A challenging research-orientated programme that covers the fundamental processes involved in stress responses of plants, micro-organisms and animals

How do plants adapt in areas with regular flooding or drought? And what are the consequences of an increase of water acidity for a fish or a micro-organism? In this specialisation, you’ll become an expert in stress adaptation of individual organisms.

Why study this specialisation at Radboud University?
• You’ll get an extensive background in academic research.
• The courses include fieldwork and visits to research institutes and biotechnological companies.
• This specialisation is closely connected to the Institute for Water and Wetland Research (IWWR), a leading institute in wet ecosystems and stress biology research.
• Radboud University just opened a new greenhouse complex and offers students the possibility to work with advanced research equipment and techniques, like electron microscopy, mass spectrometry, and next-generation sequencing.
• You’ll get the chance to perform a half-year internship abroad.
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)
• Literature thesis 1 (6 EC)
• Literature thesis 2 / Field course (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
• Orientation in Biology and Environmental Sciences (3 EC)
• Quantitative Conservation Biology (3 EC)
• Advanced Adaptation Physiology (3 EC)
• Microbiology of Wetland Ecosystems (3 EC)
• Molecular Physiology of Plant Stress Adaptation (3 EC)

Examples of specialisation electives
• Advanced Endocrinology (3 EC)
• Principles of Systems Biology (3 EC)
• Laboratory Animal Science (3 EC)
• Microbial cell structure and function (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:
• Animal Ecology and Physiology (ru.nl/animal)
  > Prof. Gert Flik and Prof. Henk Siepel
• Molecular Plant Physiology (ru.nl/mpp)
  > Prof. Titti Mariani
• Experimental Plant Ecology (ru.nl/planteology)
  > Prof. Hans de Kroon
• Microbiology (ru.nl/microbiology)
  > Prof. Mike Jetten

You can also choose to perform an 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. Every year, Radboud University offers about five to ten PhD positions in this field of research. Of course, many graduates also apply for a PhD position at related departments in the Netherlands, or abroad. You can also choose to apply your academic background in a more societal context, for example, as a consultant, policy coordinator, or teacher.

Admission requirements
You are required to have a Bachelor’s degree in Biology or a closely related discipline. You must also have a sufficient proficiency in English.
Students from a University of Applied Sciences (HBO) need to follow a pre-Master’s or minor in Biology. Other additional deficiency programmes are tailor-made. For details, please visit the website or contact the student advisor (see 'More information').

Application 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. After admittance to the Master’s programme, you can enrol for the specialisation in Adaptive Organisms.

>>> 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/adaptiveorganisms