Cardiovascular Research
Oncology

VUmc School of Medical Sciences
Are you a researcher at heart?
Do you want to join the battle against heart disease with experts from the field? Can you envision yourself doing research at a renowned institute? Then you should consider the two-year Master degree programme in Cardiovascular Research at the VUmc School of Medical Sciences!

You probably know someone in your surroundings who has suffered a heart attack or cardiac arrest. After all, cardiovascular disease is a leading cause of death in the Western world. In the Netherlands, more than 100 people die every day due to cardiovascular disease. In order to reduce this number, scientific research is needed. In the Master degree programme in Cardiovascular Research, you will contribute to this crucial research.

General information

Unique and small scale
The Master programme in Cardiovascular Research at the VUmc School of Medical Sciences is the only programme of its kind in the Netherlands and one of the few in Europe. Due to the small scale of the programme, you will receive personal guidance from the best researchers in the field.

Curriculum
During the first year, you learn all about the cardiovascular field, including the pathophysiology of the heart and the clinical aspects of cardiovascular diseases. During the second year, you focus on your own interests and preferences. There are many possibilities, also for research internships abroad. VUmc School of Medical Sciences has connections with several renowned research institutes worldwide.

The heart is a muscle about the size of a fist and weighs approximately 500g
Each year worldwide around 14.1 million people are diagnosed with cancer*. At the VUmc Cancer Center Amsterdam (VUmc CCA), 26 departments cooperate to make sure that patients with (suspicion of) cancer receive the best suited treatment available, as quickly as possible. Despite therapeutic developments, cancer remains one of the leading causes of death worldwide. Together, we want to improve treatment success, life expectancy and quality of life of cancer patients. Good research forms the basis to achieve this.

During the Master degree programme in Oncology, you will be introduced to the current knowledge on the development of cancer and its treatment. You will be learning about the newest discoveries regarding oncology, as well as working on this yourself, not only within, but also far beyond the walls of the VUmc CCA.

General information

Unique and small scale
The Master programme in Oncology at the VUmc School of Medical Sciences is a unique programme. Since it is a small-scale programme, you can count on intensive and personal guidance and supervision from the programme coordinator and the leading researchers affiliated with the programme.

Curriculum
The Master programme in Oncology at the VUmc School of Medical Sciences is a highly flexible programme. To a large extent, you are free to decide your own research topics and choose your research locations. The major part of the programme consists of practical work in the world of research. You have the opportunity to execute a significant part of the programme in one of our leading national and international partner institutes.

* The incidence and mortality statistics for cancers worldwide were taken from the International Agency for Research on Cancer GLOBOCAN database, which presents estimates for 2012.
Nature of the programmes

The Master programmes in Cardiovascular Research and Oncology are two-year international programmes, in which practical learning is paramount. Both programmes have a number of compulsory courses and a wide range of optional courses. Additionally, students will complete two internships and carry out a literature review.

Compulsory courses of the programmes include:

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<th>Month</th>
<th>Cardiovascular Research</th>
<th>Oncology</th>
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<tr>
<td>September</td>
<td>Heart and Circulation</td>
<td>Oncogenesis</td>
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<td>October</td>
<td>Cardiac Disease</td>
<td>Tumor Immunology</td>
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<td>November</td>
<td>Diabetes and Vascular Disease</td>
<td>Tumor Biology and Clinical Behavior</td>
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<td>December</td>
<td>From Advanced Imaging to Stem Cells</td>
<td>Innovative Tumor Therapies</td>
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<td>January</td>
<td>Biostatistics</td>
<td>Biostatistics</td>
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<td>Writing Scientific English</td>
<td>Writing Scientific English</td>
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Structure

- **Compulsory Courses**: 30 EC
- **Optional Courses**: 12 EC
- **Literature Study**: 9 EC
- **Minor Internship**: 30 EC
- **Major Internship**: 36 EC
- **Master Thesis**:
- **Academic Core (3EC)**
- **2 year, 120 EC**
Create a programme of your own interests

Students are free to choose from a wide range of optional courses, including Advanced Cardiac Diagnostics, Viral Oncogenesis, Biobusiness, Laboratory Animals and Policy, Management and Organisation in International Public Health. Students can also take optional courses at other faculties and universities, both in the Netherlands and abroad.

In the Minor Internship, students will carry out research at the VUmc or at one of our partner institutes in Amsterdam. During the Major Internship, students are trained in important academic skills to prepare them for a significant research career. Throughout the programme, students can rely on the supervision of researchers with an important expertise in the field.

Over half of the Master students start working on their PhD either during the programme or in the first few months after graduating. Due to the versatile Master programmes, other employers, such as policy makers, have also shown interest in our alumni. Other possible career paths include jobs in large pharmaceutical or biotech companies. Five years after the start of the programmes, approximately 90% of all the students have a job within or outside academia.
Student experiences

“What I enjoy most about the programme is the combination of gaining insight in aspects of cardiovascular research and the direct contact with the clinic.

My experiences and the opportunities during the Master programme have outgrown my expectations and I would definitely recommend this Master programme to new students.”

“Since the programme provides a lot of opportunities to choose your own subjects for both internships, the literature study and optional courses, you can make your own programme as ambitious and diverse as you prefer.

I learned to translate my basic knowledge into practical experience, to formulate and answer my own research questions and present my ideas enthusiastically.”
Are you up for the challenge?

Are you interested in working on either one of the two major types of diseases in the Western world? Do you have a Bachelor’s degree in Biomedical Sciences or related Life Sciences? Does the idea of working in a multidisciplinary research environment appeal to you? Do you like to work with people who challenge each other in order to achieve the best results?

If your answer is yes, then the VUmc School of Medical Sciences is definitely looking for you!

Admission requirements

- A Bio-medically or Life Sciences oriented Bachelor’s degree
- English language proficiency requirements
- Basic knowledge of the programme topic
- Laboratory experience*
- Preferably a GPA of 3.5 (Dutch grading system: 7.5) or higher in the final year of the Bachelor**
- Preferably an A grade (Dutch grading system: 8) for the Bachelor thesis**
- Assessment test

Admission procedure

To be part of the Master programme in Cardiovascular Research or Oncology at the VUmc School of Medical Sciences, positive completion of the selection procedure is required.

1. Complete an admission request through Studielink
2. Complete your application in VUnet
3. Upload all required documents
   - Proof of a valid Bachelor’s degree
   - Transcript of records
   - Proof of the English language proficiency requirements
   - CV
   - Motivation letter
   - Two reference letters (preferably one from the supervisor of the Bachelor thesis)
4. Participate in the assessment test

* This holds true for Oncology students only
** This holds true for Cardiovascular Research students only