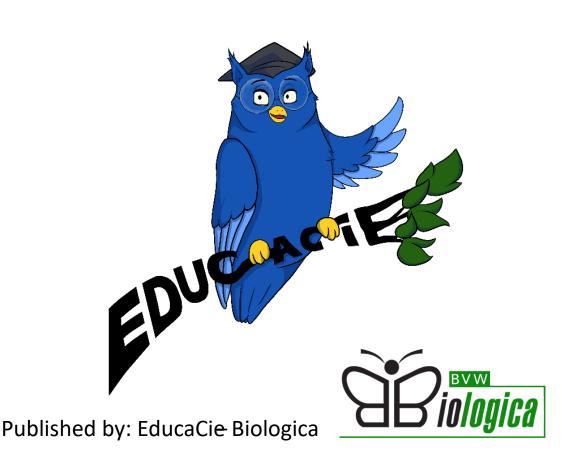
# Thesis/Internship Guide

# Where to Find Your Thesis/Internship



Everything you need to know about where to find a thesis/internship topic and how to apply per chair group





# Last update: January 2024

# Where to Find Your Thesis/Internship

Doing a thesis and/or internship is a mandatory part of the study Biology. In the BSc you are required to do a thesis of 12 ECTS ( $\pm$  2 months). You could include an internship in your BSc program, but this is not obligatory. An Internship can be done instead of a Bsc thesis if you do not plan on doing a Master program. In the MSc it is compulsory to do a thesis of 36-39 ECTS ( $\pm$  6 $^+$  months) and an internship of 24-36 ECTS ( $\pm$  4 $^+$  months). For more information about thesis and internships, take a look at the 'Biology program information' Brightspace page. (BSc informatie > Derdejaars studenten > BSc thesis ; MSc information > Thesis/internship).

**ATTENTION!** As of the last update of this document the Bsc thesis is still 12 ECTS. However, can change within a couple of years.

The thesis and internship have to be linked to a chairgroup at Wageningen University. Not all chair groups keep their research subjects or thesis/internship opportunities updated on the same site. In this document you will find an overview per chair group, on where you can find their most updated list of subjects and how to reach them.

**ATTENTION!** Some chair groups have some requirements listed you have to fulfil or an intake procedure before you can start your thesis/internship at that chair group. Read these carefully, because you might need to prepare/plan some things in advance.

**ATTENTION!** If you apply for a thesis/internship position, there might be a selection procedure, as there might be more students applying for the same thesis/internship position (happens most often when you want a research position/internship outside the WUR). Sometimes the supervisors of the project will ask for your resume/CV or a summary of the previous projects you did. Be prepared and have your resume/CV ready and up to date so you can send it to them if they ask for it.

### Chair group market

Every year the Biology team together with the EducaCie (Biologica) organize the chair group market. Almost all chair groups come to this evening where they have their own stand. Students can walk around the stands and talk to the teachers/researchers belonging to that chair group. This can give you an idea about the chair group and the research they do. This is a good opportunity to ask questions and look for a thesis/internship topic.

An overview of all chair groups at the WUR can be found <a href="here">here</a>. Biology students cannot do a thesis by every chairgroup. If you want to do a thesis at a chairgroup that isn't accessible for Biology students, it needs to be approved by the University. In that case it is good to talk to a study advisor about this.







### General sites

There are many different ways to get a thesis/internship project. Each chair group has different media they keep updated and ways to approach them if you want to do your thesis/internship at their chair group. Below you can find a few general sites/methods to find a thesis/internship topic. If one of these options is not named in the chair group description, it doesn't mean they don't use it. However, they don't update it regularly. The most updated lists and the most effective ways to get a thesis/internship can be found in the chair group descriptions.

One of the most effective ways to find a topic is to send an e-mail to a chair group you like and ask about thesis/internship positions. Some chair groups have a specific thesis/internship coordinator or prefer that you approach the researcher that monitors one of the themes within a chair group. Who to contact can be found in the chair group descriptions. If no one specific is named there, you can always send an e-mail to the chair holder of the chair group.

You can look for thesis/internship subjects by scrolling through the *WUR chair group site*: <a href="https://www.wur.nl/en/Research-Results/Chair-groups.htm">https://www.wur.nl/en/Research-Results/Chair-groups.htm</a>

Another way to find topics is by use of *tip.wur* (<a href="https://www.tip.wur.nl/index.php">https://www.tip.wur.nl/index.php</a>). This is a database where a lot of chairgroups keep their theses up to date and you can filter by certain topics or chair groups.

Some chair groups have their own *BrightSpace* (BS) space where they publish the most recent updates of their research subjects. To get access to these BS pages you need to enrol yourself via "Discover" on BS. Some chair groups also can be found via Osiris, just like course enrolment.

BrightSpace: https://brightspace.wur.nl/d2l/home; Osiris: https://wur.osiris-student.nl/

There is a separate section in the *BioFlits* (newsletter of the board of Biologica, sent to you via e-mail) for thesis/internships: 'Thesis and Internship opportunities'. In this section you can find some advertisement from chair groups, researchers or companies that have a thesis/internship position available. If you do not yet receive the Bioflits, you can mail the board at <a href="mailto:bvw.biologica@wur.nl">bvw.biologica@wur.nl</a>. If you have not yet signed up for Biologica, you can do it <a href="mailto:here">here</a> (recommended).







# Table of contents

Where to Find Your Thesis/Internship	
Chair group market	
General sites	2
AEW Aquatic Ecology and Water Management	
AFI Aquaculture and Fisheries Group	
BHE Behavioural Ecology Group	6
BIP Biophysics	
BIC Biochemistry	8
Biometris	<u></u>
BIS Biosystematics Group	
CBI Cell Biology and Immunology Group	11
CLB Laboratory of Cell Biology	
CSA Centre for Crop Systems Analysis	13
ENT Laboratory of Entomology	14
ESA Environmental Systems Analysis Group	
EZO Experimental Zoology Group	
FEM Forest Ecology and Forest Management Group	
GEN Laboratory of Genetics	18
HAP Human and Animal Physiology	19
MIB Microbiology	20
MOB Laboratory of Molecular Biology	21
NEM Laboratory of Nematology	22
PEN Plant Ecology and Nature Conservation Group	23
PHP Laboratory of Phytopathology	24
PPH Laboratory of Plant Physiology	25
SBL Soil Biology Group	26
SSB Systems and Synthetic Biology	27
TOX Toxicology	28
VIR Laboratory of Virology	29
WEC Wildlife Ecology and Conservation Group	30







# AEW Aquatic Ecology and Water Management

"We aim to generate novel insights that can help preserving and restoring marine and freshwater ecosystem services. We take a systems approach linking physical, chemical and biological processes across scales."

### Main WUR page [link]

The WUR page contains information about their research and different projects they do at AEW. They have two main themes: 'Freshwater research' and 'Marine research'. At their pages you can find the different projects belonging to that theme.

(!) Before you can apply for a thesis/internship, there are some requirements you have to fulfil. Check if you are qualified and what you have to do before starting your thesis/internship at AEW.

### Thesis/internship

The most updated list of the thesis/internship topics can be found on <u>tip.wur</u>. You can also take a look at <u>collaborating institutions</u> that do research with AEW. It is possible to do your BSc as well as your MSc thesis/internship. For the MSc <u>thesis</u> and <u>internship</u> a little more information is available, like learning goals, general set-up, writing and research.

To apply for a thesis/internship position, you can send an e-mail to get an appointment to discuss your interests and what you want to do for your thesis/internship. If you have decided on a topic, you will be assigned to a supervisor.

Торіс	Contact	
Water Quality	Bart Koelmans	Bart.Koelmans@wur.nl
Marine Ecology	Mischa Streekstra	Mischa.Streekstra@wur.nl
Freshwater Ecology	Edwin Peeters	Edwin.Peeters@wur.nl







# AFI Aquaculture and Fisheries Group

"It is our mission to be leading in academic research and education on sustainable Aquaculture and Fisheries, with a focus on society relevant questions and on the interactions between aquatic organisms and their environment. We address, in particular, nutrition and health in aquaculture systems and adaptation of fishes and fisheries to changes in the environment."

### Main WUR page [link]

The WUR page is elaborate and gives information about the chair group, the <u>research</u> and the people involved in this research. You can also find a list of <u>projects</u> they are currently active in.

### Thesis/internship

AFI organises a 'Meet & Greet' every month (usually Tuesday between 12:00 h and 13:00 h). The data can be found on their main WUR page. You have to register for such a meeting by sending an e-mail to <a href="mailto:office.AFI@wur.nl">office.AFI@wur.nl</a>. In this e-mail you mention that you want to participate in the 'Meet & Greet' and the topics you are interested in. The thesis/internship coordinator will direct you towards appropriate supervisors.

More information about doing your thesis/internship (choose BSc or MSC) at AFI can be found here.







# BHE Behavioural Ecology Group

"The Behavioural Ecology Group (BHE) studies the causes and consequences of animal behaviour with a focus on social contexts. We provide education in Behavioural Ecology and Applied Animal Behaviour.

### Our research focuses on:

- Behavioural Ecology
- Applied Animal Behaviour
- Behaviour of Companion Animals "

### Main WUR page [link]

The WUR page is not the main site of BHE. They have their <u>own site</u> where further information about the chair group can be found, like <u>research projects</u>, the BHE team, and so on.

### Thesis/internship

Information about doing your thesis/internship at BHE can be found on their own site and on their BS page (BHE-82000). The most updated list of their topics can be found on tip.wur. If you want more information about the topics or other additional options, you can contact the supervisor of that research. For more general questions about thesis/internship you can contact Bonne Beerda (Bonne.Beerda@wur.nl).

The chair group encourages students to e-mail a member of the team with a research topic to your liking and ask them for a meeting to discuss thesis/internship opportunities. They will assign you to a supervisor connected to your subject. You are also encouraged to drop by at their chairgroup.







# **BIP Biophysics**

"Biophysicists provide and apply physical techniques and try to understand life processes and structures in terms of underlying physical laws and principles. The distinction between the "live" (biology) and "dead" (physics) world is disappearing more and more."

### Main WUR page [link]

At the WUR page you can find the <u>research</u> they do at the chair group. By clicking on a topic, you get an explanation of the research and the researcher assigned to that project.

### Thesis/internship

Information about thesis/internships can be found <a href="here">here</a>. A list is given of different projects you can choose from. By clicking on a project, you get a description of the research and who to contact if you are interested.

If you like some of the research that is done at BIP, but not a specific one listed on the thesis/internship page, you can mail one of the researchers who is connected to the project you like. Thesis positions are always available.







# **BIC Biochemistry**

"Biochemistry is the study of the chemistry of life processes. Our research focuses on how biomolecules form, function and degrade inside cells. In short: "Cellular Biochemistry"."

### Main WUR page [link]

On the WUR page you can find the different research themes this chair group covers: <u>Plant Development</u>, <u>Redox Cell Surface Signalling</u>, <u>Protein Folding and Stability</u>, <u>Protein Structure and Function</u>, and <u>Biomolecular Imaging</u>. On the theme page, you can find a short description of the theme, the contact person, and the projects they are currently working on.

### Thesis/internship

More information about thesis/internships can be found <u>here</u>. The most efficient way of finding a thesis/internship is to send an e-mail to the chair group. You will get an appointment wherein you can discuss your interests and decide on your thesis/internship topic.

Topic	Contact	
Plant Development	Dolf Weijers	Dolf.Weijers@wur.nl
Redox Cell Surface Signalling	Elwira Smakowska-Luzan	Elwira.Smakowska-Luzan@wur.nl
Protein Folding and Stability	Carlo van Mierlo	Carlo.vanMierlo@wur.nl
Protein Structure and Function	Daan Swarts	Daan.Swarts@wur.nl
Biomolecular imaging	Jan Willem Borst	JanWillem.Borst@wur.nl
Green Mechanobiology	Joris Sparkel	Joris.sprakel@wur.nl







### **Biometris**

### Main WUR page [link]

At the WUR page you can find the different themes they work on:

- Statistical Genetics and Advanced Analytical methods
- Applied Mathematics for the Life Sciences
- Risk Assessments in Food Safety and Health
- Pattern Recognition, Data-Mining and Machine Learning
- Omics Sciences and Big Data Analysis
- Research Methodology for Interdisciplinary Research

You can find information about these themes and what research is being performed, including the main contact person.

### Thesis/internship

Quantitative methods are important for almost all WU study programs. Biometris connects field applications with quantitative methods. Information about a thesis/internship can be found <a href="https://nernship.com/here">here</a>. Thesis/internship topics can be found on the BS page (Thesis Overview Biometris), which you can enrol yourself in through "Discover". If you find a project to your liking, you can e-mail the supervisor assigned to that research. If you want more information about doing your thesis at Biometris, or you want to propose your own (collaborative) topic, you can contact the thesis coordinator Carel Peeters (Carel.Peeters@wur.nl).







# **BIS Biosystematics Group**

"We address fundamental questions about BIODIVERSITY and its ORIGINS."

### Main WUR page [link]

The WUR page contains information about their <u>research</u> topics: <u>Synteny analysis of plant and animal genomes</u>, <u>Hidden crop diversity in Suriname</u>, <u>Evolution of insect biodiversity</u>, and <u>Evolution of Cannabis genetic and chemical diversity</u>. This includes a short description of the topic and the main contact person.

### Thesis/internship

BIS keeps their theses up-to-date on the tip.wur site(<a href="https://www.tip.wur.nl/index.php">https://www.tip.wur.nl/index.php</a>).







# CBI Cell Biology and Immunology Group

"The vision of the Cell Biology and Immunology Group (CBI) is to generate fundamental knowledge on the immune system of vertebrates. We apply this knowledge to the development of dietary-based immunomodulation, immunotherapies and vaccination strategies in order to improve health of animals and humans."

### Main WUR page [link]

On the main WUR page of CBI, you can find information about their <u>research</u>. They work with three themes: <u>Mucosal Immunology</u>, <u>Veterinary Immunology</u>, and <u>Immune cell dynamics</u>. On the theme pages you can find a short description of the theme, the theme coordinator, and the active projects within that theme. Each project has its own page with a description and respective main researcher.

### Thesis/internship

Information about a thesis at CBI can be found <a href="here">here</a>. For a thesis position, you have to send an e-mail to a researcher working on a topic of your interest. If you have general questions about a thesis at CBI, you can send an e-mail to the respective coordinator.

For more information about an internship at CBI, you can look <a href="https://example.com/here">here</a>. If you have any questions, you can look at the <a href="https://example.com/here">FAQ page</a>, where you can also find an internship guide and contract.

Coordinator	Contact	
BSc thesis	Gosia Teodorowicz	Gosia.teodorowicz@wur.nl
MSc thesis	Edwin Tijhaar	Edwin.tijhaar@wur.nl
Internship	Coen Govers	CBlinternship@wur.nl
Eduaction	Marloes van Splunter-Berg	







# **CLB Laboratory of Cell Biology**

"The Laboratory of Cell Biology studies the dynamics of cellular organization in relation to cell growth, cell division and the organization of cell walls."

### Main WUR page [link]

On their WUR page you can find the two main research themes within the chair group: <u>Intercellular Communication</u> and <u>Cellular Polarity and Dynamics</u>. The theme pages feature a short description about the theme, recent publications, and the main researchers that work in this group.

### Thesis/internship

Information about a thesis/internship at CLB can be found <a href="here">here</a>. For more information about the different topics within the two themes of CLB you can take a look at their more detailed description of their research: Intercellular Communication and Cellular Polarity and Dynamics.

If you find a subject to your liking or you want to know more in general about a thesis/internship at CLB, you can e-mail to <a href="mailto:thesis.mob-clb@wur.nl">thesis.mob-clb@wur.nl</a> (indicate what your are looking for, MSc or BSc, your study program, the period you would like to start, and the desired amount of ECTS). They will inform you about thesis/internships at CLB and connect you to a supervisor in order to discuss your thesis/internship subject. You can also contact the thesis/internship coordinator Tijs Ketelaar (Tijs.Ketelaar@wur.nl).







# CSA Centre for Crop Systems Analysis

"Plant Science in a Crop Context

Centre for Crop Systems Analysis (CSA) contributes to the development of high quality plant production in sustainable agro-ecosystems through research and teaching. The emphasis is on improvement and innovation of plant production at various levels of integration; from genotypes to cropping systems and production chains."

### Main WUR page [link]

On the WUR page of CSA you can find information about the <u>chair group</u> and what they do in general. CSA has twelve themes they are working on which can be found <u>here</u>.

### Thesis/internship

General information about doing your thesis/internship at CSA can be found <a href="here">here</a>. On this page you can find several documents explaining what a thesis/internship at CSA means. (!) Here you can also find the requirements for participating in a project in CSA. Read these documents carefully!

If you have general questions about doing your thesis/internship at CSA, you can contact Ans Hofman (Ans.Hofman@wur.nl).

Thesis/internship positions can be found on tip.wur and on the WUR site. CSA divides its research topics in accordance with their themes: topics in <u>Crop photosynthesis</u>, <u>Crop systems biology</u>, <u>Plant form and function</u>, <u>Functional diversity</u>, and <u>Spatial agro-ecology</u>. Each topic has a main contact person for general questions. If you have questions regarding a specific subject, you can contact the person assigned to that topic.

Applying for a thesis/internship position can be done by sending an e-mail to the person who's research you want to work on, or by asking a general contact person if there are thesis/internship position within a certain theme.

Торіс	Contact	
Crop photosynthesis	Steven Driever	Steven.Driever@wur.nl
Root Biology	Jochem Evers	Jochem.Evers@wur.nl
Agrobiodiversity	Jochem Evers	Jochem.Evers@wur.nl
Crop climate adaptation	Niels Anten	Niels.Anten@wur.nl
Intercropping	Wopke van der Werf	Wopke.vanderWerf@wur.nl
Ecology of plant pests and pathogens	Bob Douma	Bob.Douma@wur.nl
Product quality	Jochem Evers	Jochem.Evers@wur.nl
Seed systems	Jochem Evers	Jochem.Evers@wur.nl
Crop-weed interactions	Lammert Bastiaans	Lammert.Bastiaans@wur.nl
Genotype to phenotype	Xinyou Yin	Xinyou.Yin@wur.nl
Nutrients	Jochem Evers	Jochem.Evers@wur.nl
Tropical perennials	Danae Rozendaal	<u>Danae.Rozendaal@wur.nl</u>







# **ENT Laboratory of Entomology**

"At the Laboratory of Entomology we work on the physiology of insect/plant interactions and the ecology of parasite/host and predator/prey interactions. In the last decade research on arthropod vectors of human and animal diseases complemented the research at the Laboratory."

### Main WUR page [link]

At the WUR page of ENT you can find a lot of pictures of the <u>staff</u>. You can read about their <u>research</u> and the four main themes they work in:

- Molecular ecology of plant-insect interactions
- ☐ Chemical, sensory and behavioural ecology of malaria mosquitoes and their control
- Participatory approach to integrated crop management
- ☐ Insect as food for humans (entomophagy)

More specific information about the research performed at ENT can be found on the research page of the respective researcher. Here is a list by topic:

- Ecology of plant-insect-microbe interactions (Marcel Dicke)
- Molecular and evolutionary ecology of interactions between phytophagous insects, host plants and natural enemies (Peter de Jong)
- Sensory and nutritional insect-plant interactions (Joop van Loon)
- Mechanisms and consequences of herbivore induced plant responses (Erik Poelman)
- <u>How insects perceive their environment and how this shapes them</u> (Alexander Haverkamp)
- Chemical ecology of plant-insect interactions (Rieta Gols)
- Evolution of sexual dimorphism (Eveline Verhulst)
- ☐ Ecology, mechanisms and control of vector-borne diseases(Sander Koenraadt)
- Ecology and control of blood-feeding insects (Sander Koenraadt)
- Insect-plant-microbe interactions and plant defense mechanisms (Karen Kloth)

### Thesis/internship

To get an overview of the research topics at ENT, you can watch a <u>video</u> where all the research topics listed above are explained briefly. As this video is from 2021 it may be partially outdated.

For thesis/internship positions, you can look at <u>tip.wur</u> or their BrightSpace page (Thesis, Internship & Research Practice @ Entomology), for which you need to enrol yourself through "Discover". To apply for a thesis/internship, you can send an e-mail to the respective researcher. For more general questions, you can send an e-mail to Martine Kos (Martine.Kos@wur.nl).

Some researchers have their own website where they post more information about their research, staff members and available positions.

Topic	Contact	Site
Mechanisms and consequences of herbivore induced plant responses	Erik Poelman	http://erikpoelman.com/site/
Evolution of sexual dimorphism	Eveline Verhulst	https://www.evelineverhulst.nl/







# ESA Environmental Systems Analysis Group

"Environmental systems analysis (ESA) studies environmental problems by exploring, modelling and communicating their causes, mechanisms, effects and potential solutions. ESA combines quantitative, qualitative and multi- and transdisciplinary research and integrates knowledge from natural, social and engineering sciences."

### Main WUR page [link]

On their main WUR page, you can find information about their <u>research</u>. They work within three themes: <u>Environmental change and Sustainability</u>, <u>Pollution & Nutrients</u>, and <u>Ecosystem Services and Biodiversity</u>. On the theme page, you can find different projects active at ESA. On a project page you find a description and the respective researcher.

### Thesis/internship

For thesis/internship the contact persons are:

Contact person	Topic
<u>Jana Verboom</u>	Education (general) and BSc and MSc theses
<u>Aritta Suwarno</u>	MSc theses
Wichertje Bron	Internships
Keith Williams	Internships







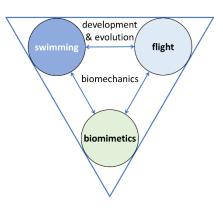
# **EZO Experimental Zoology Group**

"The Experimental Zoology Group combines physics, engineering, molecular techniques and modelling in a quantitative systems analysis to solve fundamental problems in biology. This provides insights that we use to offer solutions for practical problems with societal relevance."

### Main WUR page [link]

On the WUR page of EZO you can find information about their <u>research</u>. Currently their main focus lays on the biomechanics of motion systems in vertebrates and insects. They have four themes they work in:

- ☐ Biomechanics of moving animals
- Developmental zoology
- Bioinspired design
- <u>Evolutionary Biology</u>



### Thesis/internship

EZO has a lot of thesis/internship topics listed on their WUR site, which can be found <a href="here">here</a>. Each topic has a description and shows the researcher(s) working on that subject. You can either contact them directly or send an e-mail to <a href="mailto-ezo.thesis@wur.nl">ezo.thesis@wur.nl</a>. If you have general questions about thesis/internships at EZO, you can also send an e-mail to this address.

As they state on their site, there are two options for starting an internship at EZO:

- 1. You know where you want to go, and your topic is within the research field of EZO.
- 2. You want to do something in the research field of EZO, but you do not know where you could do this.

In both cases you can contact ezo.thesis@wur.nl.







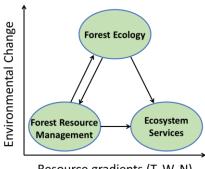
# FEM Forest Ecology and Forest Management Group

"We aim to understand the structure and functioning of forest ecosystems and their responses to changing environmental, biotic and social conditions, and to apply this knowledge for the development of sustainable forest resource use systems."

### Main WUR page [link]

At the WUR page of FEM you can find information about their research. They work with three main themes:

- 1. Ecology of forests in a changing world
- 2. Understanding biodiversity and functional diversity in relation to resource gradients
- 3. Sustainable supply of forest resources and environmental services



Resource gradients (T, W, N)

A list of the projects they are currently working on can be found

here. By clicking on the project, you get a description of the goal of the project and the research they do.

### Thesis/internship

To find a thesis/internship topic at FEM, you can look at the list of projects and find one to your liking.

There are specific pages for the BSc and MSc thesis. On the BSc thesis page, you can find a list of topics to choose from. These topics are examples. You can ask a supervisor or researcher about a specific subject and if they have thesis positions within that field. On the MSc thesis page, you can find more information about doing a thesis at FEM and the requirements you have to fulfil (document: 'Thesis Guidelines FEM').

There is a database with thesis/internship topics at which you can search by topic, region and supervisor (including a short description of the research they do). This database is linked to tip.wur. You can use this as orientation, however tip.wur does not always contain the most up-to-date list.

There are different pages for the BSc internship and MSc internship. This is where you can find specific information about the BSc and MSc internship at FEM. At the MSc page there are a few documents that you can read about the requirements you need to fulfil and different options for your internship. If you are interested in doing a research internship instead of a regular internship at FEM, you can find more specific information here.

If you want to do your thesis/internship at FEM, you can contact the researcher of that specific topic or the thesis/internship coordinator. It is recommended that you contact the thesis/internship coordinator and make an appointment to discuss your interest and how to arrange your thesis/internship.

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Coordinator	Contact	
Master Thesis coordinator	Frank Sterck	Frank.Sterck@wur.nl
Internship coordinator	Alejandra Hernandez Guzman	Alejandra.HernandezGuzman@wur.nl
Bachelor Thesis coordinator	Jose van Paassen	Jose.vanPaassen@wur.nl







# **GEN Laboratory of Genetics**

"The Laboratory of Genetics investigates causes and consequences of natural genetic variation within species."

### Main WUR page [link]

On the WUR page of GEN you can find an overview of the <u>research</u> they do at the chair group. They work in three themes: Generating variation, Genetics and levels of selection, and Genetic adaptation. On the research page there are many projects listed including the researcher who is working on that subject. The projects are ordered by subject of interest: animals, plants, or microbes (fungi and/or bacteria).

### Thesis/internship

Information about GEN can be found <a href="here">here</a>. If you want to do your thesis at GEN, you can take a look at the <a href="Research and projects">Research and projects</a> page of GEN for general information. You can also read the <a href="thesis guidelines">thesis guidelines</a>, in which a checklist is given for organizing a thesis at GEN and what requirements you have to fulfil.

To find a thesis/internship topic take a look at the different research projects in GEN. By clicking on a project, you find a description of the subject and whether there are thesis/internship positions available. To apply for those positions, you can contact the researcher/supervisor connected to that project.

Additional information and topics can be found on the BrightSpace page of GEN (Genetics Thesis & Internship). To get access to this page, you need to enrol yourself through "Discover". On the BrightSpace you also find information on the (virtual) intake + Q&A sessions every Wednesday between 12:00 h and 13:00 h.

For more general questions about thesis/internships, you can send an e-mail to <a href="mailto:thesis.gen@wur.nl">thesis.gen@wur.nl</a>, or to one of the coordinators at GEN:

Coordinator	Contact	
Education coordinator	Marjan Kampinga	Marjan.Kampinga@wur.nl
Contact person	Bas Zwaan	Bas.Zwaan@wur.nl
Theses & internship coordinator	Rene Boesten	thesis.gen@wur.nl

Furthermore, you can also contact the persons mentioned in the projects if you are interested in one project of GEN specifically







# HAP Human and Animal Physiology

"Human and Animal Physiology performs molecular physiological research and academic training focused on mechanistic understanding of energy metabolism in health and disease of humans and animals and how this can be targeted by specific nutrients to improve health."

### Main WUR page [link]

The WUR page of HAP contains a description of their <u>research</u> containing a list of their senior staff (including topic of interest). They have an overview of the <u>projects</u> they are working on at HAP. If you click on a project, you find a description of the topics they are working on within that project including the corresponding project coordinator.

### Thesis/internship

Finding a topic for a thesis/internship at HAP can be done by selecting a project to your liking and contacting the project coordinator and asking whether there are any thesis/internship positions available. Alternatively you can also e-mail <a href="mailto:office.hap@wur.nl">office.hap@wur.nl</a>

There is a specific list for a <u>BSc thesis</u> and <u>MSc thesis</u>, including more specific information regarding doing your thesis at HAP. If you want to apply for a thesis position at these pages, you have to send an e-mail to <u>office.hap@wur.nl</u>. For general questions about a thesis at HAP, or if you want an appointment to discuss thesis possibilities, you can send an e-mail to <u>office.hap@wur.nl</u>.

HAP works together with several <u>companies at which you can do your internship</u>. For an <u>internship</u> position at HAP, you can send an e-mail to Katja Teerds (<u>Katja.Teerds@wur.nl</u>).







# MIB Microbiology

"The Laboratory of Microbiology engages in research and education focusing on fundamental and applied aspects of the diversity, physiology, ecology and evolution of microorganisms and their viruses. The fundamental knowledge we generate is used in various disciplines, including health & food, bioproducts & energy, and the natural environment & sustainability. Our work contributes to exploring the potential of nature and improve the quality of life."

### Main WUR page [link]

On the WUR page you can find the research MIB works on. They work within four themes: <u>Bacterial Genetics</u>, <u>Microbial Evolution</u>, <u>Microbial Physiology</u>, and <u>Molecular Ecology</u>. On the theme pages, you can find the main contact person and different topics MIB works on. By clicking on a topic, you will find a description and the main projects of that topic. Each project page features a description and list the main researcher.

### Thesis/internship

To find a thesis/internship topic, you can take a look at the different projects at MIB, or search for a topic in the topic list of <u>thesis projects</u> (this list is not always consistent with the projects listed for each topic). By mailing the researcher or the group leader of a topic you like, you can ask for a thesis position at that topic.

For internship topics/positions, you can send an e-mail to one of the internship coordinators. If you already found a topic outside of the WUR and need to arrange approval by the MIB chair group, you can send an e-mail to the researcher performing research most closely related to your internship topic.

For general questions about thesis/internship opportunities or how it works at MIB, you can send an e-mail to Erwin Zoetendal (Erwin.zoetendal@wur.nl).

Coordinator	Contact	
Microbial Evolution	Thijs Ettema	Thijs.Ettema@wur.nl
Microbial Physiology	Diana Machado de Sousa	<u>Diana.Sousa@wur.nl</u>
Bacterial Genetics	John van der Oost	John.vanderOost@wur.nl
Molecular Ecology	Hauke Smidt	Hauke.Smidt@wur.nl







# MOB Laboratory of Molecular Biology

"The Laboratory of Molecular biology aims to understand the molecular basis of plant growth and development."

### Main WUR page [link]

At the WUR page of MOB, you can find the different research groups within MOB:

- Plant architecture and development (Wilma van Esse)
- Nodulation engineering (Rene Geurts)
- Stem cell specification and regeneration (Renze Heidstra)
- Hormonal regulation of mitotic re-activation of plant cells (Wouter Kohlen)
- Molecular development of arbuscular mycorrhizal symbiosis (Erik Limpens)
- RNA biology of plant embryos (Michael Nodine)
- Plant architecture in relation to the environment (Viola Willemsen)
- Plant Development Systems (PDS) (Gerco Angenent)
- Molecular control of flowering and reproduction of plants (Richard Immink)

On these pages, you can find a general description of the project and who is working on it. If you have any questions about the subject, you can e-mail the respective researcher.

### Thesis/internship

Thesis/internship topics can be found on tip.wur (not always fully updated). On the WUR site, topics are organized per research group. If you are interested in one of those topics, you can contact the researcher directly or send an e-mail to the group leader.

- Plant architecture and development (Wilma van Esse)
- □ Nodulation engineering (Rene Geurts)
- Stem cell specification and regeneration (Renze Heidstra)
- Hormonal regulation of mitotic re-activation of plant cells (Wouter Kohlen)
- ☐ Molecular development of arbuscular mycorrhizal symbiosis (Erik Limpens)
- RNA biology of plant embryos (Michael Nodine)
- Plant architecture in relation to the environment (Viola Willemsen)
- Plant Development Systems (PDS) (Gerco Angenent)
- ☐ Molecular control of flowering and reproduction of plants (Richard Immink)







# **NEM Laboratory of Nematology**

"Research of the Laboratory of Nematology is focused on the interactions between nematodes and (a)biotic environmental factors. The goal is to develop methodologies and strategies for durable plant parasitic nematode control with a minimal negative impact on the environment."

### Main WUR page [link]

On the WUR page you can find the <u>research</u> performed at NEM and the different <u>projects</u> that are active. By clicking on a topic, you get more explanations about that topic and who the coordinator is.

### Thesis/internship

For thesis topics, you can look at the <u>Thesis Projects</u> By clicking on a topic, you find a description and the main researcher on that topic. If you are interested in a topic, you can send the main researcher an e-mail. For more general questions about a thesis (topic) at NEM, you can e-mail the thesis coordinator Arjen, Schots (<u>Arjen.Schots@wur.nl</u>).

For more information about an internship at NEM, you can take a look <a href="here">here</a>. You can find a list of different countries including the institute/university/company previous students have worked in. For more question about an internship at NEM, or to apply for one, you can send an e-mail to the internship coordinator Arjen Schots (<a href="here">Arjen Schots (Arjen Schots @wur.nl</a>).

NEM offers MS<u>c research practice</u>. You can ask a supervisor if the thesis topic can be adapted to fit a research practice. For questions about an MSc research practice, you can e-mail Arjen Schots (Arjen.Schots@wur.nl).







# PEN Plant Ecology and Nature Conservation Group

"The Plant Ecology and Nature Conservation Group (PEN) studies and teaches the processes and underlying mechanisms that link biodiversity, ecosystem functioning and service delivery and aims to implement these insights in the design of effective biodiversity conservation strategies."

# Main WUR page [link]

On the WUR page of PEN, you can find a little information about their <u>research</u>. They work within three themes:

- ☐ Environmental and Ecosystem Functioning (Elmer Veenendaal)
- ☐ Biodiversity and Ecosystem Functioning (Jasper van Ruijven)
- ☐ Nature Conservation in Agricultural and Urban Landscapes (David Kleijn)

### Thesis/internship

General information about a thesis/internship at PEN, you can find <a href="here">here</a>. More specific information can be found on the <a href="here">BSc thesis</a>, <a href="here">MSc thesis</a> or <a href="internship page">internship page</a>. Topics for thesis/internship can be found on tip.wur. For general questions about thesis/internship you can send an e-mail to:

Coordinator	Contact	
BSc thesis	Jose van Paassen	Jose.vanPaasen@wur.nl
BSc thesis	Maaike de Jong	Maaike.deJong@wur.nl
BSc/MSc thesis	Juul Limpens	Juul.Limpens@wur.nl







# PHP Laboratory of Phytopathology

"Welcome to the website of the Laboratory of Phytopathology. Our laboratory is part of the Department of Plant Sciences of Wageningen University. On our website you will find information on our research, our courses, but also general information on plant-microbe interactions."

### Main WUR page [link]

On the main WUR page PHP you can find a short description about their <u>research</u>. They work within five themes: <u>Translational phytopathology</u>, <u>Effector Biology</u>, <u>Population genomics</u>, <u>Receptor biology</u>, <u>Oomycetes</u>. Each theme has a page containing a description of the research they do and the researcher working on it.

### Thesis/internship

PHP has many projects in which you can do a thesis/internship Information about doing your thesis/internship at PHP you can find <a href="here">here</a>. For general questions you can send an e-mail to Sander Schouten (<a href="mailto:Sander.schouten@wur.nl">Sander.schouten@wur.nl</a>)

To apply for a thesis/internship position at PHP, you can send an e-mail to a researcher working on a topic you like or Sander Schouten (Sander.schouten@wur.nl)







# PPH Laboratory of Plant Physiology

"The Laboratory of Plant Physiology of Wageningen University & Research aims to contribute to the understanding of how plants function. We are particularly interested in how plants respond to changes in their sometimes hostile environment."

### Main WUR page [link]

On the main WUR page of PPH, you can find information about their <u>research</u>. They work within six themes:

- Abiotic stress tolerance (Crista Testerink)
- Seed biology (Henk Hilhorst, Leónie Bentsink)
- ☐ Chemical communication (Iris Kappers)
- Plant Metabolomics (Robert Hall)
- Chloroplast retrograde signalling (Charlotte Gommers, Christa Testerink)
- Stress resilience in corps (Rumyana Karlova, Christa Testerink)

On the theme pages, you find a description of the research and different topics they work on.

### Thesis/internship

Information about doing your thesis/internship at PPH can be found <a href="here">here</a>. Additional information can be found here:

- Abiotic stress tolerance (Crista Testerink) Roots in Salt
- Seed biology (Henk Hilhorst, Leónie Bentsink) Seed Biology
- ☐ Chemical communication (Iris Kappers)
- Plant Metabolomics (Robert Hall) Metabolomics / Thesis projects
- Chloroplast retrograde signalling (Charlotte Gommers, Christa Testerink) Chloroplast development and signalling during plant adaptations to abiotic stress
- ☐ Stress resilience in crops (Rumyana Karlova, Christa Testerink)
- A short explanation of their research topics is given in this <u>video</u>. An up-to-date list of thesis/internship topics can be found on <u>tip.wur</u>. For general questions about thesis/internship or research practice, you can send an e-mail to or Leonie Betsink (<u>Leonie.Bentsink@wur.nl</u>).







# SBL Soil Biology Group

"The Soil Biology (SBL) group regards soil life as key to sustainable (agro)ecosystems. We study the role of soil organisms in element (carbon, nutrient) transformations in soils. Our research is embedded in three themes: fertile soils; soil functional biodiversity; and soils and climate change. We have state-of-the-art laboratories which facilitate this research, both engaging in developmental research through PhD, MSc and funded projects and requested routine analyses for external clients."

# Main WUR page [link]

On the WUR page of SBL you can read about the different <u>topics</u> they work on. You can search by soil biota, research topics and research projects.

### Thesis/internship

Information about Msc thesis/internships at SBL can be found <a href="here">here</a>, including the requirements for doing your internship at SBL. A list of topics can be found on tip.wur.

For questions, you can send an e-mail to the corresponding coordinator:

Coordinator	Contact	
Thesis/Internship	Maria Jaartsveld	Maria.Jaartsveld@wur.nl







# SSB Systems and Synthetic Biology

"Our Mission is to contribute to the elucidation of the mechanisms underlying basic cellular processes, evolution and interactions among microbes and between microbes and their environment (including the human host) and to translate this knowledge into applications of biotechnological, medical and environmental interest."

### Main WUR page [link]

SSB has its own site where you can find information about the chair group. Here you can find what research they work on including the corresponding researchers:

- Computational Systems Biology
- Microbial engineering and Synthetic biology
- Semantic Systems Biology
- Systems Health

### Thesis/internship

Information about thesis/internships at SBB can be found <a href="here">here</a>. Look at the different topics from each theme and contact the researcher corresponding to that topic. You can also contact the following persons:

Coordinator	Contact	
Thesis/Internship	Robert Smith	<u>Here</u>
Courses	Cristina Furlan	Cristina.furlan@wur.nl

Attention: they prefer you inform them you are interested in a thesis/internship 3 months in advance.







# **TOX Toxicology**

"The research programme of Toxicology covers food toxicology and environmental toxicology. It concentrates on gaining insight in the mechanisms via which toxic compounds can induce adverse effects on the health of humans and other environmental organisms, either directly via food or indirectly via different exposure pathways related to environmental pollution."

### Main WUR page [link]

On the WUR page of TOX, you can find information about the <u>research</u> they perform. They work within five themes:

- Risk assessment of herbal food supplements and teas (Ivonne Rietjens)
- ☐ Mode of action of foodborne (natural) toxins (Ivonne Rietjens)
- Alternatives to animal testing (Hans Bouwmeester)
- ☐ The role of the gut microbiota in the toxicity of foodborne chemicals (Ivonne Rietjens) ☐ Environmental toxicology (Nico van den Brink)

On the theme pages, you can find a small description of the theme and the different topics they work on including the respective researcher.

### Thesis/internship

More information about doing your thesis/internship at TOX can be found <a href="here">here</a>, including examples for thesis topics. To apply for a thesis position, you can send an e-mail to the researcher corresponding to a specific theme, or by sending an e-mail to a researcher of a specific topic you like.

Topic	Contact	
Risk assessment / mode of action / The role of	Ivonne Rietjens	Ivonne.Rietjens@wur.nl
Alternatives to animal testing	Hans Bouwmeester	Hans.Bouwmeester@wur.nl
Environmental toxicology	Nico van den Brink	Nico.vandenBrink@wur.nl







# VIR Laboratory of Virology

"Our research focuses on plant viruses, arboviruses and insect viruses. We aim to unravel the molecular and ecological mechanisms underlying virus-host and virus-vector interactions to understand how these determine pathology and transmission. The acquired knowledge contributes to the development of new technologies (e.g. in vector control and biotechnology) and durable strategies for disease management (e.g. in molecular plant breeding, vaccine development, insect biocontrol and mass rearing of insects)."

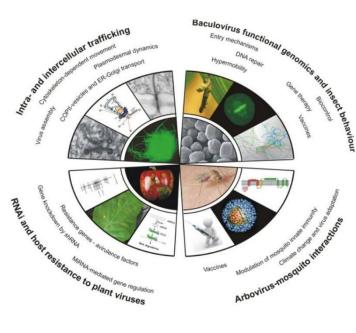
### Main WUR page [link]

On the WUR page of VIR, you can find information about their <u>research</u> and the topics they cover:

- □ Intra- and intercellular trafficking
- Baculovirus functional genomics and insect behaviour
- RNAi and host resistance to plant viruses
- ☐ Arbovirus-mosquito interactions

They have three main research themes they work in:

- Insect virus-host interactions
- Plant virus-host and -vector interactions
- Arbovirus & Biotechnology



On these research pages, you can find a description of the research they perform within that theme.

### Thesis/internship

If you want to do your thesis/internship at VIR, you can send an e-mail to the main researchers of the themes within VIR.

Topic	Contact	
Insect virus-host interactions	Monique van Oers	Monique.vanOers@wur.nl
Plant virus-host and -vector interactions	Emilyn Matsumura	Emilyn.matsumura@wur.nl
Arbovirus & Biotechnology	Gorben Pijlman	Gorben.pijlman@wur.nl







# WEC Wildlife Ecology and Conservation Group

"In the Anthropocene, human pressures on wildlife are reaching unprecedented levels. Animals, plants, and entire ecosystems must bear these pressures across different spatial and temporal scales. We, the members of the Wildlife Ecology and Conservation Group (WEC), study how humans influence wildlife. We examine both direct mechanisms like hunting and fire, and mechanisms that are more indirect and that are part of larger-scale processes, such as climate change."

### Main WUR page [link]

On the main WUR page of WEC, you can find information about their <u>research</u>. At WEC, they work within four themes:

- Animal movement and distributions
- Population dynamics
- Trophic interactions
- Disease and physiology
- Conservation science

On the pages of the themes, you can find the research projects that are currently active, including the researchers working on that topic.

### Thesis/internship

Information about doing your thesis/internship at WEC can be found here: <u>BSc thesis</u>, <u>MSc thesis and internship</u>. More information about a thesis/internship at WEC can be found on their BrightSpace page (Thesis and Internships Wildlife Ecology and Conservation), for which you need to enrol yourself through "Discover".

For a thesis, the idea is that you come up with a topic yourself or find an interesting research group within WEC and send an e-mail to a researcher that works on that topic to apply for a thesis/internship position. For general questions about doing your thesis/internship at WEC, you can send an e-mail to one of the coordinator at WEC.

Applying for an internship position works similar as applying for a thesis position. Send an e-mail to one of the researchers asking them to supervise. If this does not work, you can send an e-mail to the internship coordinator. On the internship page, you can find more information about doing your internship at WEC, including documents like: course guide, registration form, providers, internship plan, etc. Take a good look at these documents to see if you fulfil all requirements.

Coordinator	Contact	
BSc thesis coordinator	Joost de Jong	Joost.deJong@wur.nl
Thesis coordinator	Pim van Hooft	Pim.vanHooft@wur.nl
Thesis coordinator	Henjo de Knegt	Henjo.deKnegt@wur.nl
Internship coordinator	Helen Esser	Helen.Esser@wur.nl
Internship coordinator	Anouschka Hof	Anouschka.Hof@wur.nl







