For supervisors and examiners of the thesis project (Master’s Project) in Biomedicine

1. Project registration

The student and the supervisor fill out the application form together once they have decided on a project. Use the application form available for download from the course homepage [http://www.med.lu.se/biomedicin/master_programme/master_thesis_in_biomedicine](http://www.med.lu.se/biomedicin/master_programme/master_thesis_in_biomedicine).

The application must be sent by email to the course coordinator Thomas.Hellmark@med.lu.se at least one week prior to the start of the laboratory work or at the date that is posted at the course home page. When the application is approved and registered, you, the student and the examiner will be notified. The student may not under any circumstances start the thesis project before it is registered in LADOK as the student is uninsured until registered.

- Information about the student, the supervisor and the examiner should be stated. The supervisor and the faculty opponent (examiner) must hold a PhD degree.
- Writing the research plan should be done by the student, as this is one part of the examination.
- Thesis projects finish at the end of the semester. If other end dates are considered the student must discuss them with the course coordinator before submission of the application.
- Applications include a short description of the project under the following headings: Hypothesis, Background, Experimental design, Methods, Ethical consideration and health hazards and a Time schedule. The project description should be written in English.
- Should the project include experiments which require an ethical permit the permit must be at hand before the project starts.
- Should the project include animal testing you must inquire what is applicable for the student regarding the new rules for 2013. If the student has taken the course Animal Experimental Models in Biomedical Research (BIMM17) he/she will be well educated regarding animal testing but it is, still, unclear if the course fulfils the new requirements.
- Any questions regarding patents or company secrets which might have an impact on the student’s master’s thesis, regarding both the content and a possible delay of the presentation should be regulated in an agreement. A Standard agreement document can be downloaded from the course homepage. You may if you wish suggest changes in the document but if the contract is to be valid it must be signed by the company, the student and the university (the course coordinator). Without a valid contract the Swedish legislation applies.
- Take your time to discuss the project details and the time schedule with the student in order to avoid misunderstandings that might arise later. Discuss what you expect of the student and what the student expects of you. Identify relevant background literature so that the student already during the first week can prepare himself/herself for the studies. Many students wish to continue with PhD studies after the master’s degree. If you already know that this probably will not be the case you should inform the student at an early stage.
2. Project abroad

There are many opportunities for students who wish to conduct their thesis projects abroad. They can choose a university that the Biomedical Programme has agreements with or a university without agreement. The student should contact the course coordinator for the thesis project and the International coordinators in good time before the departure abroad. If the student performs the project abroad he/she will still be registered at BIMM60 and do the practical works at the host university and in the end the examination of the thesis will take place in Lund. The student is covered by insurances via Lund University.

3. Schedule

The Master’s thesis project is a course and has a schedule. The normal course period coincides with the semester periods: [http://www.med.lu.se/biomedicin/om_biomedicinsk_utbildning/terminstider_semester_periods](http://www.med.lu.se/biomedicin/om_biomedicinsk_utbildning/terminstider_semester_periods).

A normal course period starts in September (autumn semester) and ends around the 20th of January. The spring semester starts around the 20th of January and ends at the beginning of June, i.e. a full semester’s studies. The student has the right to 5 weeks of self studies, which to the main part coincides with the end of the study period. This time is used for report compilation, report writing, literature studies and preparations for the examination (oral presentation, popular science summary and preparations for the critical review of another student’s work). In addition there will be some mandatory elements in presentation skills.

4. Mandatory items

During the semester the student will be given lectures on ethics, popular science writing, writing a scientific paper and opposition. The participation is mandatory. If the student intend to do his/her thesis project at another university or abroad the student must carry out these elements as a home assignment.

5. Tutorial elements for the student. (This concerns students performing their thesis project at Lund University.)

As a course element the student will be trained in practical supervising. The student will receive an introduction and some advice. What concerns you as most as a supervisor is the fact that the student will supervise a high school student from Katedralskolan in Lund during one week in the middle of the semester. It is important that you are prepared for this. The high school students will be handpicked. To be selected they must have shown a great interest for biomedical research. Should problems occur you must contact the course coordinator immediately. The high school students are subject to High School insurances and they are aged 18 or over.

6. The role of the supervisor

The supervisor is responsible for the student’s education during the exam work. This is relevant even if the supervision is delegated to post docs, PhD students or other staff. The supervisor has an important role in educating the student in scientific attitude, knowledge in the field of enquiry, laboratory skills and writing scientifically. The supervisor should ensure that the planned project is feasible to complete within the given time frame, provide enough time to write the report, provide feedback on the final report and fill out the assessment form for supervisors. These responsibilities apply equally to supervisors from Lund University and external supervisors.

The supervisor is responsible for the safety of the project and the student is not permitted in the lab unless a tutor is present. If project involves elements of risk (e.g. working with radio activity and
infectious agents) or animal experiments they must be stated in the application and training will either be provided to the student, or these elements will be carried out by trained staff. The supervisor must contact the course coordinator if problems should occur.

During the project the student is expected to be present at the seminars, lab meetings, literature studies etc. These are important parts of the researcher’s average working day and therefore it is a part of the learning process.

At the end of the course the supervisor shall submit a structured review where the student’s independence should be assessed in terms of laboratory skills and writing of the project plan and of the work itself. This assessment criteria template can be downloaded from: https://dl.dropboxusercontent.com/u/44377668/Supervisor%20assessment%202012.pdf

7. Written report

The written report should be written in English in a clear way. You will find instructions regarding the design in “Instructions to authors” from a scientific journal. You will find one example of instructions to authors for manuscripts for the EMBO Journal here: http://www.nature.com/emboj/about/authors.html. The written report should differ from the scientific publication in two aspects:

- The introduction should be longer to give a relevant background to the thesis project.
- Results that are normally not published in a scientific journal (e.g. trials aiming at optimizing a technique, trials that have failed etc.) can be presented and discussed. This is important if the student has not had enough time to get sufficient results for a proper publication (which is normal). This is important in order to the examiner a possibility to evaluate the extent of the thesis project.

The student can choose to submit the thesis in one of two formats:

1. as a manuscript: In a manuscript; in a manuscript the student gathers the text in the first part of the document (e.g. EMBO J: Title page, Abstract, Introduction, Results, Discussion, Material and methods, etc.) Figures and Tables are attached separately at the end of the manuscript. The student is free to choose the layout of another journal but the student should provide information about what journal he/she has chosen.

2. As a printed paper; you must have the same headings as above but the student can put the figures and tables in the text. The student does not need to use a specific format for the text mass; i.e. double-spaced, 3 cm margins, times 12 pt, etc. This format often looks nicer but is harder to read.

The student may make changes in the manuscript up to the final hand in after the final seminar. The final version will be printed and the student will receive two copies. One copy will be filed at the Biomedicine office.

No later than 5 working days before the examination the student must send an electronic version (word of pdf) of the thesis including the popularized science summary to:

The course coordinator, the biomedicine office, the supervisor, the student opponent and the examiner.
The submission day is provided in the schedule. If the examiner or the student opponent asks for a printed version of the report the student should provide this without delay.

8. Presentation

The thesis project will be presented at a seminar arranged by the programme that also assigns a chairman who is responsible for the examination. At this seminar the supervisor, the examiner, the student opponent and the chairman must be present. The student has approximately 25-30 minutes to present his/her project orally, followed by a student opposition (about 5 minutes). Then the examiner discusses the thesis with the student for approximately 20-25 minutes. At the end of the discussion the audience is invited to pose questions. The presentation must be in English.

The chairman will assess the student opponent and the examiner the oral presentation, the written report and the popular scientific summary using the assessment form.

When the examination is over the chairman collects the assessment forms from the supervisor and the examiner. The chairman, the examiner and the supervisor will then discuss, based on these assessments, what the student needs to correct, change or supplement before the report can pass. If judged incomplete, any supplementary work will be agreed between the student, the supervisor and the examiner in the presence of the chairman.

The student will thereafter make the changes required and send in the final version of the written report including the popularized scientific summary in a pdf file as a single-spaced document with the popular scientific summary attached as the final page to the course coordinator that will finally approve the report. The popular scientific summary may be written in Swedish or in English.

9. Grading:

Pass or Fail.

10. To pass the exam the student need to have:

- Written a project plan with little or some help from the supervisor – passed by the course coordinator.
- Been a tutor for a student in the lab – passed by the course coordinator.
- Performed the laboratory work in an independent way, and contributed to the project by interpreting data and/or suggesting additional relevant experiments – assessed by the supervisor and passed by the course coordinator.
- Performed an oral presentation of the project – assessed by the examiner.
- A written report in English in the layout of a scientific article - assessed by the examiner and passed by the course coordinator.
- Been a student opponent – assessed by the chairman.
- Written a popularized science summary in English or Swedish – passed by the course coordinator.
- Participate in the mandatory lectures.
11. Compensation

Supervisors and examiners employed at Lund University receive compensation from the Biomedical Programme. Supervisors from other universities or companies will not be compensated.

Supervisor: SEK 10 000
Examiner: SEK 2 000