

# HWM internship rules

## Hydrology and Quantitative Water Management Group

[www.hwm.wur.nl](http://www.hwm.wur.nl)

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### 1 Internship, thesis and research practice

The MSc programmes Earth and Environment (MEE) and Climate Studies (MCL) include a specialisation *Hydrology and Water Resources* or *The Physical Climate System*. In both programmes this specialisation includes a compulsory thesis of 6 months (36 credits) and internship of 4 months (24 credits). In some cases, the internship can be replaced with a research practice (24 credits). The main difference between the thesis and internship is that for a thesis you ask and answer a research question at academic level, while for an internship you complete an assignment at academic level.

The aim of this document is to clarify the rules and regulations and show some possibilities you have as a student to personalise your MSc programme. Since the regulations may change somewhat over the years, the most recent version on the day you start your thesis or internship counts. The most recent version of this document and other information can be found via [www.hwm.wur.nl](http://www.hwm.wur.nl) → education → MSc theses & internships and on the HWM thesis Brightspace, where all thesis and internship related information is collected.

#### 1.1 Internship

The academic internship gives the student a unique opportunity to experience how it is to work at a consultancy firm, water board, government agency, research institute, or foreign university and will help to find a job after graduation. You will work on one concrete assignment and become familiar with the background of the company/organization, the market and customers, research aims or public tasks and of course the employees of the internship provider. However, the internship is part of the curriculum, and therefore the academic level is important and the final report is an important outcome.

#### 1.2 Thesis

The MSc thesis is the most important part of the study programme. You develop research skills and become an expert on a topic of your choice. By designing a project, collecting and analysing data, communicating your findings through a written thesis and colloquium (final presentation), and a critical reflection on your own research, you complete a full research circle. This is your chance to show what you have learnt at the university and you can use your thesis as proof of your quality.

#### 1.3 Research practice

Students with (supervised) work experience on an academic level and students who did internships at a previous university (of applied sciences) are sometimes allowed to exchange the internship for a research practice (ask your study advisor). The research practice is similar to a 24-credit thesis, but contains the self reflection and career orientation aspects from an internship.

### 2 Choices

#### 2.1 Planning

Most students use their last year for their thesis and internship, but theses and internships are relatively flexible. These “courses” don’t have to fit in the 6-period academic calendar and you can work during the holidays or go on vacation when the rest of the university is working (as long as you specify it in your learning agreement – see Sec. 3.7). Do realize that supervisors may not be available the whole summer.

Plan your thesis/internship well in advance, especially when you depend on people from outside the university (abroad or internship provider).

As soon as you are seriously thinking about doing an internship at HWM (usually 6–2 months in advance; see checklist on the last page), send an email to [hwm.office@wur.nl](mailto:hwm.office@wur.nl) specifying when you expect to start. The secretary will add you to Brightspace and the DES-HWM-STUDENTS mailing list, so you are informed about all relevant topics. When you have more details about your project, you can startup the administrative process on OSIRIS by following the instruction at: [wur.eu/tir-start](http://wur.eu/tir-start). If you decided not to do an internship at HWM after all, please inform the secretary at <https://wur.eu/tir-start>.

#### 2.2 Thesis or internship first?

You can choose in which order you want to do your thesis and internship. A reason for doing an internship last could be that you hope to find a job there after graduating. A reason for doing a thesis last could be that it is the most important part of your curriculum and you want to be as well prepared for this final assessment as possible.

#### 2.3 Courses

Following courses at the university is very cheap compared to following courses after you graduate (3000 euros for a week is no exception). Therefore, you may want to use the

Table 1: Summary of thesis and internship specifications. Contact [hwm.office@wur.nl](mailto:hwm.office@wur.nl) for administrative issues.

	Internship	Thesis	Research practice
Code	HWM-70424	HWM-80436 or HWM-80424	HWM-79324
Credits	24–36 (typically 24*)	24–39 (typically 36*)	24
Duration	16–26 weeks (typically 16*)	12–26 weeks (typically 24*)	16 weeks
Coordinator	Bart Vermeulen	Roel Dijksma	Bart Vermeulen
Supervisors	1 from HWM + 1 from internship provider	At least 1 from HWM	At least 1 from HWM
Topic	Linked to field of internship provider	Linked to HWM research	Linked to HWM research
Evaluation	50% performance	40% performance	40% performance
	40% project report	50% research report	50% research report
	5% oral presentation	5% oral presentation	5% oral presentation
	5% oral defence	5% oral defence	5% oral defence
	Pass/fail self-reflection note		Pass/fail self-reflection note

\* depending on study programme

opportunity while you are still a student and follow additional courses to strengthen your profile.

You can follow courses during your internship project (apart from a few compulsory courses, which you should have passed before starting your internship – Sec. 3.1).

If you want to follow extra courses, but don't want to delay your graduation, you can choose to work on your internship in the summer months (be aware of the limited availability of supervisors).

## 2.4 Deciding what you want

Before you start looking for specific topics, you should think about what you want to learn during your internship. In every internship project you will improve your research skills and skills in project management, reading, writing and presenting, but there are differences in focus between research projects.

- Do you want to focus on improving data processing, modelling or field work skills?
- Do you want to dive into the scientific literature or do you want a project with a direct link to practical application?
- Do you want to specialize and do your thesis and internship on a similar topic or do you want to widen your horizon and choose very different topics.
- Do you want experience abroad?

## 2.5 Finding a topic

The internship topic must fit within the specialisation of HWM and have a close relation with the MSc courses of HWM. For MCL students, the topic should also fit within the theme of that programme, so you should be able to explain how your topic relates to Climate Studies. Internships can only be done individually. Sometimes, parts of the project (e.g. field work) can be combined with the work of another student. There are several ways to find a suitable topic.

- Look at the announcements of internships on [tip.wur.nl](http://tip.wur.nl) (this list is not exhaustive, but gives some idea of the

possibilities as well as some concrete topics we received from internship providers).

- Look at internship opportunities on [wur.jobteaser.com](http://wur.jobteaser.com). Please note that companies can post topics on jobteaser themselves, so check if a topic is suitable for an HWM internship yourself by asking a staff member.
- Talk to staff members when you follow their courses.
- Talk to current internship students.
- Find out what research HWM staff members are involved in. Just typing their names in Google Scholar already gives a good overview.
- Look at the internship reports on the MSc thesis Brightspace (ask the secretary [hwm.office@wur.nl](mailto:hwm.office@wur.nl) if you don't have access).
- Attend other students' internship presentations to get an idea of what they did (ask [hwm.office@wur.nl](mailto:hwm.office@wur.nl) if you want to receive invitations).
- Look in the Pyrus news letter.
- Talk to the internship coordinator. He can give an overview of possibilities and direct you to other staff members. Please don't make appointments with more than two staff members yourself (unprepared "shopping" is time consuming).
- Many companies and government institutes have contact forms for internships on their websites which you can fill out, but it is usually easier to find a suitable place through the network of the lecturers. If you know which kind of topic (and type of provider) you would prefer, you can approach a lecturer from a similar field and ask if (s)he has useful contacts.
- Be aware that internship providers get students from different universities (of applied sciences), with varying regulations concerning the topic, academic level and duration. Make sure that the ideas from the provider are aligned with the HWM regulations at an early stage, by finding a university supervisor and discussing the direction before the plans solidify.
- It is allowed to split the project in two or three sub-projects, as long as they are connected and combined

in one report.

## 2.6 Going abroad

There are several possibilities for doing an internship abroad:

- The internship provider is a Dutch company that has an office or project abroad.
- The internship provider is a foreign company or NGO.
- The internship provider is a foreign university or research institute.

Of course you should also have an HWM supervisor (just like internships in the Netherlands; Sec. 3.5).

## 2.7 FAQ

- *Is it possible to involve another chair group?*  
Yes. This happens quite often. You need supervisors from both groups. In the learning agreement, you should specify the percentages of contribution from the groups.
- *Is it possible to extend the internship?*  
Yes (see Sec. 3.1). Ask your study advisor for advice and approval.
- *I don't like travelling. Can I do my internship in Wageningen?*  
Yes. There are a few companies and of course Wageningen Environmental Research. It is also possible to do an internship at the Laboratory for Water and Sediment Dynamics, but we recommend spending time outside the university.

# 3 Rules and regulations

There are quite some rules for internships. Some are set by the university and exam committee, others by HWM. This section gives an overview of the HWM rules.

## 3.1 Requirements

Before you are allowed to start your internship, a significant part of the MSc courses should be completed, including passing several courses. You should have passed two courses in the following set:

- Catchment and Climate Hydrology (HWM-32806)
- River Flow and Morphology (HWM-30306)
- Advanced Hydrological Systems Analysis (SLM-33306)
- Water and Air Flow Numerical Techniques (HWM-33806)
- Coastal Oceanography and Delta Geology (HWM-33306)
- Urban Hydrometeorology (MAQ-35306)
- Hydrogeology (HWM-20806)
- Geophysical Fluid Mechanics (HWM-23806)

and at least one of these courses should be in the set:

- Catchment and Climate Hydrology (HWM-32806),
- River Flow and Morphology (HWM-30306)
- Advanced Hydrological Systems Analysis (SLM-33306).

A less extensive study programme may result in a restricted choice of topics. Your study advisor (MEE: Kim Janssen, Monica Gorska or Femke Hillhorst, MCL: Saskia van Bakel or Annemarie Hage) has to approve that you are allowed to start. Email her and send the response to your supervisor(s).

## 3.2 Size

The standard number of credits for an internship is 24 credits (16 weeks). If you want to extend the duration of your internship (max. 39 credits = 26 weeks), you must consult your study advisor first.

## 3.3 Academic level

At Wageningen University, the internship has an academic level, because it is part of the curriculum. This means that at your internship provider, you have to be supervised by a specialist with academic background. The academic level of the internship will be estimated at the start, based on a project description (see Sec. 3.9), and evaluated afterwards, based on the final report. The report is an important part of the evaluation (see Table 1). Showing that you can evaluate your results critically (and not just carrying out what the internship provider tells you to do) is an important part of the internship.

Typical activities for an internship are: modelling, data collection and analysis or data processing and interpretation. The internship provider sets a concrete project in close consultation with the HWM-staff and the student (written down in the project description; Sec. 3.9) well before the internship starts, and the student can start from the beginning.

Preferably, the internship consists of one project, allowing sufficient time for critical evaluation of the result. If the internship consists of 2 or 3 smaller projects, this should be clarified at the start in the learning agreement, covered in the personal learning objectives and the project report. A student is allowed to spend a little time on side-projects (at academic level), but this should not come at the cost of the main project(s).

## 3.4 Provider

Finding an internship provider is your own responsibility, but the HWM staff is always willing to help and can use its (inter)national network if necessary. Sometimes companies or institutes have open positions for an internship student, and inform the chair group about it. Internship possibilities are posted on a regular basis on [tip.wur.nl](http://tip.wur.nl) and in the Pyrus newsletter. The following list contains possible locations for an internship:

- Engineering and consulting firms (see [www.nwp.nl](http://www.nwp.nl) for water related firms and institutes)
- Water boards ([www.waterschappen.nl](http://www.waterschappen.nl))
- Provinces and municipalities
- Government and research institutes (Rijkswaterstaat, KNMI, RIVM, Wageningen Environmental Research, Deltares, KWR, NIOZ)
- Foreign universities and research institutes
- External contacts of the HWM-staff (domestic and foreign)

You can also look at the reports from previous internships on Brightspace for inspiration or ask the internship coordinator for contact suggestions.

### 3.5 Coordinator, supervisors and examiner

The internship coordinator (see Table 1) can give you information on possible topics, internship providers and supervisors.

There are two secretaries (Tamara Schalkx and Rachèl Croonen) who can be contacted through [hwm.office@wur.nl](mailto:hwm.office@wur.nl) for administrative issues. Rachèl mostly handles student-related issues (but please email to [hwm.office@wur.nl](mailto:hwm.office@wur.nl), so Tamara can step in when needed).

Internship students have one supervisor at the internship provider and one from HWM (Table 1). The HWM supervisor should be a permanent staff member<sup>1</sup>. Most supervision is done by the internship provider, but the HWM supervisor should be kept informed to safeguard the academic level.

For internships you also need an examiner. The examiner is not involved in the project but checks the level of the products (internship plan / report) and grading and is present at the examination (Sec. 3.15). The examiner should be a permanent staff member. Who the examiner will be, is determined at the start of the project.

Note that just like between students, there are differences between supervisors in their way of working. Some supervisors prefer to have two-weekly updating emails and regular meetings, while others prefer a more loose contact. Some supervisors prefer to read the whole draft report at once, while others prefer to read it in parts (so they can comment directly and students can apply the new knowledge directly when writing the next chapters). Discuss what you can expect from each other during the first meeting and write it down in the learning agreement, so you won't be surprised or disappointed.

### 3.6 Workplace

Internship students work at their internship providers. There may be space in the 'Chemistry building' (at Dreijenplein 4) for internship students to spend some time (e.g.

<sup>1</sup>Permanent staff members at HWM are Victor Bense, Claudia Brauer, Roel Dijkma, Tim van Emmerik, Ton Hoitink, Hidde Leijnse, Lieke Melsen, Syed Mustafa, Martine van der Ploeg, Ryan Teuling, Bart Vermeulen, Kryss Waldschläger and Albrecht Weerts

one day a week). Please email Roel Dijkma if you want to use one of those work places. We will keep all students informed about changes in the housing procedure through the DES-HWM-STUDENTS mailing list.

Please note that we share the rooms with MAQ, but that the computers are bought and maintained by the two groups separately. So please use a pc marked with HWM and do not rearrange monitors and other hardware.

### 3.7 Agreement

The student and supervisor(s) fill out the learning agreement together. This can either be done directly in OSIRIS (for this you need to have started up the internship procedure in OSIRIS as explained at [wur.eu/tir-start](http://wur.eu/tir-start)) or in the Word document and later copied to OSIRIS. You can download the Word document from Brightspace. Complete these steps before you start.

The internship project proposal (Sec. 3.9) is added as annex to the learning agreement. For internships, a second agreement should be filled out: the internship agreement. This agreement is about the working conditions at the internship provider (financial compensation, illness or leave days) and should be signed by the internship provider, the internship coordinator (Bart Vermeulen, because of legal reasons) and yourself. Send the internship contract with signatures from the internship provider and yourself to the internship coordinator. He will sign it and send it to the secretary.

The learning agreement is important for you, especially in the case of internships. When all parties have signed it, your supervisors have committed to your project and promised to guide you through it, and in turn you have promised to work on this project and finish within a certain period (see Sec. 3.8 on what to do in case of delay). The signed agreement gives you proof of the intended project and planning, which you can use in case of conflicts. If you want to combine two or three projects, you have to specify it in the agreement and set up learning objectives for each project.

In the agreement, you already set the date of your progress evaluation meeting (Sec. 3.10) and final presentation (Sec. 3.13). Check these dates with your supervisor(s) and examiner. Also check the date of the final presentation with the secretary (send email to [hwm.office@wur.nl](mailto:hwm.office@wur.nl)) and ask her to send the meeting request for the final presentation.

You send the progress evaluation meeting and the assessment meeting yourself to the supervisor(s) and examiner (this can be done in Teams or Outlook). The progress evaluation meeting has to be 30 minutes and will be scheduled in week 3. The assessment meeting has to be 45 minutes and will be scheduled after the final presentation.

Check in the HWM thesis organization Excel sheet (link on Brightspace) if your agreement has been received and that the information has been entered in the sheet.



### 3.8 Delay

In the learning agreement, the date of completion is set. If you need an extension, you must write an email (no later than 4 weeks before the deadline) to the examiner, indicating the reason(s) for the delay and an adapted planning. Explain what you will do in order to meet the new deadline, for example change the way you work, communicate differently with supervisors or alter the topic.

### 3.9 Proposal

Internship students write a 1-page project description with subject delineation and time schedule prior to starting the internship. This project description is added as Annex to the learning agreement. About 3 weeks after the start of the project, this project description is updated and expanded to a more extensive project plan (3–5 pages, structured like a research proposal with motivation, objectives, methods and timeline), which includes the experience from the first weeks.

### 3.10 Progress evaluation

After about 3 weeks, but no more than 8 weeks (full-time equivalent), a progress evaluation takes place. The supervisors and examiner decide whether the project has enough potential, resulting in the decision “continue” (go) or “terminate” (no go). There is a (virtual) meeting with the supervisor(s), examiner and internship provider, using the updated and expanded project plan as input (send a Teams meeting request for 30 min to supervisors and examiner yourself well in advance). The examiner fills in a short progress evaluation form after the meeting and shares that with student and supervisor(s).

### 3.11 Report

At the end of the project you hand in a report. The report is a final version and will be evaluated by the university supervisor(s) and examiner. The report has the structure of a research report and should be in English. If you want to write in Dutch, you have to request permission from the examining board (ebel@wur.nl; Examining Board Environment and Landscape) and include a long (~10% of the total text) English summary. The report should have fewer than 40 pages (excl. appendices, min. font size of 10) and the maximum size is 10 MB (for the pdf), to allow easy storage and distribution. See the additional document *HWM thesis and internship tips* for tips on report set-up, text, figures and technicalities. We recommend LaTeX as an efficient text editor, but you are not obliged to use it.

If your internship report is very good, you may think of trying to publish it in a scientific journal. If you discuss this with your supervisor(s) in an early stage, you can write your report in the form of a scientific paper.

All reports are uploaded to the university’s library. If the report is confidential, please specify it in the learning

agreement and it will not be uploaded.

### 3.12 Self-reflection note

The student is requested to write a “self-reflection note” (max. 2 pages, structured like any report with a clear introduction, main text and conclusions). In the reflection note the student evaluates his/her own performance and write about the future. The personal reflection report should describe your personal development during the internship and your goals for further development. Questions on the learning outcomes you have to answer are for example:

- What were the most important learning outcomes?
- What activities did you perform to attain these learning outcomes?
- How do you evaluate your performance on these activities?
- What are your feelings on your performance on these activities?
- Could you have done things in another way? And, if so, how?
- What did you experience as your strong and weak points in this working environment?
- How can you improve your weak points?
- What gaps do you identify in your knowledge and skills in your professional development?
- What was the contribution of results to the goals of the organization/the larger project the internship was a part of?
- Based on your experience gained during this internship, which working environment (commercial, academy/research or public domain) is most suitable for you and why?
- What are your plans for the near future?

Send the self-reflection note at least one week before the final presentation to the supervisors and examiner. They will evaluate it on the basis of evaluation criteria of a good reflection report (see for example ACT or the thesis Brightspace). The reflection note is graded as pass/fail. If you don’t take it seriously, you will fail the whole internship.

### 3.13 Final presentation

The date of the final presentation is already fixed in the agreement. When planning that day, you take into account the availability of the university supervisor(s), the examiner and external supervisors (if applicable). Please check in the HWM thesis organization Excel sheet if the presentation is indeed scheduled to avoid last-minute requests and disappointments if your preferred time slot is no longer available.

You are in charge of your planning, so don’t wait for your supervisors to mention the final presentation, but raise the topic yourself. Ask your supervisors if they think the quality of your work is high enough to present within the planned time frame; if not, apply for extension (no later than 4 weeks before completion; Sec. 3.8).

You can update the title (the title of your proposal is the default) up to four weeks before the presentation by emailing [hwm.office@wur.nl](mailto:hwm.office@wur.nl). The secretary will then send a first invitation (as Teams meeting) to the HWM staff and HWM students. At least one week before the presentation, send an abstract (which has been approved by the supervisors) to the secretary. She will update the invitation. You can forward the Teams link to other people you want to invite yourself.

Your report should be finished two days before the final presentation. Send the final version to your supervisors and examiner and upload it to Brightspace.

Internship presentations are 15 minutes presentation and 5 minutes discussion. See the HWM thesis organization Excel sheet (link on Brightspace) for the scheduled presentations.

Presentations are in English and take place on Thursdays from 16:00-17:00 with drinks afterwards. We work back from 17:00, so if only one student will present, (s)he will start at 16:40. If two students present, the first presentation will start at 16:20. And if three students present, the first presentation will start at 16:00h. The presentations are scheduled as hybrid meetings. You will receive instructions from the secretary before your presentation. If it is impossible for you to be on campus, please inform the secretary so the meeting can be altered to 'online only'.

You are welcome to invite friends and family to your presentation (it's one of the few opportunities to show them what you've been doing), but target the level of your presentation to fellow students and HWM staff members that were not involved in your project. Students are expected to attend as many presentations by other students as possible and contribute actively by asking questions. The first questions from the audience are reserved for fellow MSc students. The presenting student should invite at least 5 students specifically to his/her presentation to ensure a large enough audience.

### 3.14 Presentation attendance

Students and staff are expected to attend as many presentations as possible. It is a matter of courtesy to listen to your colleagues present what they have been working on for months.

At the university many presentations take place as part of MSc theses, internships or scientific symposia. Attending presentations helps you to prepare for your own presentations, to get ideas for your research and to put the research at HWM into a broader scientific and societal context. Therefore, we strongly recommend to attend as many presentations as possible. Feel free to take notes and partake in the discussion. Do not be afraid to ask questions after the presentation – we value your contribution and will not use “bad questions” against you when assessing your own project.

### 3.15 Examination and final discussion

The final presentation is followed by a meeting of 45 minutes with supervisor(s) and examiner (send an Outlook or a Teams meeting request yourself well in advance). The first part of the meeting (15 min) is an examination. This discussion has the set-up of an oral exam, in which you should prove to the supervisor(s) and the examiner that you understand what you did, what the effect is of your choices, what the contribution of your research to science and practice and how your research fits in a broader context. This exam determines part of the final grade (see Table 1).

### 3.16 Assessment

After the discussion (Sec. 3.15), you leave the (virtual) room and your project will be evaluated by the supervisor(s) and examiner according to the official assessment forms (see HWM website; for weights of evaluation criteria, see Table 1), using the official rubrics (included in the assessment form on Brightspace).

Internship students should ask the internship provider to send their evaluation of the professional skills (form on HWM website and MSc thesis Brightspace) to the university supervisor at least two days before the final presentation. The university supervisor then makes sure that all items are evaluated.

Finally, you are invited back into the room and informed about the assessment. In exceptional cases, you can be asked to improve the report based on the presentation and discussion. The supervisors check whether the changes have been made.

When the grade for the MSc thesis is very high (9 or higher), the report needs to be graded by a second examiner (another HWM staff member).

### 3.17 Report distribution

Upload the final report to Brightspace before the final presentation (under Assessment -> Assignments). Send a digital version to your supervisor(s) and examiner by email. You do not have to print hard copy versions of the report.

### 3.18 Completion

- You should have uploaded to OSIRIS:
  - learning agreement
  - internship agreement
  - project plan
  - report
  - reflection report
- Your supervisor/examiner should have uploaded to OSIRIS:
  - progress evaluation
  - assessment forms from:
    - \* supervisor(s)
    - \* examiner

\* internship host

- You should have uploaded to Brightspace:
  - project plan
  - report (max. 10 MB)
  - reflection report

## A Planning checklist internship (for students)

When	What
6-2 months before start	Contact coordinator Bart Vermeulen
6-1 months before start	Find topic and supervisors
1 month before start	Contact secretary ( <a href="mailto:hwm.office@wur.nl">hwm.office@wur.nl</a> ) to receive starting info
2-1 weeks before start	Write 1-page project proposal
2-1 weeks before start	Complete and upload learning agreement to OSIRIS
2-1 weeks before start	Complete and sign internship agreement, send to coordinator
Week 1	Schedule final presentation with secretary
Week 1	Send Teams meeting invitation for progress evaluation meeting to supervisors (both internship host and university) and examiner
Week 1	Send Teams meeting invitation for examination meeting with supervisor(s) and examiner
Throughout project	Check progress of administrative arrangements in Excel sheet
Throughout project	Attend presentations (3 is the very minimum)
Week 4-5 or 3* (min. 1 day before meeting)	Send updated project plan to supervisors and examiner and upload to Brightspace
Week 4-5 or 3*	Progress meeting with supervisors (both from university and internship provider) and examiner
Week 4-5 or 3*	Supervisors and examiner decide go/no-go and communicate with student and secretary
4 weeks before end	Send title (if different from proposal) to secretary
1 week before end	Send abstract to secretary
1 week before end	Send reflection note to supervisors and examiner and upload to Brightspace
1 week before end	Ask external internship supervisor to send evaluation (part A on assessment form) to university internship supervisor
2 days before end	Send pdf of report to supervisors and examiner and upload to Brightspace
End	Give final presentation and do examination

\* 4-5 for theses and 3 for internship and research practice.