital who holds a leadership position (e.g., department head) and write a team report evaluating this interview. Finally, you will create a SWOT analysis, which you will present individually to your coach.

### **Assessment 3.2**

The research proposal, thesis, product, and collaboration report are assessed by the supervisor. The pitch, interview report, and SWOT analysis are evaluated by your coach. Based on these assessments, the final grade for the course unit Competency Development 3.2 is determined by the examiner.

At the conclusion of the BP in semester 3.2, a ceremony will be organized, and prizes will be awarded for the best thesis, product, and pitch.

# Information for recidivists

This document is intended for medical students who have to repeat all or some of their first year. In most cases, this concerns three groups of students:

1. 1 February- and 1 March-stoppers;
2. Students with a deferred [Binding Study Advice \(BSA\)](#);
3. Student who previously received a negative BSA and reregistered for Bachelor's degree year 1.

## What is a negative BSA?

A student who does not obtain at least 45 (out of 60) credits (ECTS) in their first year of registration will receive a negative BSA (Binding Study Advice) and may not study Medicine for two years. After this period, they may register again for the Medical Degree programme.

## What is a deferred BSA?

If special circumstances impede study progress, a student can apply for a deferred BSA or adjusted BSA with the help of a study advisor. This means that the BSA will be issued one year later. Therefore, this student has an extra year to obtain their BSA.

## How do I reregister as medical student?

As always, this is done via Studielink. Note: do not select registration as a first-year student, but select higher-year registration (as this will be your second year of registration as a medical student at the University of Groningen).

## Frequently Asked Questions about restarts

### 1. Do I have to redo all courses from Bachelor's degree year 1?

No, only the courses have not yet passed. Please check the flow charts below.

### 2. Can I take Bachelor's degree year 2 if I have not yet obtained 45 ECTS?

No, that is not allowed. To be allowed to follow classes in year 2, you must have obtained at least 45 ECTS in year 1.

### 3. What about the progress test?

If you have passed the course Knowledge Development B1, you may not take progress tests again until you have been officially admitted to year 2. If you have not yet passed Knowledge Development B1, you will continue to take progress tests until you have.

### 4. I start to study Medicine before academic year 2024-2025 and did not pass a specific course of Causes of Diseases. What does this mean?

If you have not passed a specific course of Causes of Diseases during academic year 2023-2024 or earlier, you have to follow the course again during academic year 2024-2025 according to the renewed programme. More information can be found in Article 9.2 in the [Teaching and Examination Regulations](#).

**5. I have not passed Causes of Diseases 1.2 during academic year 2023-2024 or earlier, but I have passed Competency Development 1.1. What does this mean?**

Then you just have to redo Causes of Diseases 1.2 according to the renewed programme. This means the courses Causes of Diseases 1.4, 1.5 and 1.6 including tutor group obligations, if you did not fulfilled this the first time. You are not allowed to start with Competency Development 2.1 (see point 2 above). More information can be found in Article 9.2 in the [Teaching and Examination Regulations](#).

**6. I only have to retake Causes of Diseases 1.4, 1.5 and 1.6. What do I do in the first semester?**

This means you cannot follow classes temporarily, including a minor. To do that you must have completed the propaedeutic phase of your degree programme. Officially, the Bachelor's degree programme has only one registration date, which is 1 September, but because you are not allowed to follow classes in the first semester, it is advisable to register for a start on 1 February. Always pass this on to a [study advisor](#). They will then prepare an 'Admission letter outside starting dates' for you before 1 February and send it to the university. By doing so, you do not have to pay the full tuition fee. Of course, you are also welcome to be enrolled for the entire academic year if you prefer.

**7. I stopped before 1 March and did not complete the Hepatitis B-vaccination. What now?**

You bought a vaccination card in your first year and already received two vaccinations in semester 1. In that case, you may complete the vaccination programme after your restart. It is free of charge. However, you must be able to show the previously purchased card at the vaccination location. If you have lost this, please let the staff member on site know. The structure is the same, so you will only receive your third jab in the second semester.

**8. Enrolment**

Please be aware you have to [enroll](#) by yourself for all courses via [Progress](#).

**9. Exceptions?**

If you do not agree with above explained rules, please check the [Teaching and Examination Regulations](#) for information on how to appeal.

**Flowcharts**

**Situation A: only semester 1.1 Causes of Diseases (2023-2024 and earlier) has to be redone and you pass everything from that time onwards:**

September new academic year: 1.1, 1.2 en 1.3

Second semester: 2.4, 2.5 en 2.6

September next academic year: 2.1, 2.2 en 2.3

Second semester: 3.4 en 3.5

September next academic year: 3.1, 3.2 en 3.3

*Delay: 6 months*

**Situation B: only semester 1.2 Causes of Diseases (2023-2024 and earlier) has to be redone and you pass everything from that time onwards:**

September new academic year: no classes possible

Second semester: 1.4, 1.5 en 1.6

September next academic year: 2.1, 2.2 en 2.3

September next academic year: 3.1, 3.2 en 3.3

Second semester: 3.4 en 3.5

*Delay: 12 months*



# JSM and Honours

The Junior Scientific Masterclass (JSM) and Honours College are intended for students who want to get more out of themselves and their time as a student. JSM is specifically for medical students, Honours College is available for all students. If you completed either of these programs, will this be mentioned on your Bachelor's diploma.

## *Junior Scientific Masterclass*

If you are eager to advance your scientific training, explore clinical research, and interact with like-minded students and established (clinical) scientists, then you've come to the right place. The Junior Scientific Masterclass (JSM) Programme offers a unique opportunity for students enrolled in the bachelor's degree in Medicine to enhance their scientific training beyond the regular curriculum. The JSM program aims to actively involve interested medical students from the first year of their study in the (clinical) scientific research at UMCG. The goal is to inspire students with a passion for science and to teach them the fundamental skills for a career as a physician-researcher early in their studies. In principle, any student can participate in the JSM program. Please don't hesitate to contact JSM at [j.s.masterclass@umcg.nl](mailto:j.s.masterclass@umcg.nl).

## *Honours college*

Another option for an additional program alongside the regular study of Medicine is the Honours College. This program is not specific for medical students, but offers the opportunity to further develop your talents through interdisciplinary teamwork with students from various faculties of the university. Admission to the programme is based on selection, since the number of places in the Honours Programme is limited. If you meet the requirements and are motivated to follow this programme, please apply for a place within [Honours College](#).

# Continuation with Master's degree in Medicine

## *Admission*

You have to finish your Bachelor's degree in Medicine if you would like to start with the Master's degree in Medicine. More information about the Bachelor diploma or if you want to postpone your graduation can be found [here](#). You can enroll for the Master's programme if you have met all admission requirements. Please check the [Teaching and Examination Regulations](#).

More information can be found in the Study guide Master's degree programme in Medicine at [Study Info](#).

## *Language education*

For students who have completed a non-Dutch secondary education, an additional requirement for admission to the Master's program in Medicine is possession of the Medical Dutch C1 certificate. The Dutch language development program is offered extracurricular throughout the entire Bachelor's program and is scheduled alongside the regular Bachelor's curriculum. Students with a non-Dutch diploma will be informed about the educational program through a [Brightspace](#) course. More information can be found in the [Teaching and Examination Regulations](#).

# Practical information

## Contact information

Information about who to mail when, can be found in the course *General information Bachelor (G2020)* at [Brightspace](#). This course also includes contact information from among others study advisors and confidential advisors.

## Enrolment

Please be aware you have to enroll yourself for all courses via [Progress](#). Compulsory order of examinations can be found in the [Teaching and Examination Regulations](#). Read this information carefully before you enroll yourself. Your enrollment is only valid if you meet participation requirements. After enrolling for the courses via [Progress](#), access to relevant course information at [Brightspace](#) will be granted automatically.

More information can be found in the course *General information Bachelor (G2020)* at [Brightspace](#).

## Timetable

Timetable with date, time, and location of alle course meetings can be found [here](#). Tip: Always check the schedule for any changes before a meeting. The information provided here is definitive.

Within the Bachelor's Degree Programme in Medicine, we strive to minimize timetable changes. Much of the education is provided by physicians from the UMCG who have other duties and responsibilities within the hospital. Therefore, whose availability for teaching is requested at an early stage.

If the instructor is still unable to attend, they are responsible for finding a replacement or the class will be canceled. If there is a timetable change on short notice, this will be communicated by the producent via e-mail, [Brightspace](#) en/of het [rooster](#).

If scheduling issues arise with a coach, tutor, or instructor, students should initially contact the coordinator. The coordinator will discuss the matter with the course director or year coordinator.

## Book list

The book list is determined for each cohort (i.e. starting year of the study) for each academic year. These book lists can be found in the course *General information Bachelor (G2020)* at [Brightspace](#).

Many study books can be found as ebook [here](#).

## Brightspace

[Brightspace](#) is the digital learning environment from the University of Groningen (RUG). Information about relevant courses can be found in related Brightspace courses.

While your studies continues, you will be enrolled in multiple Brightspace courses.

Naarmate je verder in je studie bent, zit je in steeds meer Brightspace cursussen. This is useful if you want to look something up at a later time. However, you might receive many irrelevant emails every time a new announcement is posted in a course. Here is a step-by-step guide to adjust your email settings for each course:

1. Click on your name in the top right corner in Brightspace
2. Click on 'Notifications'
3. Here you can adjust your preferences

## Scorion

During the Bachelor program, Scorion is used to submit your written (test) products and to compile your portfolio. You are responsible for completing your portfolio yourself. Instructions on adding logbook/file and how to send assessment forms can be found in [this video](#). More information about how to use Scorion can be found in the courses *Comptency Development* at [Brightspace](#).

## OnStage

[OnStage](#) is used for submitting among others your research proposal, thesis, and final product during the Bachelor's Project. More information about how to use OnStage can be found in the course *Comptency Development Year 3* at [Brightspace](#).

## Progress

[Progress](#) is the student- and study information system (SIS) of the RUG. This system includes, among other things, all course enrollments and recorded results.

## Video registration lectures

Information about video registration can be found in the faculty guideline video registration.

## Study guidance

Study advisors are available for 1001 questions regarding your studying schedule, studying methods, possible study delay and the Binding Study Advice (BSA). They can also help you with questions about studying with a disability and personal circumstances that might influence your studies negatively. We also answer questions about what is (and isn't) possible regarding additional options within or outside your degree programme, such as additional subjects and Minors. Don't hesitate to ask your questions by email at the [study advisor](#).

Students who are entitled to extra exam time for written tests will receive an additional 10 minutes per exam hour starting from the 2024-2025 academic year. Use [this form](#) to submit a request for additional time. If you believe you need more exam time, you can indicate this through a motivated request to the [RUG studentdeans](#). Consequently, use this advice to contact one of the study advisors from the study of Medicine.

## Student well-being and support

Information about student well-being can be found at the [student well-being portal](#). This portal includes an overview of all contact points, resources, and initiatives related to student well-being. If you have experienced (or are experiencing) inappropriate behavior, more information can be found [here](#). Next to this, please feel free to contact the [study advisor](#) as well as the confidential advisors from both UMCG and/or RUG. The app #zouikwatzeggen provides tips for dealing with inappropriate behavior from a UMCG employee.

## Evaluation of education

Involvement of medical students is valuable in improving the quality of education. The Quality Assurance Task Group for Medicine is engaged in evaluating the program throughout the year. Various ways are used for this aim, including questionnaires for students. You will be informed via [Brightspace](#) or e-mail to evaluate (recently completed) courses. We hope that you too will express your opinion and by doing so, contribute to improving the quality of our education programme.

## Student representation

Progressief Medicijnen (ProMed) represents all medical students from both RUG and UMCG. During ProMed meetings, student representatives from several committees come together to discuss relevant aspects. An overview of all educational committees involved with medical education can be found at the [website of ProMed](#).

Year representatives of all three bachelor's degrees years (YR1/2/3) are committees from the Medical Faculty Association Panacea, the medical faculty association in Groningen. They represent the students and are involved in, among other things, the evaluation of the education programme.

## Useful websites

Instructions about how to use among others Brightspace, IT (WiFi, printing, Google apps), timetable, Career Services and Progress) can be found at the website of [Edusupport](#).

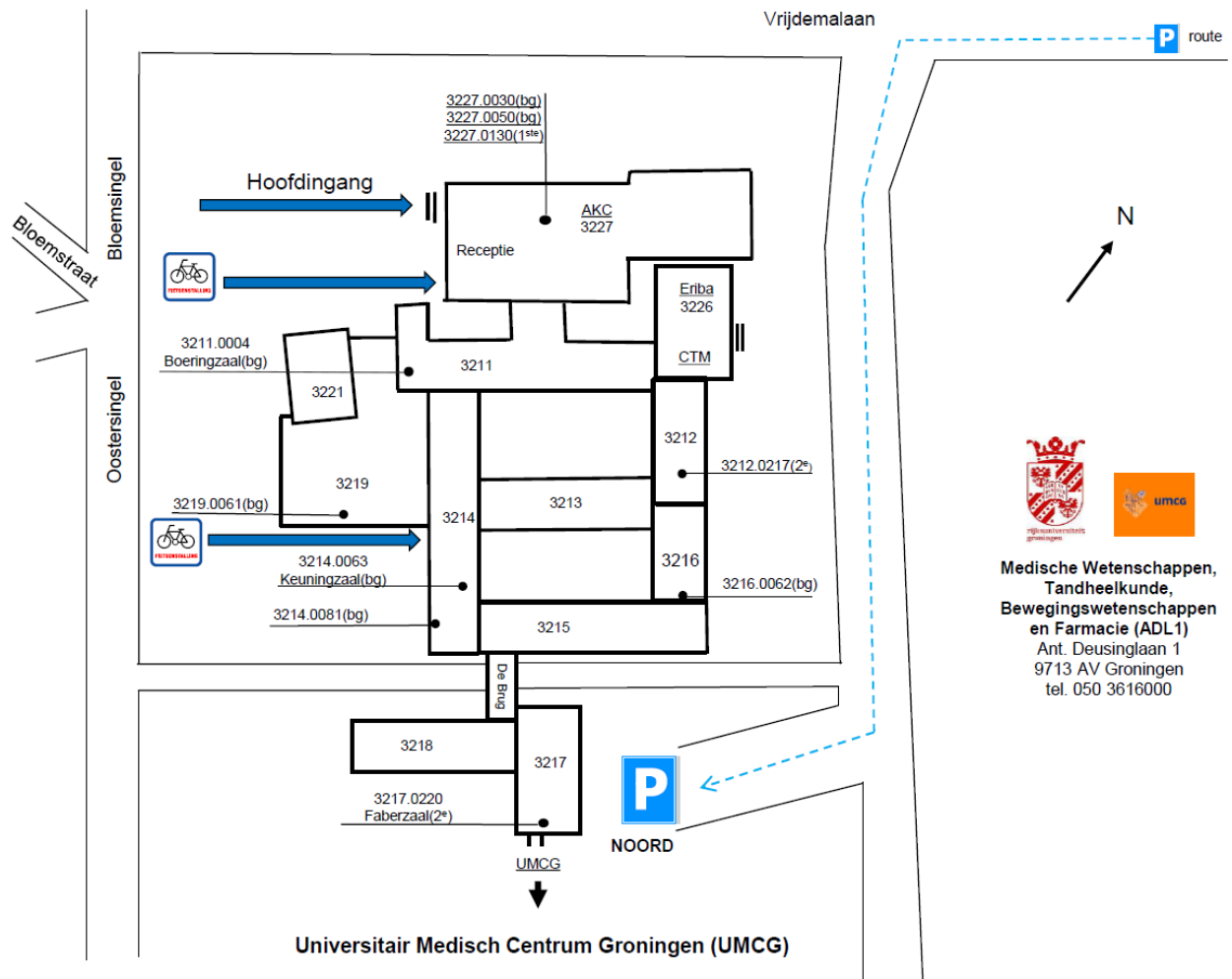
An overview of e-learning modules for both Causes of Diseases as well as Competency Development can be found [here](#).

Use this RUG [overview](#) to find information, a person or a tool. Guidelines about Artificial Intelligence (AI) can be found [here](#).

Use this [application form](#) to request a meeting room and audiovisual equipment.

# Map

## Healthy Ageing Campus



# Important documents

## Framework for Undergraduate Medical Education 2020

The Framework for Undergraduate Medical Education 2020 be found [here](#). This document contains the learning outcomes which apply to each medical student.

## Student Charter

The [Student Charter](#) provides an overview of the rights and obligations of both students and the University. It is based on national legislation, particularly the Higher Education and Research Act (WHW, hereinafter also referred to as 'the Act'), supplemented by regulations that are specific to the University of Groningen.

## TER, Assessment plan, Rules&Regulations en Examination Requirements

Each programme has a legal obligation to have Teaching and Examination Regulations, or TER for short (OER in Dutch). The TER describes the rights and obligations of each student: the TER defines the purpose and content of the programme. The TER also indicates the order in which courses should be followed. Finally, the TER contains the rules for taking an exam.

The assessment plan is an appendix of the TER, and contains the precise description of tests, assessments, and exams. Moreover, it describes the learning outcomes of the programme.

The Board of Examiners defines Rules and regulations as well as Examination Requirements for the examination procedures. These documents contain for example information about procedures in case of insufficient result for a specific course.

The documents mentioned above can be found at [Study Info](#). The TER is an important document: we encourage students to read the TER of their programme. All information applies unless the Board of Examiners Dentistry and Medicine (ECTG) decides otherwise.