







MEDIZINISCHE FAKULTÄT

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# What is population-based medicine?



Population health sciences is the study of the conditions that shape distributions of health within and across populations, and of the mechanisms through which these conditions manifest in the health of individuals. Population health takes a broad, interdisciplinary approach and includes health outcomes as well as patterns of health determinants.

Population-based medicine can be defined as population health science with a focus on medical conditions and patient populations, and refers to all aspects of community medical care, from primary prevention to tertiary care. Population-based medicine often works with big datasets and epidemiological and statistical methods to identify patterns in the diseases and health of large populations. You can find more information on the field of study and our research on the <u>department website</u>.

The Master's Program Population-Based Medicine (PBM) offers a challenging program at a competitive international level for which high individual effort and performance are **required.** We strive to prepare students to respond to both challenges and opportunities to improve health within and across populations. Our goal is to train future population health experts with outstanding methodological knowledge and interdisciplinary expertise to address the full range of factors influencing health and disease. This includes the designing, implementation and evaluation of intervention programs for health problems (e.g., lifestyle modification strategies and stress management), the development of prevention strategies at the population level (e.g., for diabetes, cardiovascular conditions, and cancer), as well as the development of policy recommendations, health education. and outreach at population level (e.g., community and digital health technologies).

# What is population-based medicine?





"Population-based medicine studies causes of health states and conditions that shape distributions of health within and across populations. The causes of population health are multidimensional and include behavioral, environmental, biological, social, economic, cultural, and psychological factors. Those determinants or risk factors accumulate throughout the life course, and they are embedded in dynamic interpersonal interactions."

Prof. Dr. Norbert Schmitz
Program Director

## Population-based medicine and public health



# What is the difference between population-based medicine and public health?

Population-based medicine provides the basic understanding of how health and illness are produced, while public health aims to apply that understanding toward building and promoting health in populations.

Population-based medicine can be considered as the basic science of public health, much as biomedical research is the basic science of clinical medicine.

Galea S, Vaughan R (2018) Population Health Science as the Basic Science of Public Health: A Public Health of Consequence. American Journal of Public Health 108(10): 1288-1289.

Public Health: building and promoting health in populations

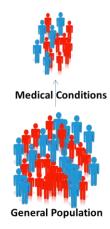






#### Population-Based Medicine:

- understanding how health and illness are produced (determinants of health conditions, diagnoses, treatment)
- understanding of health outcomes and diseases management in people with medical conditions



# Why study @ Tübingen?



Tübingen does not have a university, it **is** a university: young, creative, open, diverse. The picturesque historical town center and its attractive position on the Neckar River offer a high quality of life whether you are studying, working, or taking a break.



Innovative. Interdisciplinary. International. These have been our guiding principles in research and teaching from the very beginning. Founded in 1477, Tübingen is one of Europe's oldest, most respected institutions of higher education. Tübingen's success in the German Government's Excellence Programs since 2012 have placed it among the most outstanding universities in Germany. The University is also well-placed in international education rankings.

The University's excellence in research and teaching offers optimal study conditions to students who come to Tübingen. The attractive study environment is reinforced by many additional services, such as the <u>Language Center</u>, interdisciplinary lectures in the <u>Studium Generale</u>, and the state-of-the-art University Library.

# Why study PBM @ Tübingen?



Four main features of the Master's Program Population-Based Medicine are crucial for preparing you to meet any challenge in your future professional or academic endeavors:

- Interdisciplinary & interprofessional. We follow a comprehensive approach including behavioral, biological, social and mental factors of health and illness. You will study, learn, and work in interprofessional groups.
- **2. Research-oriented.** We strongly focus on empirical and synthesis methods in population health research.
- **3. Mentorship.** You will receive support and advice throughout the program by your individual mentor.
- 4. Practicum. In the third semester you will obtain practical experience and apply your professional competencies in population-based medicine.



# Interdisciplinary & interprofessional





Population-based medicine addresses current demographic, social, medical, and psychological issues that affect population health. An interdisciplinary approach is therefore particularly important - you will become familiar with methodologies and research strategies from a variety of disciplines. Our courses will address emerging issues and incorporate new educational strategies and technologies. Our goal is to prepare you for careers as members (and leaders) of interdisciplinary teams. In the same vein, interprofessional education is a process in which two or more professions learn from, about, and with each other to enable effective collaboration and improve health outcomes. Our program acknowledges the need for interprofessional education as becoming increasingly important to meet the challenges of the changing health care landscape.

## Research-oriented



The PBM program offers a broad spectrum of courses covering research methods, statistics, health communication, the design of population-based interventions, and evidence-based medicine to provide you with a sound knowledge base about population health research. You will apply this knowledge in a practical way during your practicum and Master's Thesis. Based on this combination of a rigorous research-oriented education and its application to real-world problems, you will be well equipped for a career in science, research, economy, policy, or industry.

Research-orientation in the PBM program is reflected by:

- The development of methodological skills in population health research.
- The development of communication skills (written or oral).
- The development of skills in critical appraisal of research findings.
- · The development of a research mindset.



# **Mentorship**





At the beginning of the Master's Program Population-Based Medicine, students will be paired with a mentor from the PBM department who will guide their academic and professional development throughout their studies.

Mentors supervise four to five students and provide guidance for the successful completion of the program and the practicum in particular. In addition, they provide advice in methodological problems students may encounter during their practicum project. We have a well-developed concept that we apply to provide successful mentorship for all our students. Your mentor will guide your academic and professional development throughout your studies and provide encouragement, academic advice, and support.

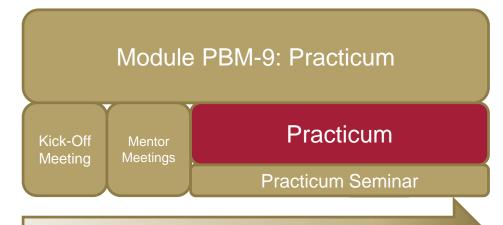
# Practicum/internship



The third semester is devoted to the completion of a 14-week full-time practicum/internship in a private or public organization of the public health sector (e.g., local planning and government offices, hospitals, NGOs) in Germany or abroad.

This is an important milestone in the Master's Program for you to apply your theoretical knowledge from the classroom in a real-world setting. Your choice of practicum site will allow you to customize the experience to your interests, expertise and future goals.

Your mentor will help you develop a **practicum project** (e.g., quantitative or qualitative data analysis or another project) that you will work on during your practicum, present to your costudents in the practicum seminar, and write about in your **practicum report**, which serves as the graded final examination of this module.



Module Examination: Practicum Report

**Practicum Project** 

<sup>\*\*\*</sup>You may be exempt from tuition fees during the practicum semester.

# Study program



The Master's Program Population-Based Medicine lasts two years (four semesters) and encompasses a total of 120 ECTS. Full-time courses will be held during the first and second semester. In the third semester you will be able to further specialize by completing your practicum/internship in a field of your choice. The practicum experience may inform your choice of topic for your Master's Thesis in the fourth and last semester.

More information on curriculum and study and examination modalities can be found in the <u>module handbook</u> and in the study and exam regulations (for the <u>PBM program</u> and for Master's programs at the University of Tübingen <u>in general</u>).

1 <sup>st</sup> Semester	CP: Credit Points
Population-Based Medicine I	12 CP
Statistics I	6 CP
Project in Health System	6 CP
Biopsychosocial Medicine	6 CP
2 <sup>nd</sup> Semester	
Practice of Population-Based Medicine	9 CP
Population-Based Medicine II	6 CP
Statistics II	6 CP
Public Health	9 CP
3 <sup>rd</sup> Semester	
Practicum (14 weeks, full-time)	30 CP
4 <sup>th</sup> Semester	
Master's Thesis	30 CP

# Your career options





A Master's Degree in Population-Based Medicine opens a variety of paths to pursue. You will have acquired skills and techniques in a wide range of health-related areas, as well as collaborative team working, communication and research methodology. Career options could include working at:

- Local planning and government offices (e.g., Public Health Officer)
- Hospitals (e.g., Health Promotion Specialist, Communication Officer)
- Consulting companies (e.g., Health Policy Analyst)
- Health insurance companies (e.g., Health Data Scientist)
- National and international (health) organizations (e.g., Program Manager)
- Pharmaceutical companies (e.g, Population Health Scientist)
- Universities and research institutes (e.g., Research Coordinator)
- Non-governmental organizations (e.g., Strategic Partnership Analyst).
- Various companies (e.g., Occupational Health Manager)

The program also provides a solid foundation for PhD studies.

# **Application and selection process**



### **Application requirements**

- Completed Bachelor's degree (6 semesters) in Health Sciences or an equivalent degree in a related field of study
- Minimum final grade of 2.5 in the German grading system
- English language proficiency at the level of B2 CEFR

If your degree is not from Germany, the University of Tübingen will convert your degree grade to the German grading system.

Applications to the Master's Program are further assessed in terms of academic merit and the candidates' prospects for professional excellence. Meeting the application requirements alone does not guarantee admission.

## Apply here!

Deadline: 15th January

#### Related fields of study

Please include a Transcript of Records or similar documents which describe the contents of your Bachelor's Degree in order to allow for assessment of the comparability of the field. A final decision can only be made based on your complete application. The following list of subjects *could* be considered comparable to Health Sciences.

- Public Health
- Epidemiology
- Medicine
- Dentistry
- Nursing
- Midwifery
- Nutrition
- Pharmacy

- · Health Economics
- Health Policy
- Biostatistics
- Psychology
- Sports
- Sociology
- Cognitive Sciences
- ......

# **Application and selection process**



## **Stage 1: Pre-selection**

## **Bachelor's Degree grade**

Minimum score (2.5): 15 points Maximum score (1.0): 30 points

#### Other achievements

- 1. Work or internship experience
- 2. Scientific achievements
- 3. Credit points in statistics and methods

Minimum score: 0 points Maximum score: 20 points

More information on the the application and selection process as well as additional links can be found here.

Applicants with the highest scores will be selected for an interview.

## **Stage 2: Selection interview**

The interview will be conducted online by members of the selection committee and lasts around 20-30 minutes.

## **Discussion topics**

- Aptitudes and motivation
- Argumentative and analytical skills
- Knowledge on statistics and methods
- Career aspirations

Minimum score: 0 points

Maximum score: 30 points



A maximum of 20 applicants with the highest scores will be offered a place in the PBM program.

## **Application and selection process**



If you want to earn bonus points (e.g., for work experience or scientific achievements), you need to upload some verification of this achievement with your application. Examples are listed below.

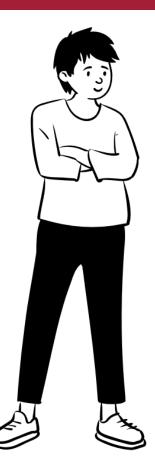
- Work experience or internship: e.g. a document from your employer or internship organization showing that the internship lasted at least 3 months and took place in the health sector
- <u>Documented</u> scientific achievements: e.g. a pdf of your published paper in a scientific journal, a conference program listing your conference contribution. A documentation is needed.

For clarity, please add a sheet to your application listing which achievements you are submitting for bonus points and where we can find verification.



# **Application and selection process - Examples**





## **Applicant A**

- Bachelor's degree with a final grade of 1.1 in the German grading system (29 points)
- 9 ECTS from a statistics course (5 points)
- Co-authorship of a scientific paper (5 points)
- Stage 1 score: 39 points
- Selection ranking: place 7

#### Applicant A is invited to an interview.

- Interview score: 25 points
- Stage 2 score: 25 points
- Total score: 64 points
- Admission ranking: place 12

Applicant A is offered a place on the PBM Master's program.

Documents that are not in English or German MUST be accompanied by a translation into German or English by a sworn-in translator! Always upload both – your original document and their translations!

# **Application and selection process - Examples**



## **Applicant B**

- Bachelor's degree with a final grade of 1.5 in the German grading system (25 points)
- Nursing internship of six months (7 points)
- 3 ECTS from a statistics course (0 points)
- Stage 1 score: 32 points
- Selection ranking: place 20

#### Applicant B is invited to an interview.

- Interview score: 20 pointsStage 2 score: 20 points
- Total score: 52 points
- Admission ranking: place 18

Applicant B is offered a place on the PBM Master's program.



# FAQs

# Which degree is required for admission to the M.Sc. Population-Based Medicine program?

You need a Bachelor's Degree (or an equivalent degree of at least 6 semesters) in Health Sciences or a comparable subject. Examples of potentially comparable subjects include:

Public Health	Health Economics
<ul> <li>Epidemiology</li> </ul>	Health Policy
Medicine	Biostatistics
<ul> <li>Dentistry</li> </ul>	<ul> <li>Psychology</li> </ul>
<ul> <li>Nursing</li> </ul>	Sports
<ul> <li>Midwifery</li> </ul>	<ul> <li>Sociology</li> </ul>
<ul> <li>Nutrition</li> </ul>	Cognitive Sciences
<ul> <li>Pharmacy</li> </ul>	•

Make sure to submit a Transcript of Records or similar documents which describe the contents of your Bachelor's Degree in order to allow for assessment of the comparability of the field. A final decision can only be made based on your complete application.

# What is the difference between the PBM program and a Public Health program?

A simple approach to bridging population-based medicine and public health: population-based medicine is the basic science of public health, much as biomedical research is the basic science of clinical medicine. Population-based medicine provides the basic understanding of how health is produced, while public health aims to apply that understanding toward building and promoting health in populations.

https://pubmed.ncbi.nlm.nih.gov/30207758/

# What ist the difference between the PBM program and an Epidemiology program?

Epidemiology provides essential knowledge to design, implement, and assess approaches to effectively prevent disease and improve health in populations.

Epidemiological methods are the cornerstones of population health and population-based medicine, which consider the broader picture by integrating concepts, methods and evidence from behavioral, environmental, biological, social, economic, cultural, and psychological science.

# Do I need any specific skills in statistics and methods?

Yes, some knowledge in statistics and methods is expected. However, you may still apply for the program if your bachelor's degree fulfills the admission requirements. During the selection process you may receive bonus points for CPs obtained in statistics and methods. Also, the topic will be discussed during the selection interview.

# Is work experience required for the application?

Work experience is not a prerequisite for your application. However, relevant work experience may give you bonus points in the selection process. Therefore, make sure to upload any certificate or verification you might have on your work experience (including duration and verification that it took place in the health care sector).

## How many students will be admitted?

There are 20 study places in Population-Based Medicine per year.

## When does the program start?

In 2024 the program starts in the summer semester (courses start mid-April). From 2025 on it will only start in the winter semester (courses start mid-October).

## What ist the deadline for applications?

The deadline for your application in 2024 is January 15th. Applications received after this date cannot be considered in the selection process. Apply <u>here</u>.

## What is the language of instruction?

All courses and examinations will be held in English. You need English skills at the B2 level (CEFR). A corresponding certificate must be submitted with the application. More information can be found <a href="https://example.com/here/">here</a>.

## What is the schedule of the program?

The first two semesters have a fixed schedule of course offerings. In the third semester you will complete your mandatory 14-week full-time practicum and attend an online practicum seminar. In the fourth semester you will attend a Master's colloquium and write your thesis. The detailed schedule can be found in the <u>module handbook</u>.

## Do I also need German language skills?

Although you won't need German in your courses, German skills are useful for managing your everyday life in Tübingen or in case you would like to complete your practicum in a German organization. Consider taking German lessons at the <u>Centre for German as a foreign language</u>.

## Am I qualified to apply to study in Germany?

At the information portal <u>anabin</u> (German only) and the DAAD <u>database</u> on <u>admission</u> requirements (English/German) you can check for yourself whether your qualifications meet the requirements. Please refer to the <u>website</u> concerning application and admission for international students and the <u>application officers</u>.

# Is there an opportunity to study abroad during the program?

A good opportunity to spend time abroad during your master studies is the practicum in the third semester. Start looking for potential practicum organizations early, and use a practicum abroad for getting to know yet another health system.

# What if my grades are not from the German grading system?

The office of <u>Advising and Admission of International Students</u> will convert your grades. More information on applications by international students can be found <u>here</u>, <u>here</u>, and <u>here</u>, for example.

#### How much is the tuition fee?

German and EU citizens only need to pay the so-called "Semesterbeitrag" which is roughly around 160 € per semester. Non-EU citizens additionally have to pay a tuition of 1500 € per semester. You may be exempt from fees during the practicum semester. Here you can find further information on costs of your studies in Tübingen.

# What are my career prospects with a degree in Population-Based Medicine?

With a degree in Population-Based Medicine you can work in a variety of public and private organizations in the health sector (e.g., hospitals, consulting agencies), as well as NGOs. You will also be ready for pursuing PhD studies.

# How can I prepare for my studies in Germany?

The University of Tübingen offers a free-of charge virtual intercultural preparation package (<u>Tü-VIP</u>) with courses on German language, culture, politics and society. You can take part in these online courses even before being a student in Tübingen. The only prerequisite is that you are enrolled as a student in your home country.

#### Where and how can I find accomodation?

Accomodation in Tübingen can be found privately or in halls of residence run by the <u>Studierendenwerk</u> or other organisations. International students can find help <u>here</u>. **Make sure to subscribe to the House mailing list!** Please note: Finding an apartment or room in Tübingen can take some time, so start your search early.

### How to get started in Tübingen?

To help you find your way around, the University of Tübingen offers an extensive <u>welcome and information program</u>. For international students there is also an <u>onboarding system</u> including a buddy program and a help desk.

## What type of Visa should I apply for?

All students from most non-EU countries will require a student visa. We recommend that you contact the nearest German embassy or German consulate in your home country **as early as possible** about visa requirements. For further information on visa regulation please check the websites of the <u>German Federal Foreign Office</u> and the <u>DAAD</u>.



#### For international students from visa countries

As soon as you know that you want to apply for our program, find out what documents you need for a successful visa application and even consider booking a visa appointment in advance, especially if you know that it takes very long in your country to receive an appointment. In case of a successful application for the PBM program you can expect to receive the admission offer around mid- to end-February.

## Contacts and links



#### **Program Director**

Prof. Dr. Norbert Schmitz

#### **Program Coordinator**

Dr. Tanja Seifried-Dübon

Postal address Visiting address

Geissweg 5/1 Geissweg 13

72076 Tübingen 72076 Tübingen

Germany Germany

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**+49 (0)7071 – 29 5434** 

pbm.studium@med.uni-tuebingen.de

- Module handbook
- Study and exam regulations (in German and English note that only the German version is legally binding)
- Masterrahmenprüfungsordnung der Universität Tübingen (German and English – note that only the German version is legally binding)
- Selection statutes (in German and English note that only the German version is legally binding)
- Admission and enrollment statutes University of Tübingen
- Program website University of Tübingen
- Program website Faculty of Medicine
- Department website
- Apply here
- Student Counseling Service (study Orientation)
- <u>Student Administration</u> (application and admission German nationals and applicants with German entrance qualification)
- Advising and Admission of international students
- Onboarding for degree-seeking international students
- Family Office
- Gender Equality Office
- Diversity Office

## **Our goal**

To train future population health experts with outstanding methodological knowledge and interdisciplinary expertise to address the full range of factors influencing health and disease.



# Attempto!





Take inspiration from our University's motto: Attemtpo! – I dare! ... and apply for Population-Based Medicine in Tübingen!

We're looking forward to meeting you!

# Population-Based

Application deadline: 15.01.2024

4 semesters/ 2 years

Start: April 2024

**120 ECTS** 

Language of Instruction: English

Full-time study

University of Tübingen
Faculty of Medicine
Department of Population-Based
Medicine
Hoppe-Seyler-Straße 9
72076 Tübingen

Program Director
Prof. Dr. Norbert Schmitz

**Study Coordinator**Dr. Tanja Seifried-Dübon

Email pbm.studium@med.uni-tuebingen.de

Web
Department website
Program website