

Master's Thesis, Research Project and Practical Methods in Pharmaceutical Sciences

The Master's Theses and the Research Project are most commonly carried out within research groups of the Institute of Pharmaceutical Sciences (IPW). However, it is also possible to perform them within other ETH research groups, or at another research institution, or in industry in Switzerland or abroad. In these cases, an IPW professor or lecturer needs to be the official supervisor and evaluator of the Master's Thesis or Research Project. It is the students' own responsibility to find a suitable position as well as an official supervisor from within IPW.

This guideline is intended to support students in the process of finding a suitable Master or Research Project and managing the administrative formalities. Moreover, it provides basic information regarding the Master's Thesis/Research Project writing and evaluation process.

PHASE A: INFORMATION, APPLICATION, REGISTRATION

(1) Find a group/topic

Students are advised to inform themselves online about the research activities performed at the Institute of Pharmaceutical Sciences (IPW) or at other institutions and to enquire with the individual lab heads about possible openings.

To learn more about research opportunities at IPW, a dedicated information session will be held in the first week of the autumn semester, during which the IPW research groups will present themselves to the students. In addition, IPW maintains a password-secured internet platform (sharepoint), where external projects are advertised. These are typically external research projects, with preexisting connections between the external group leader and an IPW professor/lecturer (who would take over the role of the official IPW-internal supervisor). Summary of search options:

- Links on the webpages of the individual research groups at the Institute of Pharmaceutical Sciences (IPW) <https://www.chab.ethz.ch/en/research/institutes/IPW/our-research-areas.html>
- Sharepoint: Collection of external project offers: <https://share.sp.ethz.ch/pharma/Students/Forms/AllItems.aspx>
- Research groups at ETH: <https://www.ethz.ch/en/research.html>
- External research institutions or Industry; identified by the student's own web search or personal contacts.
- IPW-internal information session (first week of the autumn semester, details are sent by email).

(2) Application

In a first step, students should directly apply to the head of the research lab they are interested in and ask for approval to join his/her group. They are advised to briefly state their motivation and send their CV along.

(2.1.) Projects carried out within ETH

If the project is carried out in a research group within IPW or at the Center for Radiopharmaceutical Sciences of the Paul Scherrer Institute (PSI), the group leader (typically a professor/lecturer) will automatically also be the official supervisor of the work. Should the student have found a position in another research group within ETH, the corresponding ETH professor can also be the official supervisor. In both cases (i.e. ETH-internal research groups), students can directly proceed to the registration in myStudies (see below).

(2.2.) Projects carried out outside of ETH

Students can perform either the Research Project or the Master's Thesis outside of ETH. For projects carried out outside of ETH, students will need to find an external, local supervisor (typically the professor or lab head of the research group), who commits to supporting them over the duration of the project. Once the project and external supervisor have been identified, students will additionally need to find an official supervisor from within IPW (i.e. a professor/lecturer at IPW).

To find a suitable IPW supervisor, students are requested to write up a short project proposal (not more than one page) summarizing the research topic and question that will be addressed, the methods that will be used, the level/type of supervision that will be provided, and the contact details of the external supervisor (address, affiliation, e-mail, phone number and web-link, if available). This proposal should be submitted to the IPW professor/lecturer whose research area is most closely related to the proposed project, with the request for supervision. It is at the discretion of the IPW professor to accept or reject the request for supervision, depending on his/her workload. Moreover, he/she may reject a proposal if he/she has concerns about the scientific quality, content and methods used, or the level of the proposed project. In such cases, the IPW professor may recommend changes or suggest alternative IPW-internal supervisors.

Once an IPW professor/lecturer has accepted to be the supervisor of a project, he/she will be responsible for the overall quality control of the work performed. This includes the project outline, ensuring that the student receives an adequate level of supervision at the external institution, the quality of the handed-in written report (e.g. requesting revisions, if necessary) and the grading (i.e. entering the grade into the teaching portal "e-Doz").

- If applicable (e.g. for a Research Project carried out in industry), aspects of copyright should be addressed with the external supervisor in advance. The general ETH regulations on copyright of performance assessments (Leistungskontrollenverordnung ETH Zürich) apply.
- If applicable, aspects of confidentiality should be addressed with the external supervisor in advance, and a letter of confidentiality may be signed if needed.

- If problems occur while searching for a project or an internal supervisor, students are advised to consult their tutor or the MSc PharmSciences programme coordinator.

The Master's Thesis generally should not be performed at the same company as an internship. The Director of Studies may approve exceptions on reasoned request.

(3) Registration

Once the project and the supervisor(s) have been defined, students need to register the project in myStudies under "Projects/papers/ theses". Registration is possible as soon as the semester enrolment has been released. The following information will need to be provided: the ETH supervisor, the external supervisor (if applicable), the title of the project (editable) and the starting date. Additionally, the co-supervisor, i.e. the PhD student or Postdoc who will supervise the daily work in the laboratory may be listed. Once submitted, the ETH/IPW supervisor and the study administration will receive automatically sent e-mails asking them to confirm the project. After their confirmation, the registration is completed.

PHASE B: EXECUTION

The organization of the project execution (e.g. working hours, reporting, defining milestones, the time allocated for writing up the report) lies within the responsibility of the group in which the project is performed. In the case of an external project, the official ETH/IPW supervisor determines the level of communication needed between him/her, the student and the co-supervisor. For example, the supervisor may request to receive an interim progress report/update.

PHASE C: COMPLETION

At the end of the Research Project, Practical Methods or Master's Thesis, a written report must be handed in to the ETH/IPW supervisor (at the submission date indicated in myStudies). The supervisor decides if he/she prefers a hardcopy or an electronic version.

Written report

For the writing process (e.g. scientific language, structure of the report, citation rules, generation of figures or tables) students should apply what they learnt in the course "Scientific Writing and Presenting" (offered in the 1st semester of the MSc Pharm. Sciences programme).

Reports typically contain: title page, table of contents, abstract, introduction, aim, materials and methods, results, discussion including conclusions and outlook, references, acknowledgements, appendix (if applicable). The order may slightly differ. Every report at ETH needs to contain a signed declaration of originality (typically last page).

An example of a title page and of the ETH declaration of originality can be found at the end of this document.

Oral presentation

At the end of the Research Project or Master's Thesis students have to give an oral presentation of their work in front of the research group of the ETH/IPW supervisor. In the case of Practical Methods in Pharmaceutical Sciences (which typically accompanies the Scientific Writing and Presenting Course) an oral presentation is also mandatory.

PHASE D: ASSESSMENT

It is the responsibility of the internal supervisor to read and evaluate Practical Methods in Pharmaceutical Sciences, Research Project and Master's Theses.

Practical Methods in Pharmaceutical Sciences and the Research Project are evaluated as "passed" or "failed".

The Master's Thesis is graded. The assessment includes the following 4 categories:

- Quality of the written thesis
- Quality of the oral presentation
- Quality of planning and practical work
- Scientific understanding, independent thinking, dedication to the project

Upon completion students are encouraged to ask their supervisors for feedback regarding their performance.

REGLEMENTARY COURSE DETAILS

Practical Methods in Pharmaceutical Sciences (mandatory)

511-0003-00 8 ECTS credits ca. 240 h/7 weeks

November & December (ideally in the same semester as the Scientific Writing Course) or as convenient.

Needs to be performed at the IPW.

Prerequisites: Students from the ETH BSc Pharmaceutical Sciences: min. 120 credits, 2nd year completed. Other students: completed BSc degree and matriculation in the Master's programme.

Research Project (optional)

511-0004-00 15 ECTS credits minimum 550h/13 weeks

May - July or as convenient

Prerequisite: Practical Methods in Pharmaceutical Sciences passed

Recommendation: Scientific Writing Course completed

Master's Thesis (mandatory)

511-0002-00 30 ECTS credits 26 weeks

(vacation and other short absences incl.)

Time: as convenient

Prerequisites:

- BSc programme completed
- Practical Methods in Pharmaceutical Sciences & Scientific Writing Course completed
- Additional requirements passed
- Crash courses passed

ETH Zurich
Department of Chemistry and Applied Biosciences
Institute of Pharmaceutical Sciences
Master in Pharmaceutical Sciences

[TITLE]

Master's Thesis

In partial fulfilment of the requirements for the Master of Science ETH in
Pharmaceutical Sciences

Submitted by:

[First Name Name]

Supervisor(s):

[(Title) First Name(s) Name]

[Institute or Professorship or Institution]

Co-supervisor:

[(Title) First Name(s) Name]

[Institute or Professorship or Institution]

Zurich, [Month Year]

Declaration of originality

<https://ethz.ch/content/dam/ethz/main/education/rechtliches-abschluesse/leistungskontrollen/declaration-originality.pdf>



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Declaration of originality

The signed declaration of originality is a component of every semester paper, Bachelor's thesis, Master's thesis and any other degree paper undertaken during the course of studies, including the respective electronic versions.

Lecturers may also require a declaration of originality for other written papers compiled for their courses.

I hereby confirm that I am the sole author of the written work here enclosed and that I have compiled it in my own words. Parts excepted are corrections of form and content by the supervisor.

Title of work (in block letters):

Authored by (in block letters):

For papers written by groups the names of all authors are required.

Name(s):

First name(s):

_____	_____
_____	_____
_____	_____
_____	_____

With my signature I confirm that

- I have committed none of the forms of plagiarism described in the ['Citation etiquette'](#) information sheet.
- I have documented all methods, data and processes truthfully.
- I have not manipulated any data.
- I have mentioned all persons who were significant facilitators of the work.

I am aware that the work may be screened electronically for plagiarism.

Place, date

Signature(s)

_____	_____
_____	_____
_____	_____
_____	_____

For papers written by groups the names of all authors are required. Their signatures collectively guarantee the entire content of the written paper.