



# Individual study plan for postgraduate studies

Reference number

ISP 2022/xxx

Agreement doctoral student

Xxx

Date

2023-09-18

Agreement principal supervisor

Yyy

Date

2023-09-18

Established by Director of third cycle education

Svein Helge Kleiven

Date

2023-10-03

## 1. Basic information

### Doctoral student

Name

Xxx

Civic registration number

XXXXXX-XXXX

Phone number

+XXXXXX

Email address

XXX

Home address

Xxxx

### Organisation

Faculty

KTH Royal Institute of Technology

School

CBH/School of CBH

Specialisation

Gemensamt forskarutbildningsprogram inom medicinsk teknologi

Participating departments and/or divisions

Institionen för neurovetenskap på Karolinska Institutet

Other participating institutes of higher education and organizations

Karolinska institutet

Utbildningssamarbete: MDTE01

### Education

Subject

Medical Technology (MEDICINT)

Admission applies to

Doctoral degree

Date of commencement of studies

20xx-yy-zz

Permanent leave from studies

-- value missing --

Doctoral programme

Medicinsk teknologi (MEDICINT)

Intending to obtain licentiate degree

No

Intending to obtain doctoral degree

Yes, 20xx Autumn

Information about the general study syllabus

KI Dnr: 5-58/2020  
KTH Dnr: V-2020-0695  
<https://www.kth.se/en/ki-kth-doktorand/dokument/blanketter-och-dokument-1.1205110>

The doctoral student has read the general study syllabus

Yes

## 2. Degree of activity and Funding

### 2.1 Time plan

Current rate of study (from Ladok)

Year	Semester	%	Comment
20xx	Spring	24	the doctoral student has 76% activity at KI beside the 24% activity at KTH for a total of 100%
20xx	Autumn	50	the doctoral student has 50% activity at KI beside the 50% activity at KTH for a total of 100%
20xx	Spring	50	the doctoral student has 50% activity at KI beside the 50% activity at KTH for a total of 100%
20xx	Autumn	50	the doctoral student has 50% activity at KI beside the 50% activity at KTH for a total of 100%
20xx	Spring	50	the doctoral student has 50% activity at KI beside the 50% activity at KTH for a total of 100%
20xx	Autumn	25	the doctoral student has 50% activity at KI beside the 50% activity at KTH for a total of 100%

Work achieved so far in % of the requirements for the degree (filled in by the principal supervisor)

90

Comment

-- value missing --

Total current study period used (%) - Ladok

31.13

Comment

the activity at KI prior to switching to the KI-KTH joint programme is not accounted for under total current study period - and the period after switching is 50% at KI and is not accounted for under total current study period

### Planned degree of activity

Year	Semester	%	Comment
20xx	Spring	87	Tidigare doktorandprogram på KI (C4MEDVET)
20xx	Autumn	100	Tidigare doktorandprogram på KI (C4MEDVET)
20xx	Spring	100	Tidigare doktorandprogram på KI (C4MEDVET)
20xx	Autumn	100	Tidigare doktorandprogram på KI (C4MEDVET)
20xx	Spring	100	20xx-yy-zz till 20xx-yy-zz på tidigare doktorandprogram på KI (C4MEDVET)
20xx	Autumn	100	
20xx	Spring	100	
20xx	Autumn	100	
20xx	Spring	100	
20xx	Autumn	50	Planerad disputation i november

## 2.2 Funding

### Current funding (from Ladok)

Year	Semester	%	Form	Comment
20xx	Spring	100	Doctoral studentship	
20xx	Autumn	100	Doctoral studentship	
20xx	Spring	100	Doctoral studentship	
20xx	Autumn	100	Doctoral studentship	
20xx	Spring	100	Doctoral studentship	
20xx	Autumn	100	Doctoral studentship	

### Planned funding (to be filled in by the principal supervisor)

Year	Semester	%	Form	Comment
20xx	Autumn	50	Doctoral studentship	

## 2.3 Departmental duties: to date and planned

Year	Semester	%/days/hrs	Task

## 2.4 Past and present leaves/assignments that constitute grounds for extensions/special reasons

Year	Semester	%/days/hrs	Reason	Description

## 2.5 Available fixed resources

Office space

Yes

Computer

Yes

Other available fixed resources

Comment

## 3. Courses and conferences

### 3.1 Planned courses

Compulsory courses within third-cycle studies

Course code	Course	Comment	HEC	Level	Year	Semester
SK2530	Introduction to Biomedicine	Kursen avklarad på KTH 20xx-yy-zz.  Tillgodoräknad som KIs kurs Human Physiology - an Overview (C3F2644) i KIs ladok (beslutsdatum 20xx-yy-zz, ärendenr xxx)  Uppfyller kravet på grundläggande kurs i Människans biologi eller sjukdomslära.	3	Second Cycle	20xx	Autumn
MT4001	Statistical Analysis	Kursen avklarad hos SU 20xx-yy-zz.  Tillgodoräknad som 7.5hp statistik i KIs ladok (20xx-yy-zz, ärendenr RExxx)  Uppfyller kravet på kurs i statistik.	7.5	First Cycle	20xx	Autumn
C7F2724	Compulsory Introduction for Doctoral Students	Kursen avklarad hos KI 20xx-yy-zz	0	Third Cycle	20xx	Spring
H9F3118	Ethics in Science	Kursen avklarad hos KI 20xx-yy-zz  Uppfyller kravet på min 1.5hp i Forskningsetik.	1.5	Third Cycle	20xx	Autumn

Course code	Course	Comment	HEC	Level	Year	Semester
K6F2618	Write your Research Results and get Them Published	Kursen avklarad hos KI 20xx-yy-zz  Uppfyller kravet på min 1.5hp i Grundläggande kommunikation och undervisning.	3	Third Cycle	20xx	Autumn
Total			15.0			

#### Elective courses within third-cycle studies

Course code	Course	Comment	HEC	Level	Year	Semester
	4th HBP School - Future Computing: Brain Science and Artificial Intelligence	Tillgodoräknad i KIs ladok (beslutsdatum 20xx-yy-zz, ärendenr xxx)	1.5	Third Cycle	20xx	Spring
	Janelia/MSRI Summer Graduate School on Mathematical Analysis of Behavior	Tillgodoräknad i KIs ladok (beslutsdatum 20xx-yy-zz, ärendenr xxx)	3	Third Cycle	20xx	Spring
C4F2624	Brain Circuits	Kursen avklarad hos KI 20xx-yy-zz	1.5	Third Cycle	20xx	Autumn
Total			6.0			

### 3.2 Completed courses

Course code	Course	HEC	Date	Course examiner
FEO3350	Information Theory for Statistics and Learning	12.0	20xx-yy-zz	Mikael Skoglund
FDD3435	Graduate Course in Mathematical Modeling of Biological system	9.0	20xx-yy-zz	Erik Fransén
FHN3014	Medical Technology	3.0	20xx-yy-zz	Svein Kleiven
FDD3403	Advanced Topics in Brain Science	7.5	20xx-yy-zz	Arvind Kumar
Total		31.5		

#### 3.2.1 Credited courses

Decision on credited courses equals	Decision on credited courses made by	Decision date

Course	Crediting based on	Education level	University

Credited as

Total points credited courses: 0.0

#### 3.2.2 Higher education qualification on research level exists

No
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### 3.3 Planned and completed participation at conferences

Year	Date	Name and location of the conference	Type and/or title of any contribution
20xx	20xx-yy-zz to 20xx-yy-zz	xxth FENS, Forum of Neuroscience, poster presentation, July xx-xx, 20xx, Xxxx...	Poster presentation: Xxx
20xx	20xx-yy-zz to 20xx-yy-zz	xrd Neuroscience meeting 20xx, Xxxx...	Poster presentation: Xxx

### 3.4 Planned and completed activities, including international participation

Year	Date	Information

Type of mobility abroad	Country	Duration of stay in weeks

### 3.5 Planned and completed seminars

Year	Date	Type of seminar
20xx	20xx-yy-zz to 20xx-yy-zz	KTH Journal Club on Computational Biology >48 tillfällen motsv. 6 hp
20xx	20xx-yy-zz	Halvtidsseminarium

## 4. Supervision and examination

### 4.1 Principal supervisor (to be filled in by the principal supervisor)

Name Yyy	Title Professor
School CBH/School of CBH	Section, unit or equivalent Department of...
E-mail x@ki.se	Docent (Reader)/equivalent Yes
Completed formal training in supervision/equivalent Yes	

KTH does not use this field

Forms of supervision/Plan for supervision

Responsible supervisor at home university.

Other planned commitments limiting the Principal supervisor's availability

### 4.2 Assistant supervisor (to be filled in by the principal supervisor) 1

Name Yyy1	Title ASSOCIATE PROFESSOR
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School  
EECS-skolan

Section, unit or equivalent  
DIVISION OF...

E-mail  
x@kth.se

Docent (Reader)/equivalent  
Yes

Completed formal training in supervision/equivalent  
Yes

Current position and employer  
ASSOCIATE PROFESSOR at KTH

Forms of supervision/Plan for supervision  
Responsible supervisor at partner university.

Other planned commitments limiting the assistant supervisor's availability  
None.

## 4.2 Assistant supervisor (to be filled in by the principal supervisor) 2

Name  
Yy2

Title  
Professor

School  
CBH/School of CBH

Section, unit or equivalent  
Department of...

E-mail  
x@ki.se

Docent (Reader)/equivalent  
Yes

Completed formal training in supervision/equivalent  
Yes

Current position and employer  
Professor at KI

Forms of supervision/Plan for supervision  
Assistant supervisor at home university.

Other planned commitments limiting the assistant supervisor's availability  
None.

## 4.3 Programme director/Director of studies

Name  
Yyy3

Title  
Professor

School  
CBH/School of CBH

Section, unit or equivalent  
xxx

E-mail  
x@ki.se

## 4.4 Additional persons

Name  
-- value missing --

Title  
-- value missing --

E-mail

-- value missing --

Phone

-- value missing --

Current employment and employer

Role and availability

## 4.5 Allocation of supervisory contribution

Person	Year	Semester	% of total contribution
Yyy	20xx	Spring	45
Yyy1	20xx	Spring	45
Yyy2	20xx	Spring	10
Yyy	20xx	Autumn	45
Yyy1	20xx	Autumn	45
Yyy2	20xx	Autumn	10
Yyy	20xx	Spring	45
Yy1	20xx	Spring	45
Yyy2	20xx	Spring	10
Yyy	20xx	Autumn	45
Yyy1	20xx	Autumn	45
Yyy2	20xx	Autumn	10
Yyy	20xx	Spring	45
Yyy1	20xx	Spring	45
Yyy2	20xx	Spring	10
Yyy	20xx	Autumn	45
Yyy1	20xx	Autumn	45
Yyy2	20xx	Autumn	10

## 5. Thesis

### 5.1 Title of the thesis or doctoral project

Xxxx

### 5.2 Description of thesis or doctoral project

Se bilaga.

### 5.3 Planned form of thesis

Compilation thesis

### 5.4 Research plan for the next 12-month period

Besvara och åtgärda eventuella synpunkter från fackgranskare på det inskickade manuskriptet (Xxx, 20xx).

Färdigställa och testa ett nytt förbättrat mjukvaruverktyg för extraktion av xxx-signaler från xxx-data.



Dokumentera funktion och prestanda i form av ett metod-manuskript, inklusive analys av ny data från xxx möss.

## 5.5 Thesis work in progress

Inskickad (f.n. review hos PNAS):

Xxx (20xx) Xxxx. bioRxiv

(10.1101/Xxx )

Pågående:

Xxxx

I mån av tid:

Xxxx.

## 5.6 Parts of the thesis/component papers completed

Publicerade och fack-granskade artiklar:

Xxxx, PLOS

Computational Biology xxx

Xxxx, Cell Reports xxx

## 5.7 Deviations from previous study plan

Plannerad disputationstermin flyttad från VT20xx till HT20xx.

# 6. Meetings

## 6.1 Progress meetings

Date	Participants	Comment
20xx-yy-zz	Yyy, Yyy1	Update on manuscript submission.

## 6.2 Supervisory meetings

Date	Participants	Comment
20xx-yy-zz	Yyy, Yyy1, Yyy2	Discussion on project, time management, and manuscript preparation.
20xx-yy-zz	Yyy, Yyy1, Yyy2	Discussion on project, time management, and manuscript preparation.
20xx-yy-zz	Yyy, Yyy1, Yyy2	Discussion on project, time management, and manuscript preparation.
20xx-yy-zz	Yyy, Yyy1, Yyy2	Discussion on project, time management, and manuscript preparation.

# 7. Comments

## 7.1 Doctoral student comments

Jag har deltagit i såväl fler lokala seminarier som fler internationella sommarskolor och konferenser men inte redovisat dem under punkt 3 här (och som jag inte heller rapporterat till studierektor) eftersom programmets krav på

60hp enligt min räkning redan är uppfyllt.

## 7.2 Principal supervisor comments

## 7.3 Programme director/Director of studies comments

## 7.4 Administrator of third-cycle education comments

## 8. Approvals

### 8.1 Permits required

Yes

Experiments on animals will be included

Yes

Ethical trial required

Yes

Experiments on humans will be included

No

Notification of processing of personal data (GDPR) required

No

Indicate which approvals have been applied for and granted

Etiskt tillstånd från Stockholms djurförsöksetiska nämnd är godkänt (Dnr xxx; se bilaga).

## 9. Degree objectives

### Degree of Doctor

**Scope:** A Degree of Doctor is awarded after the third-cycle student has completed a study programme of 240 credits in a subject in which third-cycle teaching is offered.

General Qualifications: Degree of Doctor, The Higher Education Ordinance, Annex 2, Qualifications Ordinance (2006:1053): The connection between the third-cycle studies and the objectives of the Higher Education Ordinance are documented here together with the particular activities planned and realized in order to fulfil each objective. See also the aims stated in the general study syllabus for the third-cycle subject. On each occasion for revision new realized activities should be entered.

### A. Knowledge and understanding – for the Degree of Doctor the third-cycle student shall

A1. Demonstrate broad knowledge and systematic understanding of the research field as well as advanced and up-to-date specialised knowledge in a limited area of this field.

#### Activities realized in order to fulfil the objective

Have taken courses at KI and KTH as well as four international summer schools on topics within computational and systems neuroscience. Attended and presented at international conferences (FENS, Nordic Neuroscience, COSYNE). Presented at seminars and journal clubs (both at KTH and KI) on numerous occasions.

#### Activities planned in order to fulfil the objective

Continued participation in journal clubs and seminars at KI and KTH.

A2. Demonstrate familiarity with research methodology in general and the methods of the specific field of research in particular.

**Activities realized in order to fulfil the objective**

Had a leading role in completion of two scientific publications and one manuscript within the research field. Discussed scientific methodology with supervisors on numerous occasions. Active participation in weekly lab meetings of Yyy and Yyy1 research groups.

**Activities planned in order to fulfil the objective**

Continued active participation in these lab meetings.

## **B. Competence and skills – for the Degree of Doctor the third-cycle student shall**

B1. Demonstrate the capacity for scholarly analysis and synthesis as well as to review and assess new and complex phenomena, issues and situations autonomously and critically.

**Activities realized in order to fulfil the objective**

Active participation in lab meetings and journal club, including giving critical scientific feedback on lab members' work.

**Activities planned in order to fulfil the objective**

Critically review my own and others' scientific work in the introduction of my thesis.

B2. Demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work.

**Activities realized in order to fulfil the objective**

Designed and executed the analysis of the two published manuscript with help of supervisors.

Autonomously devised the research question, method and interpretation of the work in the third manuscript. Independently wrote drafts of Introduction and Discussion sections with extensive references to existing literature.

Independently wrote extensive literature review for the half-time, including proposing several new interpretations and syntheses of previous results from literature with our own work.

**Activities planned in order to fulfil the objective**

Take responsibility of responding to any peer-review comments of the submitted manuscript (Xxx & Yyy1, 20xx).

B3. Demonstrate through a dissertation the ability to make a significant contribution to the formation of knowledge through his or her own research.

**Activities realized in order to fulfil the objective**

Have read literature and compiled a literature review for the half-time, which will serve as a starting point for the doctoral thesis.

**Activities planned in order to fulfil the objective**

Write and present a doctoral thesis.

B4. Demonstrate the ability in both national and international contexts to present and discuss research and research findings authoritatively in speech and writing and in dialogue with the academic community and society in general.

**Activities realized in order to fulfil the objective**

Attended and presented at international conferences (FENS, Nordic Neuroscience, COSYNE) as well as national/internal seminar series (Network-for-Networks, Biomedicum seminar series, Dept. of xxx lunch seminar, xxx Retreat).

**Activities planned in order to fulfil the objective**

Write and publicly defend a doctoral thesis.

B5. Demonstrate the ability to identify the need for further knowledge.

**Activities realized in order to fulfil the objective**

Discussed limitations of the research methods with the supervisors in the context of planning the ongoing research throughout the doctoral education.

Discussed limitations of the results in the Discussion section of the publications and manuscript.

**Activities planned in order to fulfil the objective**

Discuss limitations of our work and propose future directions for research in the doctoral thesis.

B6. Demonstrate the capacity to contribute to social development and support the learning of others both through research and education and in some other qualified professional capacity.

**Activities realized in order to fulfil the objective**

Taken a scientific writing course, and have practiced manuscript writing in several projects.

Supervised two bachelor theses and three master theses.

Teaching assistant in the xxx course, as well as in computer exercises in basic neuroscience courses.

Teaching assistant at the graduate course xxx (at xxx, xxx, xxx) which included designing and giving four lectures on various topics in xxx neuroscience.

Provided qualified technical advise (programming, statistics, data management) to other members of Yyy and Yyy1 research groups.

**Activities planned in order to fulfil the objective**

Supervise one more master thesis in VT20xx.

**C. Judgement and approach – for the Degree of Doctor the third-cycle student shall**

C1. Demonstrate intellectual autonomy and disciplinary rectitude as well as the ability to make assessments of research ethics.

**Activities realized in order to fulfil the objective**

Course on Ethics in science.

Discussion of ethics with supervisors and other lab members.

Independently drafted literature review and a scientific manuscript.

Independently peer-reviewed a manuscript for eNeuro.

**Activities planned in order to fulfil the objective**

Autonomously write a doctoral thesis which clearly describes my contributions, as well as my interpretation of our results.

C2. Demonstrate specialised insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used.

**Activities realized in order to fulfil the objective**

Followed and participated in scientific discussions at the departments (xxx at KI and xxx at KTH).  
Participated in formal discussions on the role of science in society at the summer schools, both as a participant and as a TA (xxx at xxx).

**Activities planned in order to fulfil the objective**

Continue to follow the scientific discussions and debates at the departments.

## **KTH sustainability goal**

Demonstrate the ability to contribute to a sustainable societal development toward a gender equal, inclusive and climate neutral society with knowledge and skills.

**Activities realized in order to fulfil the objective**

Seminars in the course Medical Technology on Sustainability as well as Gender and equality.

**Activities planned in order to fulfil the objective**

## **10. Attachments**

etik\_tillstand.pdf

projektplan\_KID.pdf

financing\_plan\_xxx