

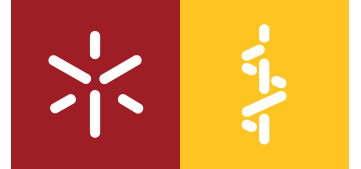


**Universidade do Minho**  
School of Medicine

# MinhoMD

**Health outcomes •**  
**oriented learning**

# School of Medicine



Universidade do Minho  
School of Medicine

## Mission

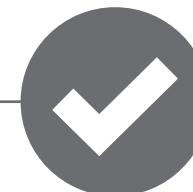
Improve health care  
through training  
and generation of  
knowledge and value



Best national  
performance  
in residency selection



ASPIRE Recognition  
of Excellence  
for student engagement



Assured quality  
through a continuous  
evaluation culture



Admissions  
per year



**student**  
in the center  
of the learning  
process

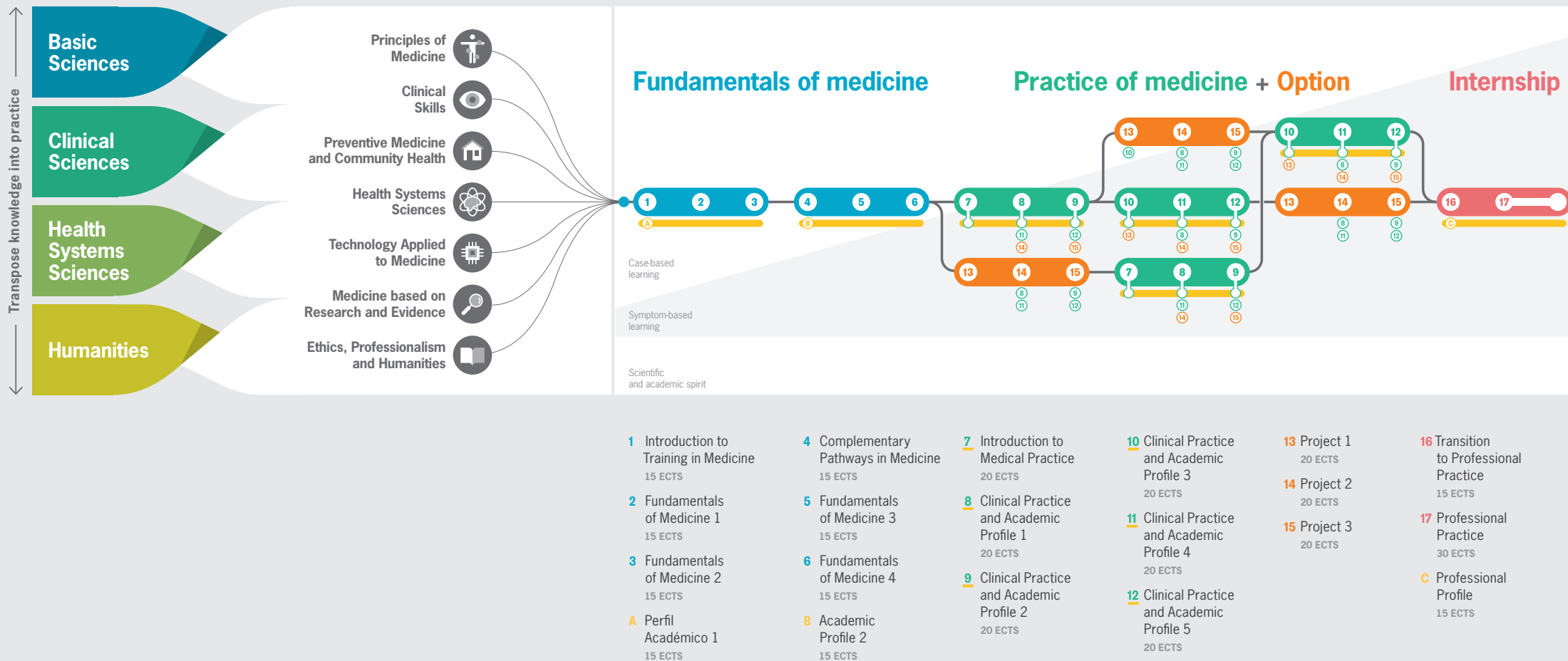
# The innovative study plan of the School of Medicine

The School of Medicine presents its curriculum for the Integrated Master Course in Medicine, with a reform that continues the innovative path initiated 20 years ago. The mission continues to be to train the doctors of the future.

The School of Medicine of the University of Minho has a new study plan, the **MinhoMD**. Known by its innovative teaching method, the School of Medicine creates a **more diversified curriculum which will allow students to have more autonomy in choosing their path.**

MinhoMD is designed under the motto “**preparing today the doctors that the future needs**”. The practice of medicine is changing rapidly, and medical education must accompany that change. Having this fact in mind, with an extended collection of contributes from teachers, students and former students, patients and informal caregivers, managers of health institutions, physicians and other health professionals, a completely innovative curricular plan was designed. The goal is **to train doctors that are versatile, multidisciplinary, endowed with high reasoning ability, excellent communicators, and great human abilities.**

# Study Plan



# More customized learning

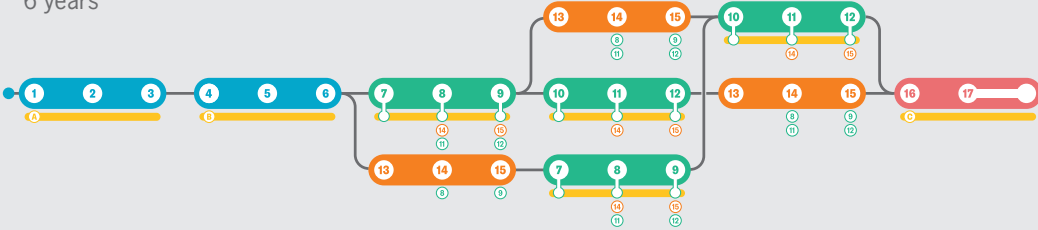
O The new curriculum is highly focused on students, allowing them to explore and develop all their interests and potential. Therefore, the students are responsible for defining their own curriculum, designing their path through optional course units (that establish about 20% of the total), including the possibility of attending **majors** and **minors** in various areas (economics, management, data science or biomedical research, for example) or participating in volunteer initiatives, erasmus+, research and other activities.

The ability to define their own pace allows students to extend their training with the attainment of the integrated doctorate (9-year MD/PhD programme) or to complete the degree in just five years (accelerated path). The students that wish to anticipate the conclusion of the degree will need to attend curricular units outside the academic calendar, for example, during summer vacation. The units available for attendance in those moments are optional, which gives students the freedom of developing projects in one or multiple areas of their interest. Additionally, a student with a previous degree can apply for the alternative path of four years. The large range of options provided by the

study plan allows **to train differentiated and oriented doctors to areas such as economics, management, or informatics, for example**. In addition to the different experiences and realities that the student comes across, the path itself dictates a greater preparation of the future doctors.

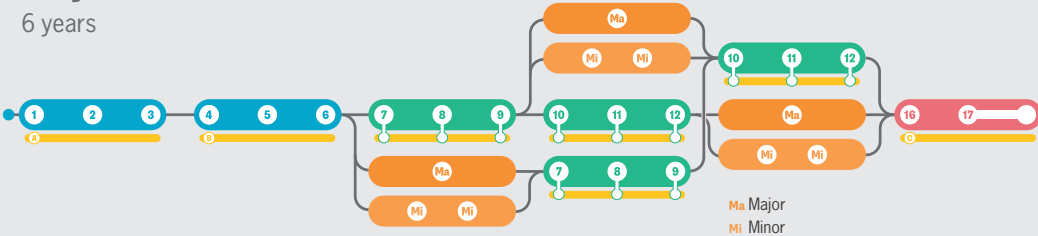
## Conventional

6 years



## Majors and Minors

6 years



## Accelerated

5 years



## Alternative

(students with previous degree)

4 years



18 Foundations of Medicine 1  
19 Foundations of Medicine 2

# What else does it bring to the students?

One of the most distinctive points of the new curriculum is the **anticipation of the contact with the clinical practice** (education based on clinical cases, training of semiology and point-of-care ultrasound) since the 1<sup>st</sup> year of the degree. But those are not the only big changes we made to improve even more the degree. In addition to the flexibility and freedom of each student in defining their path, each one will have, in the degree, a **whole optional year**. This optional year will help gather knowledge in other areas (even if they don't relate directly with Medicine or Health) and gain new experiences and skills.

Like our founder, Professor Joaquim Pinto Machado said:

**nothing of what is human is strange to the doctor.**

Our curriculum is already recognized by the strong **connection to research**. In the MinhoMD we reinforce even more the opportunities to develop scientific research in our research centres – the ICVS, located in the same building, and the 2CA, that operates right next to the school, in the hospital of Braga.

Our teaching method has always been innovative and sought to provide the best tools to train doctors with effective and clinical reasoning and excellent transversal skills. With the MinhoMD we go beyond on how students learn.

Instead of memorizing diseases (warning signs and symptoms, diagnostic tools, treatment, and management of the patient) and then understanding if they fit the symptoms of the patient, the student learns to think from what people convey in an appointment or emergency, for example. Therefore, the reasoning starts from the complaint of the patient and, from then on, the student must reach the diagnosis and treatment – exactly as professionals working at health units do. In addition to being more relevant to the future medical practice, it should also be noted that this approach is much closer to the way the Speciality Entrance Exam is currently performed (in which the students at the School of Medicine of the University of Minho always have had the best average rankings).

# What changes in the big curricular areas? And how is the education?

Our difference was already noticed for the focus on Arts and Humanities, which have a relevant weight in the students training. Now, the MinhoMD goes beyond on adding four big areas which focus on: **Basic Sciences, Clinical Sciences, Health Systems Sciences** and **Humanities**. We highlight the inclusion of the Health Systems Sciences, in line with the most recent international recommendations, which brings a more focused approach to achieving gains in health, namely the quality and efficiency of the system.

It is within these four areas that we find the seven essential threads that guide learning at the School of Medicine: **Principles of Medicine; Clinical Skills; Preventive Medicine and Community Health; Technology Applied to Medicine; Medicine based on Research and Evidence; and Ethics, Professionalism and Humanities**.

**Basic Sciences**  
Supplying students with the fundamental knowledge on the structure and function of human organs and their interactions.

**Clinical Sciences**  
Providing different approaches to clinical knowledge and skills based on a conduct centered on the patient.

**Health Systems Sciences**  
Recognizing the scope of the Health Systems as a complex system that influences health care and the health outcomes.

**Humanities**  
Promoting the reflection on preponderant themes like ethics, professionalism, and humanities to create a professional identity.



**Principles of Medicine**  
The future doctors should learn the basic concepts about the human body and their systems from their structure to their function and pathology, as well as their interactions.



**Technology Applied to Medicine**  
The future doctors should understand and adopt the technological transformation that will shape the future of healthcare.



**Clinical Skills**  
The future doctors should have skills in the different approaches to patients and pathologies.



**Medicine based on Research and Evidence**  
The future doctors have the responsibility of keeping themselves updated and support their clinical decisions with scientific evidence and critical logic.



**Preventive Medicine and Community Health**  
The future doctors should be proactive in preventing disease and promoting the health of their community health.



**Ethics, Professionalism and Humanities**  
The future doctors should promote a human relation with their patients and with the other health professionals.



**Health Systems Science**  
The future doctors should understand the complexity inherent to the Health Systems, as well as their role on them.

There are a lot of differences on the academic path and on what you are about to find. The education focuses on **Case-Based Learning** (CBL) and practical activities. CBL is one of the big innovations, with a constant presence in the student learning path. This method brings future doctors closer to the clinical reality, making them solve real case scenarios and promoting clinical reasoning in a more acute way.

From the beginning, time will be devoted to the **Academic Profile**. This new unit aims at giving the student a space for the development of projects, creation

of a portfolio with the work developed outside the teaching places and promote contact with the community and involvement in society.

Our educative approach stimulates the debate and seeks the development of the autonomy of each student, trying to promote the acquisition of transversal skills, from biomedical research to ethics and humanities. It is important not to forget the relevance of institutional partners, that give space and opportunity to learning in a clinical context and give students an essential experience in medical training.

## Academic Profile

### Personal Development

- + Well-being and lifestyles
- + Study Strategies
- + Mentoring
- + Medical Anthropology

### Clinical Relation

- + Clinical Communication
- + Medical Psychology
- + Family and health
- + Interprofessionalism
- + People and their diversity
- + Quality and patient safety

### Humanities in Medicine

- + Arts and Expressions
- + Ethics and Bioethics in Medicine
- + Literature
- + History of Medicine
- + Narrative Medicine

### Professional Development

- + Medical Law
- + Legal Medicine
- + Medical Careers
- + The doctor beyond the office
- + Medical Error

### Scientific Thinking

- + Epistemology
- + Evidence in Science
- + Scientific communication
- + Literacy in Health
- + Population Health
- + Critical thinking

# Assessment

## Formative assessment

The formative assessment consists of a set of assessments without summative profile that target the promotion of study habits and autoregulation.

The formative assessments are available in two ways on the electronic platform:

1. on-request sessions that the student fully controls (duration, extension and content) [a] and
2. sessions scheduled by the faculty [a].

The contents tested in the scheduled sessions are mainly those versed in the respective learning block, but questions about previously addressed contents can be included.

## Block tests

The contents tested in the block tests are mainly the ones versed on the respective module, but questions about contents that were previously addressed can be included.

- The formats of the questions can be multiple choice (MCQ) or open-ended (OEQ) or their variants.
- The classification will be qualitative (excellence/superior/competent/ limit/not competent)

## Progress Test

The Progress Test addresses all learning contents of the respective cycle (Fundamentals of medicine or Practice of medicine). This test aims to stimulate continuous learning habits and evaluate the progress of the cognitive development of the student. The formats of the questions can be multiple choice (MCQ) and open-ended (OEQ) or their variants, aligned sequentially around a central theme.

- The Component A of the Progress Test encompasses the whole contents of the CU that was just completed. Component A has a non-normalized absolute classification.
- Component B of the Progress Test includes all the learning contents of the respective cycle. The Component B has normalized classification for the cohort.

## Abilities test

Test in which students are observed, that consists of a series of stations that require the performance of practical tasks such as, for example, the identification/location of morphological structures or clinical or laboratorial gestures.

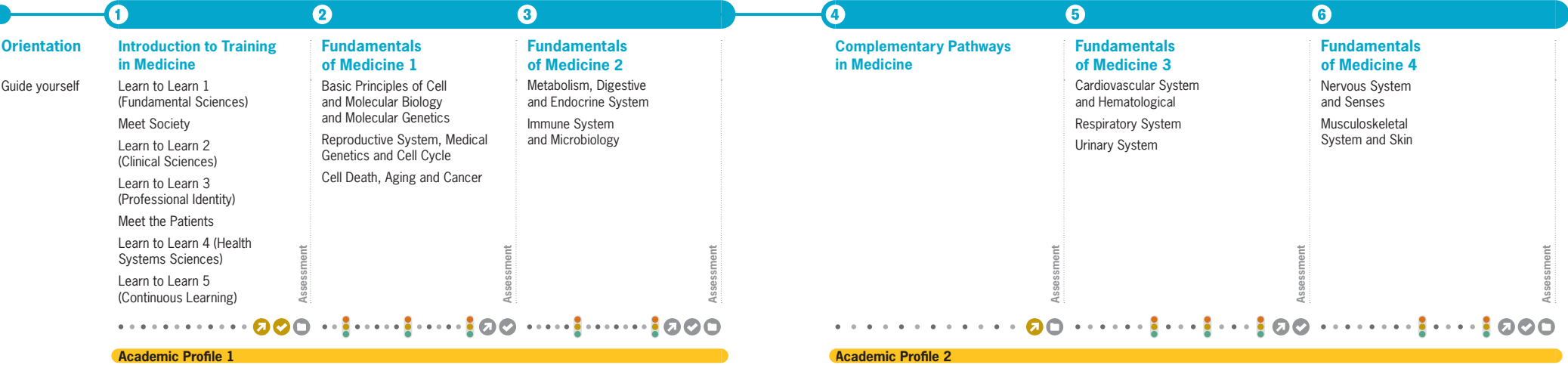
## Portfolio

The Portfolio is composed by 3 components:

1. **Academic Indicators** – report of academic indicators at the level of Knowledge, Abilities and Attitudes and Behaviour.
2. **Tasks** – repertoire of the tasks developed during the period of assessment.
3. **Critical reflection about the individual development** – consists of a reflexive exercise on individual development that implies a self-critical observation, the development of a plan of action for the remediation and future personal development.

The Portfolio will be assessed by a monitoring committee constituted by teachers and Alumni that took a collegiate decision-making based on the report and defense of it by the student.

# Fundamentals of Medicine



## 1 Introduction to Training in Medicine

11 weeks

WEEK	0	1	3	4	7	8	9	10	11
	Guide yourself	Learn to Learn 1 Fundamental Sciences	Meet Society	Learn to Learn 2 Clinical Sciences	Learn to Learn 3 Professional Identity	Meet the Patients	Learn to Learn 4 Health Systems Science	Learn to Learn 5 Continuous Learning	Portfolio + Formative OSCE + Formative Progress Test

## Example Week

MONDAY	TUESDAY	WEDNESDAY	WEDNESDAY	FRIDAY
CBL	Academic Profile	CBL	Laboratory	Multidisciplinary Review
	Laboratory		Seminars	

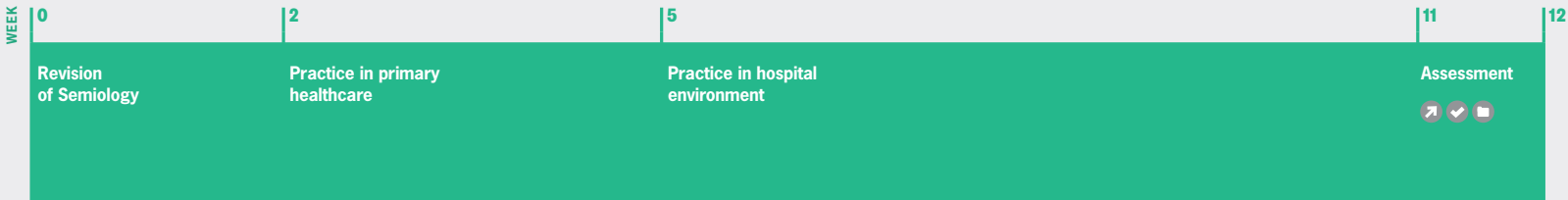


# Practice of medicine

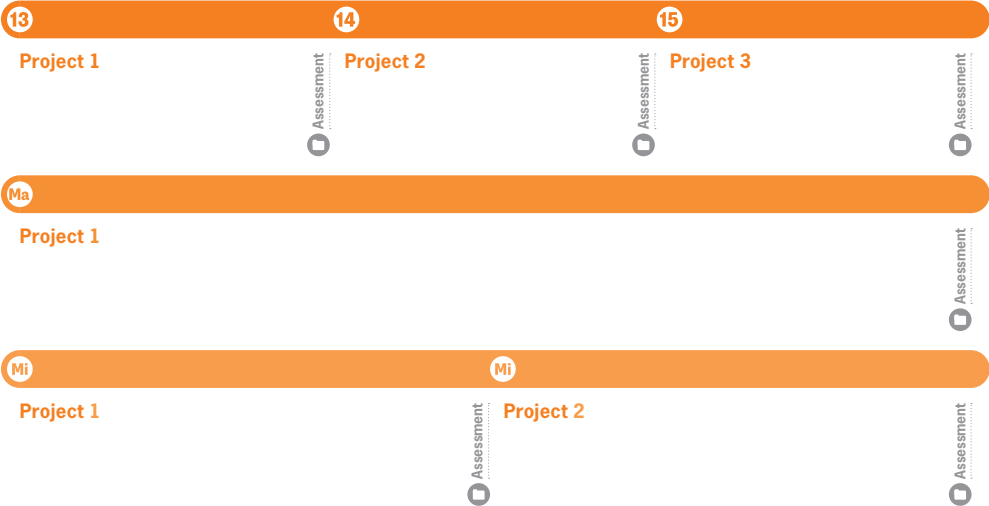


## 7 Introduction to Medical Practice

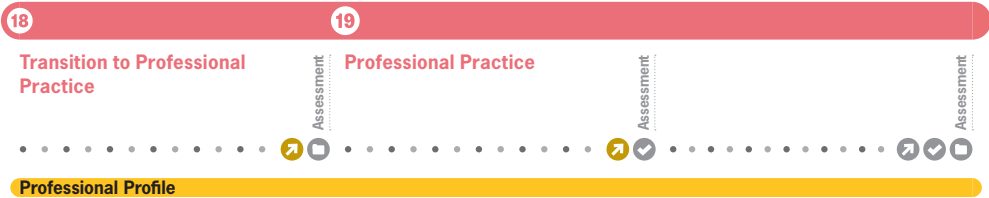
12 semanas



# Option



# Internship



With MinhoMD,  
you choose  
your path

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