G2020

Assessment Plan for the 2020 Academic Year

Bachelor of Science in Medicine
University of Groningen
Groningen University Medical Centre

Update - 12-3-2021
Amendment to article 5.3: the sentence "The mark for the statistics test will affect the mark for the competency domain and the final mark for the course unit" has been deleted.
Table of contents

Preface .................................................................................................................................................... 3
1. Learning outcomes for the G2020 Bachelor of Medicine degree programme............................... 5
  1.1 National learning outcomes and G2020 ................................................................................. 5
  1.2 Aim of the G2020 degree programme .................................................................................... 5
  1.3 Knowledge development learning outcomes for the Bachelor’s degree programme .......... 6
  1.4 Competency Development learning outcomes for the Bachelor’s degree programme ...... 6
1. The relationships between competencies and learning outcomes ................................................ 9
  2.1 Causes of Diseases course units............................................................................................ 10
  2.2 Knowledge Development course units ................................................................................. 10
  2.3 Competency Development course units ............................................................................... 10
3. Assessment policy, assessment methods and modes of assessment .......................................... 12
  3.1 Vision on assessment ............................................................................................................ 12
  3.2 Knowledge assessment methods .......................................................................................... 12
  3.3 Competency Development assessment methods ................................................................. 13
  3.4 Responsibilities for assessment policy .................................................................................. 14
4. Assessments of knowledge: implementation regulations ............................................................ 15
  4.1 Defining the learning outcomes for Causes of Diseases ....................................................... 15
  4.2 Composition of the Causes of Diseases written knowledge tests ........................................ 15
  4.3 Sitting the Causes of Diseases tests ...................................................................................... 15
  4.4 Pass mark for the Causes of Diseases written tests .............................................................. 16
  4.5 Determining the final result of the Causes of Diseases tests ............................................... 16
  4.6 Post-examination discussion of and access to the Causes of Diseases tests ....................... 16
  4.7 Resitting the Causes of Diseases tests .................................................................................. 16
  4.8 Progress Test assessment procedures .................................................................................. 17
5. Competency Development assessment: implementation regulations ........................................ 18
  5.1 Defining the Competency Development learning outcomes ............................................... 18
  5.2 Composition of the Competency Development summative assessment ............................. 18
  5.3 Calculating Competency Development marks ...................................................................... 19
  5.4 Progress interview ................................................................................................................ 19
  5.5 Assessment interview ........................................................................................................... 20
  5.6 Assessment recommendation ............................................................................................... 20
  5.7 Determining the final mark ................................................................................................... 20
  5.8 Resits ................................................................................................................................... 20
  5.9 Remedial work ....................................................................................................................... 20
Preface

This document lays out the assessment plan for the G2020 Bachelor of Medicine degree programme at the University of Groningen, which started on 1 September 2014. The plan comprises the curriculum’s assessment procedures and the course units for the Bachelor’s degree programme (BSc) for years 1, 2 and 3 in the 2019-2020 academic year. The assessment plan for the G2020 Bachelor of Medicine degree programme is in accordance with the assessment memo of the Faculty of Medical Sciences, which is based on the general assessment policy of the University of Groningen.

The curriculum is continually evolving and improving, based on evaluations. From the 2020-2021 academic year, the first year starts with the new competency-based course units. The assessment plan is in two parts: Part A for year 1 and Part B for years 2 and 3.

This assessment plan was drawn up in consultation with the Board of Examiners for Dentistry and Medicine and incorporated in the Teaching and Examination Regulations as approved by the Faculty Board 1 of August 2020.

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Part A

Assessment Plan for Year 1
1. Learning outcomes for the G2020 Bachelor of Medicine degree programme

1.1 National learning outcomes and G2020

The learning outcomes for the initial training, leading to the qualification of doctor of medicine in the Netherlands, were established by the eight Medical Faculties in the Netherlands and are defined in the 2009 Framework for Undergraduate Medical Education (the Framework). The Framework sets out the learning outcomes for the following seven roles: Medical Expert, Communicator, Collaborator, Leader, Health Advocate, Scholar and Professional. In the G2020 programme, the choice was made to let the learning outcomes based on these roles also direct the Bachelor’s degree programme.

The physician graduation profile is based on CanMEDS, an internationally renowned model for competency development in medical education. CanMEDS describes competencies as the integration of knowledge and understanding, skills and attitude (professional conduct). The 2015 CanMEDS model identifies seven ‘physician roles’: one integrated or integrating Medical Expert role and six ‘intrinsic roles’: Communicator, Collaborator, Leader, Health Advocate, Scholar and Professional.

In the case of the Bachelor’s degree programme, the CanMEDS model has been adapted to a Dutch context. The 2020 Framework and the KNMG’s general medical specialist competencies use competency areas (KNMG) or competency domains (Framework) instead of the CanMEDS roles. We therefore use the term ‘competency domain’. There are seven competency domains, as follows:

1. Medical Expertise (MED)
2. Communication (COM)
3. Collaboration (COL)
4. Scientific Practice (SCI)
5. Leadership (LEA)
6. Management in social context (MAS)
7. Professionalism (PROF)

A competency domain is a general description of the competency, followed by a number of subcompetencies. These act describing the end point of development over the three years of the Bachelor’s degree programme. The subcompetencies, addressed in Competency Development in the Bachelor’s degree programme, are based on those in the G2020 Master’s degree programme and set at the target level for the Bachelor’s degree, with no intermediate levels.

1.2 Aim of the G2020 degree programme

The aim of the G2020 Bachelor of Medicine and Master of Medicine degree programmes is to train students to gain the qualification of doctor of medicine as set out in the Framework. The two programmes train students to become competent doctors of medicine who are – and will be in future – able to deal professionally with developments in medical practice. Future doctors, who are able to function optimally in the continually and rapidly changing environment of healthcare, must possess a sound basic medical knowledge that they are able to apply. The ability to assess and integrate new information is essential for dealing with medical and scientific problems both critically and creatively. This critical, analytical attitude enables academically-trained students to generate knowledge, even after they have finished their medical training (life-long learning).

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1 CanMEDS 2005
2 2009 Framework for Undergraduate Medical Education, NFU
Students taking the Bachelor’s degree programme will study within a Learning Community; a distinct community in which students feel connected with and learn from each other, and which aims to have its ‘own’ team of lecturers and a specific content-related profile. There are four LCs: Global Health (GH), Sustainable Care (Duurzame Zorg, DZ), Intramural Care (Intramurale Zorg, IZ) and Molecular Medicine (MM).

1.3 Knowledge development learning outcomes for the Bachelor’s degree programme
The Framework subdivides the basic subjects into (1) natural sciences and (2) humanities and social sciences subjects. In the *Causes of Diseases* course units, students will acquire knowledge of basic and clinical subjects. Basic subjects cover the medical and natural sciences subject areas, and the humanities and social sciences, that provide the underlying knowledge to gain a clear understanding and awareness of clinical pathologies.

In G2020, the following disciplines are part of the natural sciences basic subjects: anatomy, cell biology, pharmacology, physiology, histology, pathology and methodology, and statistics. The following disciplines are part of the humanities and social sciences: medical psychology, medical sociology, developmental psychology, ethics, medical legislation and certain elements of public health (organization, funding and quality of medicine). In the content-related structure of the curriculum, the learning outcomes for the basic subjects are spread over the years of the degree programme.

1.4 Competency Development learning outcomes for the Bachelor’s degree programme
The aim of the *Competency Development* course units is for students to acquire competencies. There are seven competency domains, with subcompetencies. The term *competency* refers to the entirety of a competency domain with its subcompetencies.

The Framework distinguishes five competency levels (see Fig. 1). The majority of the competencies must be achieved at level III in the Bachelor’s degree programme.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
</table>
| I | 1.1 Students know and understand the areas of science that are relevant to medicine.  
1.2 Students are able to demonstrate that they possess the skills relevant to medicine in standardized situations.  
1.3 Students are able to demonstrate that they possess the basic skills of professional conduct. |
| II | Students are able to combine knowledge, skills and professionalism in an appropriate approach to the issues relating to health and illness that are set out in the Framework. Students are able to demonstrate this competency in test situations with a rich context. |
| III | The professional activities defined within the competencies for doctors are performed satisfactorily by students in specific teaching sessions and/or simulated professional settings. |
| IV | Students satisfactorily perform the professional activities defined as part of the competencies for doctors in authentic professional settings, with prior case-specific instruction and close supervision by an experienced medical practitioner. |

The competencies for the Bachelor’s degree programme are based on those for the Master’s degree programme and set out in the document *Competency Development in G2020, November 2019*. The competencies for the Bachelor’s degree programme are set out below.
**Competency domain: Medical Expertise (MED)**

**Description of competency**
Physicians are able to apply medical knowledge, clinical skills and professional values to the provision of high-quality, safe, patient-centred care. Medical Expert is the physician’s key role in the CanMEDS model: it defines the clinical range of a physician’s work.

**Subcompetencies**

**Students:**
- **MED1** are able, in a simulated professional setting, to make appropriate use of medical knowledge to give consultations
- **MED2** are able, in a simulated professional setting, to explore the main health issue and clarify the care request, taking into consideration the medical history and patient-specific factors (language, culture, religion, level of education)
- **MED7** are able, in a simulated professional setting, to inform patients in language that is easily understandable and is appropriate to the care request and check whether they have understood the information
- **MED9** in a simulated setting, are able to structure the consultation appropriately
- **MED14** in a teaching and learning context, are able to work safely and professionally, taking the principles of safe working in healthcare into consideration; are aware of the safety protocols and the channels through which incidents should be reported to avoid causing or exacerbating harm.

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**Competency domain: Communication (COM)**

**Description of competency**
Physicians are able to develop relationships with patients and their family members that make it easier to collect and share essential information that makes effective healthcare possible.

**Subcompetencies**

**Students:**
- **COM1** are able, in a simulated professional setting, to communicate both verbally and non-verbally, with empathy and respect
- **COM2** are able, in a simulated professional setting, to support patients’ trust and autonomy by their communication
- **COM3** are able, in a simulated professional setting, to optimize the physical environment to promote patients’ comfort, dignity, privacy, involvement and safety
- **COM4** are able, in a simulated professional setting, to take patient factors such as social and cultural background and health literacy into consideration in their communication
- **COM5** are able to deal appropriately with differences of opinion and emotionally charged conversations
- **COM6** are able, in a simulated professional setting, to collect and organize biomedical and psychosocial information on a medical problem in proper consultation with patients and their close families
- **COM7** are able, in a simulated professional setting, to clarify patients’ care requests, underlying care needs and preferences
- **COM11** are able to communicate in a culturally sensitive way, i.e. to take cultural factors into consideration in their communication with patients and fellow students from a different cultural background
- **COM12** are able, in a simulated professional setting, to refer patients and their families to sources of information in support of their health and treatment and to improve their health literacy.
### Competency domain: Collaboration (COL)

**Description of competency**
Physicians are able to collaborate effectively with other healthcare professionals in order to provide safe, high-quality, patient-centred care.

**Students:**
COL1 are able to collaborate effectively with fellow students and lecturers, maintain professional relationships and deal effectively with differences of opinion and conflicts, and are aware of the opportunities for and obstacles to effective collaboration
COL2 are able, in a simulated professional setting, to transfer patient care properly to other care professionals, verbally and/or in writing, to safeguard and facilitate the continuity of safe patient care.

### Competency domain: Leadership (LEA)

**Description of competency**
Physicians are able, in contact with others, to contribute to achieving a high-quality care system and to take responsibility for delivering outstanding patient care through their work as a physician, administrator, scholar or lecturer.

**Subcompetencies**

**Students:**
LEA2 are able to apply an evidence-based approach with a view to efficiency and are familiar with strategies to avoid unnecessary use of resources
LEA3 are able, for the sake of their professional development, to reflect on the impact and effects of key issues in healthcare and social debates; are able, for the sake of their professional development, to reflect on the priority areas of patient safety, efficiency and vulnerable groups
LEA5 are able to use appropriate information technology for medical and care applications (e-health and m-health) and have a knowledge of patient care quality systems, guidelines and standards
LEA6 are able to take the initiative to improve their personal practice by evaluating problems, setting priorities, implementing plans and analysing the results
LEA7 have a realistic self-image and set personal, educational and professional goals based on it
LEA8 are able to display time management skills, i.e. to deliver good work in both qualitative and quantitative terms even under pressure of time

### Competency domain: Management in social context (MAS)

**Description of competency**
As health advocates, physicians are able to use their expertise and influence when working with communities or patient populations to improve health. They are able to work together with the people to whom they are providing care to determine and understand their needs, speak on behalf of others when necessary, and support the mobilization of resources to bring about changes.

**Subcompetencies**

**Students:**
MAS1 are able, based on relevant determinants of illness and health, to contribute to disease prevention and appropriate patient care, developing a healthy behaviour strategy that does justice to individual patient factors
MAS2 are able to identify the obstacles that patients experience to obtaining the health resources they need, and to help overcome them, or adapt them to patients’ individual needs in consultation with authorities and health services
MAS3 are able to identify opportunities for disease prevention, health promotion and health monitoring, and to devise strategies for discussing these with patients and their families
MAS4 are able to develop a strategy for a population that they are investigating to adapt an existing health system or health practice to the needs of vulnerable patients, communities or populations with health differences
MAS5 are able to devise a strategy and/or formulate disease prevention, health promotion and/or health monitoring activities for at-risk populations and discuss them with healthcare professionals and policy-makers in order to improve clinical practices.
## Competency domain: Scientific Practice (SCI)

**Description of competency**
Physicians are able to display a lifelong commitment to outstanding care by continually learning and training others, evaluating evidence and contributing to science.

**Subcompetencies**

**Students:**
- SCI1 are aware of their own learning competencies within and beyond the curriculum and are able to respond to challenges and pitfalls
- SCI7 are able to draw up a research question, find and weigh up evidence independently (e.g. PICOs/CATs, audits) and put across the results in a structured manner
- SCI9 are able to evaluate a level of evidence and a level of recommendation and apply this when making choices in professional practice
- SCI10 are familiar with the correct methods and able to select them to test hypotheses, and to analyse the data (with assistance) and report in accordance with the guidelines in force
- SCI11 are familiar with medical ethics reviews and guidelines for research on human subjects
- SCI12 are familiar with the rights of individual patients in medical research, the rules on academic integrity and informed consent and the UMCG Research Code and apply them
- SCI13 are able to participate in medical research under supervision, and to defend their own study or part of a study in a presentation, including background, methodology, results, discussion, conclusion and references.

## Competency domain: Professionalism (PROF)

**Description of competency**
Physicians are able to work for the health and well-being of individual patients and society by practising ethically, setting themselves rigorous standards of behaviour, being accountable to the profession and society, through regulations drawn up by physicians, and by maintaining their personal health.

**Subcompetencies**

**Students:**
- PROF1 are able, in contact with patients, to behave in accordance with the values of the medical profession
- PROF2 are able, in a teaching and learning context, to display professional conduct, paying sufficient attention to relationship management, task management and self-management
- PROF3 are aware of conflicts of interests during their studies and clerkships
- PROF4 have IT skills relating to the systems used, paying attention to the confidentiality of medical information
- PROF5 keep up to date with important social issues and debates on healthcare
- PROF6 are familiar with the statutory frameworks and professional responsibilities associated with the medical profession and are able to apply them in simulated professional practice
- PROF7 are able to analyse an ethical dilemma or critical incident in professional practice systematically and discuss it with lecturers and fellow students in order to achieve optimum patient care
- PROF9 are able to give constructive, safe feedback to others
- PROF10 are able to adapt their behaviour when necessary based on feedback, in order to achieve optimum patient care and good working relationships
- PROF11 are able to maintain a good work-life balance.

### 1. The relationships between competencies and learning outcomes

The G2020 Bachelor’s degree programme has course units that focus on medical knowledge and skills, and course units that focus on competency development. The curriculum comprises:

- Causes of Diseases course units
- Knowledge Development course units
- Competency Development course units

The first year of G2020 comprises five course units:

- Causes of Diseases I (18 ECTS credit points)
- Causes of Diseases II (17 ECTS credit points)
- Competency Development LC 1.1 (10 ECTS credit points)
- Competency Development LC 1.2 (11 ECTS credit points)
- Progress Test (4 ECTS credit points)

(see Fig. 2 and Teaching and Examination Regulations, Article 4.1a + b).

<table>
<thead>
<tr>
<th>Semester 1.1</th>
<th>Semester 1.2</th>
</tr>
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<tbody>
<tr>
<td>Causes of Diseases 1.1</td>
<td>Causes of Diseases 1.2</td>
</tr>
<tr>
<td>(18 ECTS credit points)</td>
<td>(17 ECTS credit points)</td>
</tr>
<tr>
<td>Competency Development 1.1</td>
<td>Competency Development 1.2</td>
</tr>
<tr>
<td>(10 ECTS credit points)</td>
<td>(11 ECTS credit points)</td>
</tr>
<tr>
<td>Including care clerkship and</td>
<td></td>
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<tr>
<td>science clerkship</td>
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<tr>
<td>Knowledge Development 1</td>
<td></td>
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<tr>
<td>(4 ECTS credit points)</td>
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</tbody>
</table>

2.1 Causes of Diseases course units
The Causes of Diseases course units achieve the learning outcomes related to knowledge development, and through them, students become thoroughly aware of the importance of the basic subjects to medical content. Students develop a knowledge of the basic subjects during the three years of the programme. Explicitly including the knowledge in the Causes of Diseases course units makes it more familiar to students. The aim of the G2020 degree programme is to teach them to use their knowledge in an integrated manner in their professional activities. The Causes of Diseases course units focus on a particular health problem each week.

Health problems are clustered into themes. Themes take an average of four weeks, in order to prevent fragmentation and to provide structure for the students. Lecturers and examiners agree on the design of strands of teaching in themes and semesters, thus avoiding gaps in knowledge development. The themes direct the content of the curriculum and are chosen to logically link the study material in the basic subjects.

Students are expected to study all aspects of this health problem, from molecular background, aetiology, pathogenesis, symptomatology and treatment to financial, ethical and public health aspects. This ensures that the basic subjects are properly integrated with the clinical content and assessed accordingly. Students are also expected to be able to link the health problem to Healthy Ageing.

2.2 Knowledge Development course units
As part of the Knowledge Development course units, students’ knowledge development is assessed in the Inter-university Progress Test, which is compiled in collaboration with the other participating faculties. This test is described as a desirable instrument for external validation.

2.3 Competency Development course units
In the Competency Development course units, students work on developing the competencies laid down for the Bachelor’s degree programme. Competency development takes place in the Learning Communities. The Competency Development course units are based on four learning pathways:
1. Professional Development (PO): yellow learning pathway
2. Healthy Ageing (HA): blue learning pathway
3. Medical Communication (MC): green learning pathway
4. Scientific Training(ST): red learning pathway

The learning pathways are linked to the subcompetencies in the competency domains for year 3 of the Bachelor’s degree programme. They indicate what level students are expected to reach at the
end of year 3. Learning outcomes for the training courses, assignments and other study activities in each year are based on them. Assessment is the same for all the LCs.

The LCs develop assignments with LC-specific topics. Which assignments students must hand in, which achievements are required of them, and what subcompetencies they will develop in the process are clearly set out. Students are enabled to evolve through assignments and other study activities. Their achievements are collected in a portfolio (Scorion), to which students also add results from written examinations and assessments, the Progress Test and evidence of additional work.
3  Assessment policy, assessment methods and modes of assessment

3.1 Vision on assessment
The principles behind the assessment programme are based on the requirements formulated by the University of Groningen for a good assessment programme, in combination with recent insights on and experience of longitudinal assessment. The vision on assessment of the curriculum harmonises with the ambitions, goals and teaching methods of the degree programme. Hence, the assessment programme:

1. stimulates students to actively engage with their studies and the study material (increasing participation)
2. encourages students to demonstrate what they are capable of and have achieved in each competency (increasing autonomy and increasing motivation and commitment)
3. inspires students to grow and demonstrate this growth (increasing motivation and stimulating academic attitude)
4. ensures regular feedback is given by lecturers on the students’ products and competency development (condition for achieving the above expectations)
5. provides opportunities for feedback and assessment by peers (increasing commitment, motivation and academic attitude).

In the assessment programme, information is systematically collected on the functioning and achievements of the students. Based on this information, students can be guided to enable them to eventually make a decision on their study progress. Through frequent planning of assessment stages and the use of different modes of assessment, students are stimulated to develop their competencies in an effective manner and to start and continue working with the study material. The following principles underlie the assessment programme:

- focusing on the development of knowledge and competencies
- providing information from various sources
- providing students with regular feedback from teachers and peers
- students regularly reflecting on their personal functioning.

3.2 Knowledge assessment methods
Medical knowledge is assessed in the following three course units:

- Causes of Diseases I (18 ECTS credit points)
- Causes of Diseases II (17 ECTS credit points)
- Progress Test (4 ECTS credit points) (Fig. 2 and Teaching and Examination Regulations, Article 4.1a + b)

3.2.1 Assessment of Causes of Diseases course units I & II
The basic knowledge acquired from the Causes of Diseases course units will be assessed in written tests. Written tests consist largely of cases providing an outline of the clinical picture. Linked to this, a series of questions will be asked that cover a significant proportion of the basic subjects.

CAUSES OF DISEASES COURSE UNIT I

- Development
- Endocrine Regulation
- Blood & Neoplasms
- Immune Response and Infection 1
- Immune Response and Infection 2

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3 ‘De toets doorstaan: Toetsbeleid aan de RUG’ (Surviving the assessment: Assessment Policy at the University of Groningen), 2013 revised edition of policy document
Causes of Diseases 1.2 comprises the following topics:
- Ischaemia
- Injury & Trauma
- Degeneration
- Illness & Health

**Mode of assessment:**
- The knowledge in Causes of Diseases course units 1.1 and 1.2 is assessed in an examination that is taken at multiple assessment stages (every three to five weeks).
- The tests comprise open and closed-book items.
- Specific knowledge of the basic subjects, which is acquired during an earlier phase of the partial examination, will be assessed in a cumulative assessment system.
- A predetermined number of open and closed-book questions will be set for each week, divided up among a maximum of three tests.

The knowledge for Causes of Diseases course units 1.1 and 1.2 will be assessed in a written test, which will be administered cumulatively in several parts. There will be a written test (assessment stage) following each theme (three to five weeks), known as a ‘partial test’. Partial tests comprise closed and open-book sections, as a general rule ten open-book and ten closed-book items each week. Open-book items are preferably case-related questions.

In accordance with the applicable measures and restrictions related to the Covid-19 virus, an exam can be taken both physically and online simultaneously. In case of a simultaneous physical and online exam, it is allowed to include only closed book questions in the test.

### 3.2.2 Assessment of Knowledge Development course units

Knowledge is also assessed in the Inter-faculty Progress Test, which is curriculum-based and is taken at the same time at five different universities in the Netherlands. In addition to information about the knowledge development of individual students compared to their fellow students, it provides information for the comparison of the knowledge level of various student cohorts in the different degree programmes.

The procedure for the assessment of the final result is decided in the Inter-university Progress Test national consultation with the Board of Examiners for Dentistry and Medicine. All the participating medical degree programmes use approximately the same procedure.

**Mode of assessment:**
- The Inter-faculty Progress Test (the ‘Progress Test’) is held four times per academic year.
- It is a multiple choice test.
- The final result of the Progress Test is assessed at the end of the academic year, based on the results obtained in all four progress tests.
- After every progress test taken, students receive an assessment of their knowledge level in that test.
- Students reflect on their Progress Test results in the coaching meeting at the end of the academic year.

### 3.3 Competency Development assessment methods

Students have their competency development assessed in the Learning Communities, by working on the assignments and study activities, and by participating and collaborating in workgroups in the LCs to develop their competency. Various lecturers give narrative feedback on students’ products, achievements, performance and professional conduct, using clear criteria based on the learning outcomes.
The LC director ensures that the lecturers provide sufficient narrative feedback for each assessment of competencies, and that they are properly instructed beforehand about this mode of assessment. Students and/or assessors can also indicate in specific cases which competencies they would like to receive or give feedback on. This narrative feedback provides the input to the summative marks for the competency domains (see also Chapter 5, Competency Development assessment: implementation rules).

3.3.1 Assessment of Competency Development course unit 1.1
The summative final assessment of the course unit comprises:
1) a summative assessment of competency development

The summative assessment takes into account attendance at compulsory course units\(^4\) and whether the portfolio requirements have been met.

3.3.2 Assessment of Competency Development course unit 1.2
The summative final assessment of the course unit comprises:
1) a summative assessment of competency development
The summative assessment takes into account attendance at compulsory course units\(^5\) and whether the portfolio requirements have been met.

3.4 Tutorials
The tutorials are compulsory practical activities for the Causes of Diseases course units. During the tutorials, students are assessed on their professional conduct. This assessment counts towards the final mark for the Competency Development course unit.

The tutor records absences and the reasons given and periodically reports absences to the Causes of Diseases examiner. In the event of insufficient attendance, an examiner may decide to give the student a supplementary assignment or not to award the credit points for the Causes of Diseases course unit. Problems in the area of professional conduct will be discussed with the LC director.

3.4 Responsibilities for assessment policy
The Course Director bears ultimate responsibility for the formulation and correct implementation of assessment policy. The Course Director draws up the assessment plan and the Teaching and Examination Regulations.

The Board of Examiners for Dentistry and Medicine is appointed by the Faculty Board, and one of its responsibilities is to ensure that the assessment plan is applied and implemented correctly. The examiners are appointed by the Board of Examiners based on their expertise and experience. The Board of Examiners for Dentistry and Medicine establishes rules and regulations that set out how the examiners must implement the assessment plan.

The following specific tasks are the responsibility of the Board of Examiners:
1. Formulating and deciding the way in which tests and assessments are designed and how the pass mark is determined
2. Appointing the correct examiners for the various components of the assessment programme
3. Determining the method used to organize regular evaluation of the assessment methods
4. Evaluating the assessment plan in relation to the learning outcomes achieved
5. Supervising the assessment methods used in relation to the established assessment plan.

Every academic year, the Board of Examiners for Dentistry and Medicine evaluates the implementation of the assessment plan and chooses the points that need attention during the

\(^4\) The compulsory course units include all small-group teaching and courses for which the student is enrolled.
\(^5\) The compulsory course units include all small-group teaching and courses for which the student is enrolled.
following academic year. The Board of Examiners for Dentistry and Medicine reports annually, in its annual report, on the results of the implementation of the assessment plan. The Dean revises the assessment plan, if necessary. This allows the Board of Examiners for Dentistry and Medicine to ensure good quality control of assessment based on the assessment plan.

4. Assessments of knowledge: implementation regulations

4.1 Defining the learning outcomes for Causes of Diseases

The learning outcomes for the various course units are defined by the relevant examiners, and one of them is the contact person for the Board of Examiners for Dentistry and Medicine.

4.2 Composition of the Causes of Diseases written knowledge tests

The knowledge in Causes of Disease course units 1.1 and 1.2 is assessed in a written test that is taken in parts (assessment stages). The two Course Directors for the semester are responsible for the composition of the written tests. Written tests are compiled according to the following general guidelines:

- The content of the questions must reflect the study material satisfactorily (representation).
- The content of the questions must be able to be related to the learning outcomes (validity).
- The questions must not be able to be interpreted in more than one way, must contain enough information to answer the question, and must not lead to contradictory answers obtained from different sources (reliability).
- The test comprises open and closed-book items. The questions are multiple choice.
- The distribution of the questions over the various assessment stages takes place according to a predetermined cumulative system.

In accordance with the applicable measures and restrictions related to the Covid-19 virus, an exam can be taken both physically and online simultaneously. In case of a simultaneous physical and online exam, it is allowed to include only closed book questions in the test.

The examiner compiles the test and submits draft questions for the written tests to the Examination Assessment Panel. This panel of experts comments on the draft questions and assesses whether they have been asked in an appropriate way and whether they are clear. Questions may be reformulated or rejected for a written test if they are unclear or do not dovetail properly with the study material. The examiner for the course unit ultimately decides on the final composition of a test.

4.3 Sitting the Causes of Diseases tests

Students must take all the part tests for a semester. The students will be informed of the guidelines and rules on sitting the test by the examiner. A student who cancels in good time for compelling reasons, such as illness or force majeure, by e-mailing g2020-basic1@umcg.nl may be allowed to sit the replacement test. The Board of Examiners for Dentistry and Medicine will decide on participation in the replacement test, which is held immediately after the partial examination. The mark gained in the replacement test replaces the ‘zero’ result of the missed part test when calculating the final mark for the partial examination. Students who have missed more than one partial test of a particular partial examination will always be referred for a resit. Students who do not cancel, or cancel too late, using the above e-mail address, or were absent for non-valid reasons in the opinion of the Board of Examiners for Dentistry and Medicine, will be referred for a resit after the end of the academic year.

Missed partial tests: the final mark for a Causes of Diseases course unit will be calculated once the student has taken all the part tests for the particular semester. Students who have missed one partial test of a partial examination for a valid reason will be given the opportunity to resit that
partial test after the partial examination has been held, with the prior permission of the Board of Examiners for Dentistry and Medicine (the procedure is set out in the 2019-2020 Rules and Regulations (R&A) of the Board of Examiners for Dentistry and Medicine). The result of the replacement test will be combined with the results of the other partial tests and used to calculate the final mark for the course unit. Students who have missed more than one partial test will be referred for the resits that take place after the end of the academic year.

4.4 Pass mark for the Causes of Diseases written tests
The result of the written test is calculated based on a knowledge percentage of 60% and a Cohen cut-off score at the 99th percentile.

Causes of Diseases course unit 1.1 will be assessed in two partial examinations (1.1A and 1.1B) that count for 40% and 60% of the final result respectively. Students who achieve a pass mark (a mark ≥5.50) will be awarded 18 ECTS credit points, provided they have passed all their practicals and taken all their partial tests.

Causes of Diseases course unit 1.2 will be assessed in two partial examinations (1.2A and 1.2B) that each count for 50% of the final result. Students who achieve a pass mark (a mark ≥5.50) will be awarded 17 ECTS credit points, provided they have passed all their practicals and taken all their partial tests.

After each assessment stage, students will receive individual feedback on their performance in the last test and their combined performance so far. Students will be awarded a definitive mark within ten working days of completing a partial examination. Summative assessment will take place at the end of the semester. The final result of the course unit will be based on the marks for the two partial examinations if results are available for all the partial tests.

4.5 Determining the final result of the Causes of Diseases tests
The examiner for the relevant course unit will inform the students of their assessment results. The results of written tests and marks for partial examinations will be decided within ten working days, whilst the result of the progress test will be decided within twenty working days. LC assessments will also be decided within ten working days.

4.6 Post-examination discussion of and access to the Causes of Diseases tests
A post-examination analysis of each part test will take place with the cohort platform (JV/YR), with a producer (minutes taker), in the form of a discussion. Any subject-matter-related points that are not clear will be submitted to a lecturer who is an expert on the subject by the examiner. The decisions made at these meetings and the reasons for them will be announced by the examiner within ten working days. The examiner and the Examination Assessment Panel will hold a post-examination discussion of the tests with the lecturers (who supplied questions) at a later date. The results and any decisions by the examiner will be discussed at that meeting.

4.7 Resitting the Causes of Diseases tests
During cumulative assessments, students continually have the opportunity to improve inadequate performances. In G2020, the principle of order of enrolment is used. This means that in cases where the final result of several course units is a fail, the first resit must be for the course unit that was taught first, chronologically (this also applies to students in year 1 of G2020 with a lower BSA threshold). This system has been chosen because knowledge builds up gradually during the programme, which makes it necessary for the earliest of the previous course units to be passed first.

4.7.1 Resitting Causes of Diseases
Students will be given the opportunity to resit partial examinations that they have failed after the end of the second semester, in July (year 1).
4.7.2 Resitting partial examination 1.1A
Students in year 1 of the Bachelor’s degree programme have an additional opportunity to resit partial examination 1.1A after the Christmas break if they need to repair a poor start, thus enabling them to meet the requirements for the binding study advice. They can also take part in the regular resits of both partial examinations after the end of the academic year.

4.7.3 Resitting the Progress Test
The Progress Test is taken four times a year and every Progress Test represents a resit opportunity for progress tests that were previously failed. Students must demonstrate sufficient knowledge growth. At the end of the academic year, and based on a combination of the results of the progress tests, the decision whether or not the Knowledge Development course unit has been passed is taken. Students will not be prevented from progressing to the next year of their studies if they fail a Progress Test, provided they have earned sufficient ECTS credit points. Every Progress Test in the next year of their studies offers the students a further opportunity to satisfy the criteria for the Knowledge Development course unit from the previous year.

4.8 Progress Test assessment procedures
The Progress Test is developed at national level. The procedures for taking it, the announcement of results and resit opportunities are posted on the website.
## 5 Competency Development assessment: implementation regulations

### 5.1 Defining the Competency Development learning outcomes
The learning outcomes are based on the subcompetencies, which, in turn, are based on the competencies laid down for the G2020 Bachelor’s degree programme. Those competencies are laid down by the Course Director.

### 5.2 Composition of the Competency Development summative assessment
Students are given narrative feedback on products, presentations, performance and professional conduct based on a holistic rubric. It is given by the lecturer (the trainer, coach, supervisor or tutor). The assessment of professional conduct includes attendance and participation. At the end of the semester the lecturer gives a mark (1-10) for the competency domains involved in the course unit. The assessment of each competency domain is based on the previous feedback. Table 1 shows the assessments.

<table>
<thead>
<tr>
<th>Semester 1.1</th>
<th>Narrative (formative)</th>
<th>Number of formative assessments</th>
<th>Summative</th>
<th>Number of summative assessments</th>
</tr>
</thead>
</table>
| Professional Development learning pathway | Narrative feedback on assignment 1, The Good Doctor  
Narrative feedback on Professional Conduct | 1x  
2x | Summative mark for the competency domains | 1x |
| Medical Communication learning pathway | Narrative feedback on Communication  
Narrative feedback on Professional Conduct | 2x  
1x | Summative mark for the competency domains | 1x |
| Healthy Ageing learning pathway | Narrative feedback on assignment 2, Healthy Ageing  
Narrative feedback on Professional Conduct | 1x  
1x | Summative mark for the competency domains | 1x |
| Scientific Training learning pathway | Narrative feedback on the Evidence-Based Medicine assignment | 1x | Summative mark for the competency domains | 1x |
| Tutor group | Narrative feedback on Professional Conduct | 2x | Summative mark for the competency domains | 1x |

<table>
<thead>
<tr>
<th>Semester 1.2</th>
<th>Narrative (formative)</th>
<th>Number of formative assessments</th>
<th>Summative</th>
<th>Number of summative assessments</th>
</tr>
</thead>
</table>
| Professional Development learning pathway | Narrative feedback on care clerkship  
Narrative feedback on Professional Development | 1x  
2x | Summative mark for the competency domains | 1x |
| Medical Communication learning pathway | Narrative feedback on Communication  
Narrative feedback on Professional Conduct | 2x  
1x | Summative mark for the competency domains | 1x |
| Healthy Ageing learning pathway | Narrative feedback on assignment 3, Vulnerable People, and assignment 4, Pain  
Narrative feedback on Professional Conduct | 2x  
2x | Summative mark for the competency domains | 1x |
| Scientific Training learning pathway | Narrative feedback on science clerkship  
Narrative feedback on professional Conduct  
Statistics test | 1x  
1x  
1x | Mark for competency domains  
Mark for statistics test | 1x |
| Tutor group | Narrative feedback on Professional Conduct | 2x | Summative mark for the competency domains | 1x |

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6 Medical Communication is moved (education and assessment) to semester 1.2 because of the Corona-crisis
The marks given for the competency domains are posted on a dashboard (see Table 2, a specimen dashboard).

<table>
<thead>
<tr>
<th>Competency domains</th>
<th>MED</th>
<th>COM</th>
<th>COL</th>
<th>LEA</th>
<th>SCI</th>
<th>MAS</th>
<th>PROF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of assessments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
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<td>a</td>
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<tr>
<td>2</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
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<td>3</td>
<td>a</td>
<td>a</td>
<td>a</td>
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<td></td>
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<tr>
<td>5</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a</td>
</tr>
<tr>
<td>Statistics test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Average for each competency domain</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Final mark for competency domains</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.3 Calculating Competency Development marks

The procedure for determining the final mark for competencies (C) is as follows:

- The average mark for the competency domain is calculated by dividing the sum of the marks (a) for that domain by the number of assessments (e.g. MED (a+a+a) / 3 = B)
- The sum of the average marks for the competency domains is then divided by the number of competency domains (e.g. (B+B+B+B+B+B+B) / 7).

It is then calculated whether the student has achieved the pass mark:

- All competency domains ≥ 5.5
- No more than 1x ≤ 5.0 in one domain
- No more than 2x ≤ 5.0 in all marks

The statistics test (A) must then be passed before the start of the year 3 Bachelor’s project. The coach will discuss the dashboard with the student, followed by an assessment recommendation to the examiner. The maximum number of testing opportunities per year is laid down in the Teaching and Examination Regulations.

5.4 Progress interview

Students will have progress interviews with their coach half-way through semesters 1.1 and 1.2. They prepare for them by completing a reflection assignment, in which they describe their development, using the feedback they have received so far (see 2.1) and their results and development in all the other parts of the degree programme.

The coach will look at the feedback on the competency-based course units and the results of the other course units and discuss them with the student. In most cases, students will have developed successfully and just a few areas for improvement will be set.

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2 Medical Expertise (MED)  
Communication (COM)  
Collaboration (COL)  
Scientific Practice (SCI)  
Leadership (LEA)  
Management in social context (MAS)  
Professionalism (PROF)
A coach who judges that the student is not progressing satisfactorily will make this clear and discuss it with the student, and will post a ‘red flag’ (which can be seen in Scorion).

5.5 Assessment interview
The coach will discuss the dashboard with the student, and the results of the other course units, in the assessment interview at the end of the semester. Students prepare for this, just as they do for the progress interview. The coach and the student examine and discuss the marks, the feedback and the reflection assignment. Any fail marks will be discussed in detail to clarify the causes and background. The coach (and the student) can assemble and access all the feedback in a competency domain.

5.6 Assessment recommendation
The coach will make assessment recommendations to the examiner for all the students.
1. If the student has met the pass requirements, and there is nothing out of the ordinary, the coach will inform the examiner that the final mark can be adopted.

2. If the student has not achieved the pass mark or has a very discordant profile (despite the fact that the final mark is a pass), the coach will make a detailed assessment recommendation to the examiner.

3. A coach who considers it necessary can always put forward a student for discussion at a committee meeting, irrespective of the marks.

5.7 Determining the final mark
If the student has met all the pass requirements, the examiner will determine the final mark and round it off (≥ 0.5 to the next highest whole number).

5.8 Resits
Students who have a fail mark or a divergent advice of the coach, will be discussed at an assessment meeting, attended by Competency Development examiners, the LC directors and an member not involved with bachelor students. Whether the student can take a resit will be decided by this committee. The examiner will inform the student of the result at an interview.

The type of resit will be discussed at the assessment meeting and validated by the examiner. There are various resit options:
1. Quick repair: a quick repair must be achievable in two weeks.

2. Resit during the next semester: the student is given learning outcomes and assignments (drawn in an action plan) and will work on them in the next semester (in addition to the various learning outcomes and assignments for that semester). The examiner will decide how much time the student has to work on the assignments and learning outcomes. A student who fails 1.2 can resit it during semester 2.1.

The maximum new final mark for the course unit that has been resat is 6.

If the student fails the resit, the Teaching and Examination Regulations allow for two test opportunities in the next academic year.

5.9 Remedial work
Students who, in spite of the guidance described above, still do not sufficiently develop to the desired level of competency may be referred to the Student Remedial Committee (SRC) by the LC director.