Improving health and environment, by studying, applying, and manipulating microorganisms

Microbiology at Radboud University focuses on the functioning of microorganisms and their potential for improving our health and the environment. Think of applications in energy-efficient societal waste processing or next generation vaccines. As the programme contains more than one year of academic research, you will gain extensive hands-on experience in microbial research, for example in the leading research department of Prof. Mike Jetten.

Why study this specialisation at Radboud University?
• The research of the Microbiology department at Radboud University has been bestowed with the most prestigious science prizes, including three ERC Advanced Grants, a Spinoza Prize, and two Gravitation Grants.
• You will be able to work with state-of-the-art bio-reactors, electron microscopy and mass spectroscopy equipment, and facilities for molecular methods.
• You will follow medical as well as general microbiology courses, enabling you to choose the topics that interest you the most.
• We offer internships at multiple related research institutes, including departments at the University Medical Center (Radboudumc).
Programme outline (2 years, 120 EC)
The programme of this specialisation consists of:
• Compulsory courses (15 EC)
• Specialisation electives (18 EC)
• Philosophy elective (3 EC)
• 2 Internships (2 x 36 EC)
• 2 Literature theses (2 x 6 EC)

Courses
Below you can find an overview of the compulsory courses and some examples of electives. Please have a look at the online prospectus (see 'More information') for more detailed information.

Compulsory courses
• Introduction and Orientation in Microbiology (3 EC)
• Microbial Physiology & Metabolism (3 EC)
• Environmental Microbiology and Biotechnology (3 EC)
• Microbial Cell Structure & Function (3 EC)
• Host-microbe Interactions (3 EC)

Examples of specialisation electives
• Microbiology of Wetland Ecosystems (3 EC)
• Cellular Imaging in Four Dimensions (3 EC)
• Ecological and Environmental concepts (3 EC)
• Apoptosis (3 EC)

Research internship
During your internships, you will be responsible for your own experiments, under the supervision of one of our top researchers. At Radboud University, the most relevant departments are:
• Microbiology (ru.nl/microbiology)
  › Prof. Mike Jetten
• Medical Microbiology (rimls.nl)
  › Prof. Heiman Wertheim and Dr. Ronald van Rij
• Pediatrics (rimls.nl)
  › Dr. Marien de Jonge
• Internal Medicine (rimls.nl)
  › Prof. André van der Ven, Prof. Mihai Netea, Prof. Leo Joosten

For more information on these research topics, have a look at the website of the Radboud Institute for Molecular Life Sciences (rimls.nl), theme 'Infectious Diseases and Global Health'.

You can also choose to do one internship at another university, a company, or a research institute. There are, for example, close contacts with the Max Planck Institute in Germany. For other possibilities, you can always contact a lecturer or the student advisor (see 'More information').

Your advantages on the labour market
This Master’s specialisation is an excellent preparation for a career in research, either at a university or at a company or governmental institute. However, many of our students also apply their academic background in a more societal context. They work for example as a consultant, risk analyser, policy officer or teacher.

Admission requirements
You are required to have a Bachelor’s degree in Biology or a closely related discipline and specialised courses related to microbiology. You must also have a sufficient proficiency in English.
Students from a University of Applied Sciences (HBO) need to follow a relevant pre-Master’s. If you do not meet the entry requirements, tailor-made programmes can be offered. For details, please visit the website or contact the student advisor (see 'More information').

Application and selection procedure
The programme starts in September. The application deadline is 1 April for students from non-EU/EEA countries and 1 May for students from within the EU/EEA. You apply for the Master’s programme in Biology via www.studielink.nl.

This specialisation involves a selection procedure. External students should upload a motivation letter in the application system or send it directly to the student advisor (see 'More information'). Make sure that your motivation letter states clearly why submission to this specialisation is desired (max. 2 pages) and include at least one letter of reference from an expert, preferably your Bachelor’s thesis advisor. The selection will take place mid May and will include a personal or skype interview.

>>> More information

Prospectus: www.ru.nl/prospectus/sciencefaculty

Student advisor Biology: Conny Mooren
› biology@ru.nl / +31 (0)24 365 22 81

www.ru.nl/masters/microbiology