



YOUR→PhD AT NIKHEF

Nikhef

National
Institute for
Subatomic Physics

Research School Subatomic Physics

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INTRODUCTION

As a new doctoral student you have decided to further yourself in the sciences. For this you have chosen Nikhef. We are proud of the many graduates who have preceded you and wish to share our institute's rich experience with you. At Nikhef you can count on a stimulating scientific environment, passionate colleagues and excellent facilities.

We also expect a lot from you. You have a position as 'scientific researcher in training'. The aim of this appointment is to let you grow into a self-sufficient researcher. This scientific development is the common thread in your time as a doctoral student.

The first year there will be ample opportunities to follow courses and to acquaint yourself with the (sometimes international) team of people with whom you will do your research. It is good practice to write up the finished parts of your research in publications, internal notes or even manuals. In the second year you will work towards your own research topic, but you will also have time for education. During this period you will probably spend quite some time on teaching. In the third year, the core of your dissertation should be in such an advanced stage that it will allow you and your mentors and promotor to describe a detailed content of said dissertation.

The scientific results of the research you perform during your training must be published in a dissertation. This requires, apart from your intellectual efforts and great perseverance, a thorough planning. If your dissertation is of sufficient quality and is approved by your promotor and a specially selected manuscript committee it can lead –after a public defence– to the conferring of the grade of Philosophical Doctor (PhD). The writing and the content of the manuscript are the graduate's responsibility. Judging the quality of the manuscript is the responsibility of your promotor.



With this brochure we will help you on your way with the first steps of your graduate period. We will show you with whom you will have to deal at Nikhef as a graduate and we will address some practicalities.

We wish you a good time at Nikhef and we hope to see some groundbreaking research!

THE NIKHEF ORGANISATION

Nikhef is an organisation where scientists, together with technicians and support staff, perform fundamental research in the field of subatomic physics. As a doctoral student you're now part of this effort. What does the organisation look like?

NIKHEF INSTITUTE

The National Institute for Subatomic Physics Nikhef is based in Amsterdam and is a partnership between the NWO_I foundation and five universities:

- The University of Amsterdam
- The VU University Amsterdam
- The Radboud University Nijmegen
- Utrecht University
- Groningen University

The partners in the Nikhef partnership finance and support the institute. If you're a doctoral student at Nikhef, you're almost always employed by one of these six organisations. However, if you have questions about your salary or working conditions you can always contact the Nikhef Human Resources department in room H221, phone them at (020-592)5077/5120 or email to pz@nikhef.nl. Even when your salary is paid from an (international) grant programme, the Nikhef HR department is your first port of call.

Nikhef is managed by a management team that is responsible for everything that goes on in the organisation. At Nikhef there are different research programmes. Each research programme has a programme leader, who is responsible for the appointment of doctoral students in his or her programme.

There are three technical departments within Nikhef that work – together with the physicists – on the technical realisation of the experiments that Nikhef participates in. Engineers and technicians in the fields of mechanical technology, electronics and computing work in a number of well-equipped laboratories.

For the daily affairs, the Nikhef organisation is supported by departments such as Facilities, Finances, HRM, Communications and the library.

Nikhef has a Works Council (Ondernemingsraad, OR). You as a doctoral student are also represented in this OR.

EMPLOYER AND WORKING CONDITIONS

For a large number of doctoral students, NWO-I is the official employer. A minority is employed by a university. In a few exceptional cases, doctoral students are employed by other organisations such as e.g. CERN. Doctoral students appointed in the context of a European grant (ERC, training network) or an NWO grant (Vidi or Vici) will usually be employed by NWO-I or a university.

As an employee of NWO-I or one of the universities, a Collective Labour Agreement (Collectieve Arbeidsovereenkomst, cao) is applicable. In this cao all sorts of working conditions are described. Besides the cao there are working conditions that are the result of agreements with the Works Council. The following agreements exist:

For NWO-I employees the agreements can be found on the website www.nwo-i.nl. The most important documents are:

- [Cao Onderzoeksinstellingen](#)
- [Uitvoeringsregelingen \(UVR\)](#)

University employees can find their working conditions on the employer's website.

The applicable CAO is the 'Cao Nederlandse Universiteiten' and can be found on the website www.vsnul.nl.

Working conditions can differ from employer to employer.

Nikhef aims to treat doctoral students in the partnership as equally as possible. However, sometimes working conditions (e.g. remunerations and leave) are not the same for all employers. Examples are the possibility to buy leave hours and the different compensation schemes for printing your dissertation. In these cases, a partnership such as Nikhef implies that we have to learn to live with the differences.

RESEARCH SCHOOL

The factual coordination of the training of doctoral students within the Nikhef partnership lies with the Research School for Subatomic Physics (Onderzoekschool Subatomaire Fysica, OSAF). All doctoral students who reside at Nikhef (or its partners) during their four-year contract period are in principle students of this research school. OSAF is also responsible for a part of your education (see the Education section). An exception are doctoral students in the Theoretical Physics programme. For these students training is organised by Dutch Research School for Theoretical Physics (DRSTP).

PHD COUNCIL

There is an independent doctoral student council (PhD Council) which can give useful advice and is also a good place to meet your co-students. The PhD Council has its own pages on the Nikhef website and can be reached by email via phdcouncil@nikhef.nl. The PhD council is represented at OSAF meetings .

COMMUNICATIONS AND OUTREACH

The communications department organises many outreach activities, such as lab tours, school visits, open days, etc. The assistance of doctoral students is requested on a regular basis to support these activities. Nikhef attaches great importance to outreach, and therefore expects doctoral students to support these activities and so be the 'face' of Nikhef and the physics field. You can contact the Communications dept. for templates, brochures, etc.: communications@nikhef.nl or visit room H222b.

WHOM TO DEAL WITH AS A DOCTORAL STUDENT

As a doctoral student you are of course first and foremost responsible for the success of your own graduation. Below we will look closer at the roles and responsibilities of those involved.

At the start of your employment, a mentor and a promotor are assigned. It can happen that during your research a mentor is added or replaced. Normally, this will happen in consultation with all concerned. The promotor is responsible for your research plan and will therefore write an education and supervision plan in which the final research topic is clearly stated, but also what is on the programme in the first few months. A template of this plan is in the appendix.

The aim of your work as a doctoral student is doing research and the preparation of a manuscript or dissertation. Obviously, your contract is not a guarantee that this mission will be successful. It is therefore important to look at the concerned parties and their responsibilities:

PROMOTOR

When you start, the promotor will make a research plan. He or she will see to it that mentor and student confer on a regular basis and will discuss changes to the research plan when necessary. The promotor has the final responsibility for the approval of the manuscript. He or she will offer the student the chance for (gradually more and more) independent research. The promotor will be clear about the progress and the expectations. A weekly contact with your promotor isn't necessary, but you should try to speak with each other at least twice a month. If you think you don't see each other enough, discuss this with your promotor and your mentor.

Once the manuscript is finished, it needs to be approved by your mentor and your promotor. There is a possibility that during your graduate track one of your mentors has gotten tenure as a professor. Usually this mentor will then be appointed as co-promotor. After approval, the manuscript will be handed to a committee and a request for public defence can be made.



Graduation is only possible at a university (hence not at Nikhef) and this will usually be the university where your promotor works. The graduation regulations differ slightly from university to university, but are explained in the regulations. It is advised to read the graduation regulations of the university where you wish to graduate well before the graduation date.

MENTOR

The mentor is appointed in consultation with your promotor. All research-related questions must be discussed with your mentor. In principle, you and your mentor meet once a week. The mentor will discuss the degree of independence that you have with your promotor. It is obvious that in some cases mentors have a great deal of experience and seniority (e.g. associate professor or senior researcher) and in other cases little experience (post-doctoral researchers). The supervisory tasks will be allocated in consultation between mentor, promotor and doctoral student. Take steps if you feel this division of tasks isn't correct. In first instance discuss the problem with your mentor and/or your promotor. If the problem persists, you can contact a so-called '3rd mentor', the C3 member.

PROGRAMME LEADER

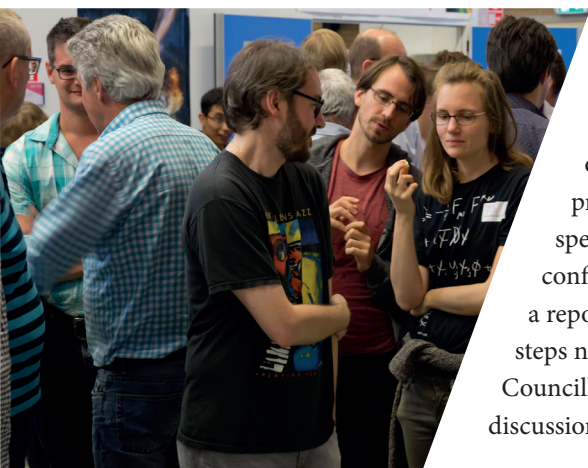
Most research at Nikhef is done in programmes which are led by a programme leader. This programme leader is your formal manager. Under his or her responsibility the group tasks will be allocated. It is therefore expected of you to do your share in the group's work, such as software development, working on the experiment and helping new doctoral students. Your programme leader can also obligate you to participate in weekly group meetings. Furthermore the programme leader is your point of contact for a number of practicalities such as requesting a computer account, finding office space and approving work-related travel. By the way, it is possible that your promotor and your programme leader are one and the same person. If that isn't the case, there will be a regular meeting between your promotor and your programme leader.

C3 MEMBER ON BEHALF OF THE RESEARCH SCHOOL SUBATOMIC PHYSICS (OSAF)

The research school decides on the content of the education and the quality of the supervision. Shortly after your appointment a so-called '3rd mentor', aka the 'C3 member' will be allocated by the research school's education committee. The promotor, regular mentor and C3 mentor together form the 'C3'. The task of the C3 member is to judge the progress and especially the supervision and agreement between doctoral student, mentor and promotor. Normally, four meetings are booked in at 6, 12, 24 and 36 months. If you or one of the C3 members feel the need, more meetings can be arranged.

CONFIDENTIAL COUNCILLOR

At Nikhef we strive for an open culture, based on respect and trust. Part of this is that problems are immediately discussed by those concerned. We speak with each other, not about each other!



Nevertheless it can happen that a problem exists between you and your colleagues that appears unsolvable. If you see no other possibility to come to terms with your promotor, mentor or other colleague, you can speak with the Confidential Councillor. A confidential discussion can be had (if needed without a report) and the Councillor can advise you about the steps needed for a solution to the problem. The Councillor can also support you (if needed) in a discussion with your mentor and/or promotor.

To safeguard the confidentiality there are some rules. You can find these on the HRM website pages. Here you can also find the contact details of the Confidential Councillor.

YOUR NETWORK!

Last, but not least: during your graduate track you will become part of the research community. In the world of scientific research, knowledge must ‘flow’ through this community and you will participate in this! Make sure therefore to have good and intensive contacts with your fellow doctoral students, your own research group, but also the other groups. Have a poster or preferably a talk ready to give at meetings or conferences that you visit. Be seen. Ask questions. Give constructive criticism. In short: work on your network.

EDUCATION

A large part of training is doing your research and conferring with mentors and international research groups. Throughout the four-year period, you must grow to be an independent researcher who takes initiatives, looks for opportunities for collaborations and has a critical view of his or her own achievements. Besides research there are also a number of courses, some of which are compulsory. Finally you are expected to teach some classes.

EDUCATION TRACK

As a doctoral student you participate in a research school; most Nikhef doctoral students resort under the OSAF. Each doctoral student is expected to go to the international ‘AIO/OIO’ school twice. This international school is organised together with our Belgian and German colleagues and is called the ‘BND school’ (NB. For doctoral students in Nikhef’s Theoretical Physics group the school is not compulsory since they are usually affiliated to the DRSTP). Furthermore, three times a year so-called ‘Topical Lectures’ are organised. Apart from the fact that these lectures are useful, fun and educational it is stressed that attendance is required. Finally, in consultation with your mentor and promotor there is sometimes the possibility of attending an extra international school.

TEACHING

Part of your graduate track is teaching classes. Usually this entails helping at tutorials, preparing practical classes, marking exams and mentoring bachelor and master students. Make sure to be fully informed about the obligations and rights which concern you. NWO-I and the



universities have different guidelines and demands. Links to the different education guidelines per employer are mentioned in the appendix.

Most doctoral students will try to complete their education tasks within two to three years. Many universities have a local education coordinator who allocates tasks. Take the initiative to speak to this person. Don't forget to inform your mentor of your plans. Some teaching tasks can be very educational for yourself and can be a useful item on your CV. Obviously, this is also true of other outreach activities. Unless structural, the latter are not counted in the total teaching task.

SKILLS TRAINING

Besides scientific content, there are other skills that you can develop during your training. NWO-I has an extensive range of courses. For NWO-I doctoral students the following courses are compulsory:

- Dutch welcome course (for foreign students)
- Taking charge of your PhD project

There are a number of non-compulsory courses available for Nikhef doctoral students. These courses are aimed at developing your capabilities as a researcher, but also at enhancing your career after graduation. These courses are:

- The art of presenting science
- The art of scientific writing
- Valorisation
- How to get funded
- Career planning
- Business orientation week (with Nyenrode Business University)

If you are employed by a university, there might be a possibility to follow (part of) the NWO-I courses. Questions about this, or if you want to know more about courses and training in general, can always be answered by Nikhef's HRM department in room H221.

PLANNING YOUR GRADUATION: 'READY IN 4 YEARS'

All things must end, and so does your graduation track. The whole track, including your defence, will in principle last four years. The trend is that this period is used increasingly strictly. Even though four years seems like a long time, a thorough planning from day one is essential. The multitude of tasks and responsibilities you have as a doctoral student do not only challenge your intellect, but also your planning capabilities.

Nikhef supports doctoral students in several ways to finish the graduation track within the allocated time. Each and every graduation track starts with the drafting of an education and supervision plan. This is drafted together with your mentor and your promotor. There will also be meetings with the C3 committee; in principle four times during the graduate track period. In these meetings attention will be given to your graduation planning. Furthermore, you can expect your mentor to help you with your work planning should you ask him or her.

As said, Nikhef also offers the opportunity to attend the course: 'Taking charge of your PhD project'.

BEHAVIOUR, INTEGRITY AND SECURITY

REPRESENTATION

Nikhef attaches great importance to the maintaining and improvement of the good reputation that the institute has built up over the years. As a doctoral student at Nikhef you have direct influence on this reputation. Obviously your research is of excellent quality, and you work to the highest standards of integrity. Also make sure that you can give an accurate picture and a fair representation outside Nikhef of the organisation. The Communications department can help you with advice, templates and with representative activities. You can find them in room H222b.

INTEGRITY

Scientific research done at Nikhef needs to be performed according to the strictest interpretation of scientific integrity. This includes the dissertation on which you hope to get the degree of doctor at the end of your graduation track and, if any, other publications on which you put your name during your scientific career.

There are a number of codes of conduct and guidelines that you can use when you wonder what exactly scientific integrity is, and what it means for your work as a scientist. The Association of Universities in the Netherlands (VSNU) has named five principles in the Netherlands Code of Conduct for Scientific Practice:

- **Scrupulousness;**
- **Reliability;**
- **Verifiability;**
- **Impartiality;**
- **Independence.**

These principles are further elaborated in the Code of Conduct. Other codes are published by (a.o.) the OECD and the ESF/ALLEA. Links to these codes can be found in the appendix.

If ever during your time at Nikhef you find yourself in a situation wherein you have doubts about scientific integrity, you can inform NWO-I or your university of this situation. A link to the procedure can be found in the appendix.



Finally, we like to draw your attention to the National Board for Research Integrity (Landelijk Orgaan Wetenschappelijke Integriteit, LOWI). This is an independent advisory body, established in 2003 by the KNAW, the NWO and the VSNU. It advises the boards of universities, university medical centres, the Sanquin Foundation, the NWO and the KNAW regarding violations of norms on research integrity.

COMPUTING RULES

There is a code of conduct for using the Nikhef computer systems, services and networks. See the Acceptable Use Policy (AUP) on the Nikhef website. Many other organisations (e.g. CERN) have AUPs. As a Nikhef doctoral student it is expected of you that you behave according to these rules.

SAFETY

If during your work you are faced with dangerous situations, such as high voltage, poisonous materials, lasers or radiation please make sure that you are well-informed about the regulations and precautions. You can call on the Safety coordinator for information at all times.

CONFLICTS

Contact between you and your manager and colleagues is open, honest, correct and business-like.

If there are conflicts of competence, intimidation or other unwanted or inappropriate behaviour, and you can't discuss it (anymore) with the other party, we advise you to contact the Confidential Councillor whose name and contact details can be found on the HRM page of the Nikhef intranet site.

Furthermore, the NWO-I Foundation has a formal complaint procedure, which can be found in "Uitvoeringsregeling 17: Individueel klachtrecht" on the NWO-I website.

DOCUMENTATION AND ADMINISTRATION

In the appendices you will find additional information and pointers to other sources of information as well as forms and templates.

LINKS

On this intranet page you will find a large number of useful links:

<https://intranet.nikhef.nl/phd>

APPENDIX: PLANNING TEMPLATE

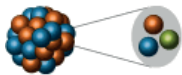
Reminder: Time line of the graduation track

t-time in months, where t=0 is the moment that employment starts

When	What	Who	Remark
t=4, 8, 12, 16, 20, 24	Topical lectures	All Nikhef doctoral students	
t=december	Jamboree	All Nikhef doctoral students	once per year
t=0-36	NWO-I courses	All NWO-I-Nikhef doctoral students	
t= 0	Write training and supervision plan	Promotor and doctoral student?	
t=0	First planning of graduation track	Doctoral student	
t=4	First C3 meeting: planning with promotor, mentor and C3 member	Doctoral student	HR supports
t=6	C3 meeting	Doctoral student + C3 committee	
t=16	Second C3 meeting: planning with promotor, mentor and C3 member	Doctoral student	
t=18	C3 meeting	Doctoral student + C3 committee	
t=28	Third C3 meeting: planning with promotor, mentor and C3 member	Doctoral student	
t=30	C3 meeting	Doctoral student + C3 committee	
t=40	Fourth C3 meeting: planning with promotor, mentor and C3 member	Doctoral student	
t=42	C3 meeting	Doctoral student + C3 committee	
t=...	manuscript hand-in to the reading committee	Doctoral student	
t=48	Public defence of dissertation	Doctoral student	

APPENDIX: OSAF TRAINING AND SUPERVISION PLAN

APPENDIX: FORMAT C3 INTAKE FORM



**JOB DESCRIPTION
and
PLAN FOR TRAINING AND SUPERVISION
PhD student**

Name of employee:
Institute/working group:
Department/research unit:
Effective as of:

1. Supervisor(s)
working group leader:
PhD supervisor (s):
other supervisors:

2. Research
Research objective:
.....
.....
.....
Design of research, as well as reporting method and timing of reports:
.....
.....
.....

3. Training plan
What expertise and skills must be acquired during the course this appointment:
.....
.....
.....

How is this to be implemented (1st year - specific, subsequent years - general)
(e.g. lecture course, symposia, traineeships, studying abroad, and the like):
.....
.....
.....

4. Supervision plan

How often and in what way is personal supervision provided by working group leaders and/or other supervisors (at least once every two weeks):

.....
.....
.....

(there will be an annual planning and evaluation interview)

5. Other activities

Size of task (maximum 10%):

.....
.....
.....

Nature of the activities and the number of hours per activity:

.....
.....
.....

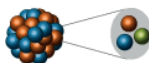
6. Signed

<i>role</i>	<i>name</i>	<i>date</i>	<i>signature</i>
PhD student	-.....-.....	
Promotor	-.....-.....	
Supervisor	-.....-.....	
Director Nikhef	Prof.dr. S.C.M. Bentvelsen-.....-.....	

Forward to the Nikhef Personnel Department after signing

For NWO-I employees the following applies to this plan:

- 1. Implementation Regulation 6 'Conditions for employment of PhD students'
- 2. Collective labour agreement for research establishments. Section 12.

C3 file

Nikhef

Onderzoekschool Subatomaire Fysica

Nikhef research group		
Name PhD student	<name>	<email>
Master title obtained	<university, date, subject>	
Employer	<NWO-i / university of.../other>	
Duration employment	from/...../20....	until/...../20....
Promotion at university:		
<u>C3 Commission</u>		
Promotor:	<name>	<email>
Supervisor:	<name>	<email>
Member on behalf of OSAF (C3 member):	<name>	<email>

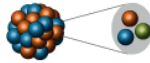
C3 Meeting: <date>**Items on the agenda:**

1. Explanation about C3; training/supervision plan. (Only during first meeting)

2. **Evaluation of the past period (work):**
<draft of the nature of the activities, such as talks, highlights, tasks within the collaboration, tutorials, practical sessions, outreach,...>

3. **Evaluation of the past period (received education):**
<received education through 'aio/oio'-schools, topical lectures, colleges, courses or international schools>

4. **Publications:**
<entire publications, conference proceedings, internal notes, manual, web pages, chapter thesis, ...>

C3 file

Nik|hef

Onderzoekschool Subatomaire Fysica

5. Evaluation of the progress until now:

- a. Planning:
<ahead/tight/behind schedule>
- b. External factors:
<personal circumstances, other factors outside of work>
- c. Bottlenecks:
<work-related or personal circumstances that obstruct the progress>

6. Evaluatie van de begeleiding:

<Are there enough contact moments, are agreements met by all parties, is the cooperation sufficiently productive>

7. Reflection on competencies:

<What's going well, what can be improved, is extra help desired/necessary. For instance help with writing, presenting, time management, theory/experiment, assertiveness,...>

8. Planning of the period ahead:

- a. Work:
<point by point: What will the PhD student do and when will it be finished (in terms of results)>
- b. Personal development:
<conferences; (NWO-i) courses; coaching; job interviews after promotion,.....>
- c. Next C3 meeting:
.....-.....-20

9. Other

<if extension is needed, discuss here>

