




Master's Thesis @ BiRC


November 2022

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Master's Thesis in Bioinformatics

In the Master's program in bioinformatics, you must do a 30 ECTS Master's thesis. You must start your 30 ECTS thesis no later than **February 1** (or **September 1**) a year and a half after commencement of your studies (i.e. February 2021 for students admitted in summer 2019, or September 2021 for students admitted in winter 2020). You must complete your thesis (including the exam) no later than **June 30** the same year, if you started on February 1 (or **January 31** the following year, if you started on September 1).

You can read the course description for the MSc thesis project at:

kursuskatalog.au.dk/en/course/114372/Thesis-30-ECTS-Bioinformatics

You can read some general information and advice about Master's thesis work at:

<https://studerende.au.dk/en/studies/subject-portals/bioinformatics/masters-thesis/masters-thesis/>

You can see abstracts of (some) Master's theses from BiRC at:

<https://www.birc.au.dk/~cstorm/birc-msc/birc-msc.html>

Thesis contract

Before you start your thesis, you must make a thesis contract. The thesis contract must be completed and approved by **February 1** (or **September 1**). You can read about how to submit the contract on the above www page. As part of the thesis contract, you must attach a pdf file containing project description, project goals, activity plan, and supervision plan. This is very much like what you have to describe for a Project in Bioinformatics. At BiRC, you should use the following template for this description.

[Problem statement, activity plan, and supervision plan \(template in docx format\)](#)

When formulating the thesis project, you should keep in mind that it should cover 30 ECTS of work, i.e. full-

<https://birc.au.dk/studies/msc-thesis/>

What is a Master's thesis?

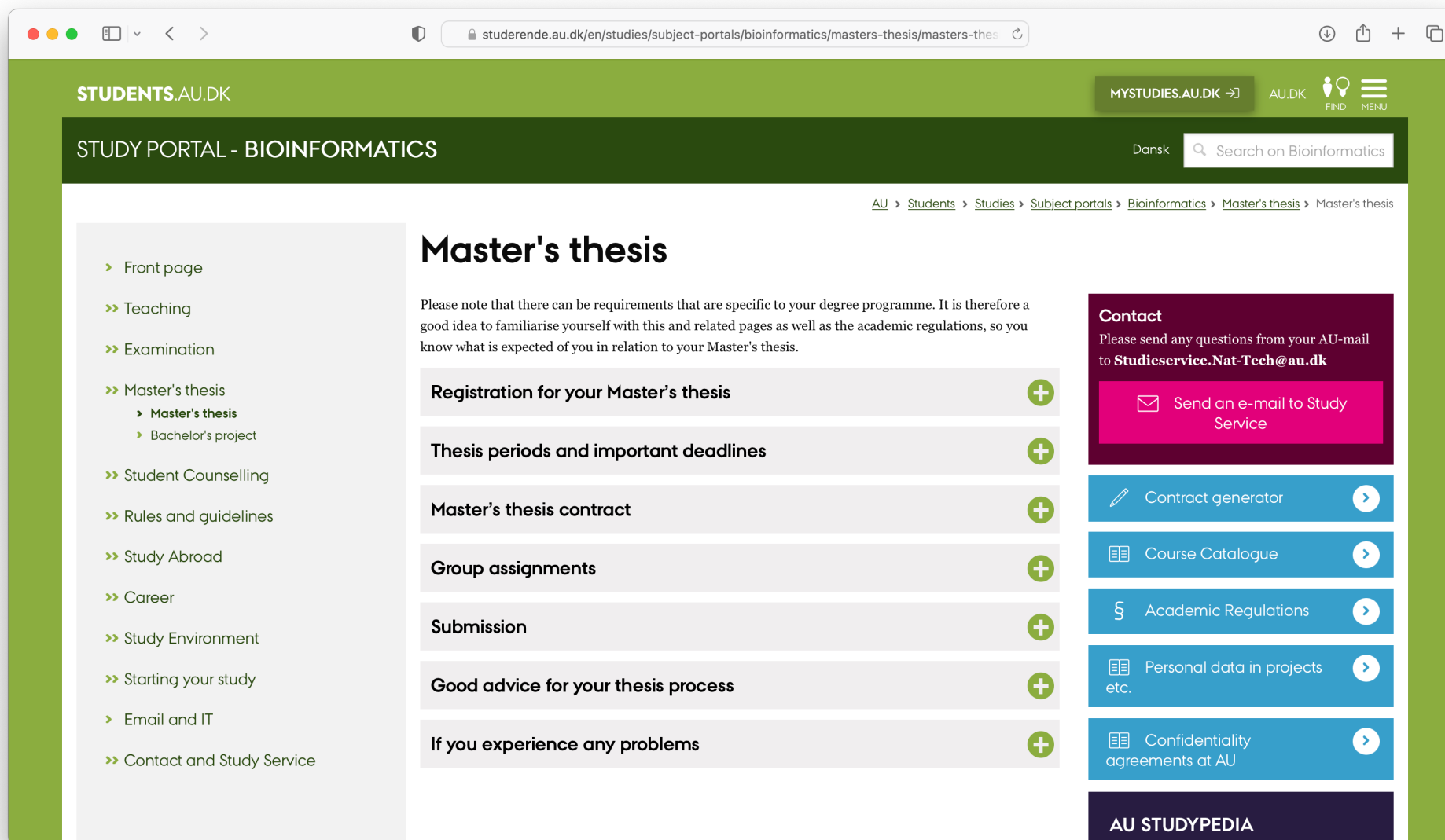
From the general description of an MSc thesis at ST:

Description of qualifications

For the Master's thesis, the student works independently on an academic issue, on completion of which the graduate can:

- identify, define and formulate an academic issue on a scientific basis.
- define and present testable hypotheses within a subject-related topic.
- independently plan and complete a major academic project using the subject's scientific methodology.
- analyse, critically discuss and put into perspective an academic issue.
- assess, critically analyse and summarise the scientific literature within a defined topic area.
- relay academic results objectively and concisely to a scientific audience.

See <https://students.au.dk/> (under bioinformatics "Master's thesis") for general NAT information on how to do this.



<https://studerende.au.dk/en/studies/subject-portals/bioinformatics/masters-thesis/masters-thesis/>

Regarding Group Projects

Group assignments

You have the possibility of doing your Master's thesis as a group assignment together with maximum two of your fellow students.

What is a group Master's thesis?

A group may consist of a maximum of three people.

You can choose between two types of group assignments:

- You can do a joint report in which everyone is equally responsible for all parts of the report. The final grade for each of you will be an overall grade for your individual oral examination and the entire thesis report.
- You can do a report, where it is stated who of you has done the individual parts of the report and is responsible for them. Parts of the report may be produced together. It must be stated in the table of contents who is responsible for the individual parts of the report.

The bibliography of the report can be divided into a common part and a part for each group member. The final grade for each of you will be an overall grade for your individual oral examination, and the individual and common parts of the report.

Regarding Group Projects

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You have the possibility of doing your Master's thesis as a group assignment together with maximum two of your fellow students.

What is a group Master's thesis?

A group may consist of a maximum of three students.

You can choose between

- You can do a joint report and the entire thesis

Working in a group has many benefits. It gives you somebody to discuss all aspects of the project with ...

- You can do a report and is responsible

... but you should know your group members well enough in advance such that you know that you can work together.

parts of the report.
oral examination

parts of the report
r. It must be stated in

the table of contents who is responsible for the individual parts of the report.

The bibliography of the report can be divided into a common part and a part for each group member. The final grade for each of you will be an overall grade for your individual oral examination, and the individual and common parts of the report.

Thesis periods and important deadlines

- You are all doing a **30 ECTS** thesis
- Master's thesis contract must be uploaded **before February 1, 2023**
- Master's thesis project **starts February 1, 2023**
- The exam must be **no later than June 30, 2023**
- Hand in **between June 1 and 15, 2023** depending on exam schedule. Decided by your supervisor
- Handing in late, means failing!

Master's thesis contract

- The contract is done via <https://kontrakt.nattech.au.dk>
- It consists of information (project title, hand in date, ...), and a **more detailed description** that is attached as a pdf-file. At BiRC this description must contain:
 - **Project description:** 12-15 lines describing the overall aim of the project.
 - **Project goals:** A concise presentation of the project goals/objectives.
 - This is like a “PiB contract” that you all know.
- The contract must be done in collaboration with your supervisor. Upon submission it must be approved by your supervisor and me (as head of studies).
- The thesis can be done in a **group of 2-3 students**. If you do this, all group members must make a contract, and the combined amount of work must reflect the group size!

Good advice regarding your thesis process

- Make an early start on your considerations about the thesis
 - Contact potential supervisors (i.e., BiRC researchers) soon!
- Clarify the formal framework of the thesis
 - This is what you do now ;-)
- Ensure a clear match of expectations with your supervisors (and others)
 - See “Good advice regarding your thesis process” on [www](#) page!
 - Remember that your supervisor is expected to spend ~30 hours on supervision (including meetings, exam etc.) while **it is your “full time job” for an entire semester** (30 ECTS \approx 750 hours) to do the thesis. I.e., 45 hours/week for the entire semester, and an additional 120 hours for exam preparation etc.
 - **It is your project.** Your supervisor is there to guide it, not make it!

Hand in and exam

- You must via Digital Exam before the agreed upon submission deadline. The typical length of a report is ~50 pages. Longer if you work in a group.
- Exam is **1 hour** and consists of **30 minutes of presentation** by you, and **30 minutes discussion** with the examiners. The presentation is based on a question that you get **one week before the exam**.
- You get a single grade for the exam which reflects the report (~2/3) and the presentation/discussion (~1/3).
- If you do your project in a group, each group member has an individual exam.

Bits and pieces

- Be careful formulating the project. Keep in mind that being late is not an option!
- Better to formulate a simple, but doable, project that can be extended if you have time, rather than a complicated project that you must reduce at the last minute.
- Do not formulate a project with too many dependencies on other people's input.
- Be realistic when planning, and keep in mind that time wasted early in the thesis project, is time that you will probably need towards the end of the project.
- Implement a work habit that you can sustain for 4 months.
- Identify problems as early as possible. Be honest towards yourself and your supervisor.
- Expect to work hard! Especially towards the end.

Questions?

Possible projects

... “Before you can make a thesis contract, and commence your thesis work, you must (of course) choose a topic and a supervisor. The supervisor must be a tenured researcher associated to BiRC, but you can also have one or more co-supervisors. When choosing a thesis topic, it is a good idea to think about the classes and projects that you have done during your Master’s studies, and what kind of work do you like? **Contact potential supervisors as early as possible to discuss your wishes and ideas. Remember that you are always welcome to come by our offices and discuss. You can also ask potential supervisors for examples of thesis’s that they have supervised in order to get a better idea of how a thesis can look.” ...**

<https://birc.au.dk/studies/msc-thesis/>

Possible projects – Previous years

You can see examples of previous thesis' at:

<https://www.birc.au.dk/~cstorm/birc-msc/birc-msc.html>