

## GSLS Guidelines and Advice for Research Projects & Writing Assignments

All physical activities regarding Research Projects in UU buildings are suspended until at least **June 1, 2020**. In line with the UU policy, the physical activities for all projects in buildings of the UMC Utrecht, Hubrecht Institute, and Princess Maxima Center are also suspended till June 1, 2020. For research projects at external institutes or companies: you should follow the policy of the institution or company where you are doing your project. You can contact your local supervisor in order to be informed about the policy. If you are unable to come to an agreement with the host institute, you should discuss it with your UU/UMCU examiner and contact the research project coordinator.

Should the institute (external or UU/UMCU-related institutes) open before June 1, 2020 AND you and your supervisor agree that it is safe to start again, you should notify the research project coordinator.

### 1. Writing Assignments

Writing assignments can start or will continue from home, using online communication with the supervisor/examiner.

If you have a **medical examiner/supervisor** who is now too busy, you are allowed to change examiner, supervisor or even research topic. The request should be submitted to the Board of Examiners (following the procedure in the [study guide](#)) with the approval of (at least) your programme (or track) coordinator and the new examiner. The Board of Examiners will prioritize these requests.

Should the current COVID-19 situation affect (the duration of) the writing assignment in any other way, please contact the Research Project Coordinator.

### 2. Research Projects

As the Graduate School of Life Sciences, our first priority is to keep our students, teachers and examiners and our society healthy by adhering to government regulations. Right after that, we aim to limit study delay as much as possible while still fully achieving the [learning goals](#) of the Master's Degree and the Research Projects (EER, Article 3.1).

The key principle is that students need to fully achieve the [learning outcomes](#). For that, you need a minimum of at least 7 months of practical work during your GSLS Master's degree.

We have developed advice for **three possible scenarios** relating to the timing of the research project. The status of Major and Minor Research Projects are divided in three situations (of 3 or 2 months each, respectively) to indicate where you are in your project. You should objectively see in which category you fall.

At the bottom of each table, there is information about who to contact in every specific situation. You are encouraged to discuss the changes with your programme (or track) coordinator. If you need help with your individual strategy, you can contact the research project coordinator (RPC).

You are in the following stage of the project:

**Beginning (first 2 or 3 months):** You have not collected much data yet.

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| <b>Within the research project</b>  | Working on the introduction: diving into the literature of the research field and writing an extensive introduction on the topic.   |
|   | Planning of future experiments and analysis of the possible outcomes.   |
|   | Filling a part of the research project with theoretical components: alternatives below in 2.1 (reproducibility assignment, research proposal, etc.).                          |
| <b>Outside the research project</b>   | Pausing the research project to take courses, start the writing assignment or a theoretical mini-project in electives (see 2.2).  |
| <b>Changes in the number of credits</b>   | If you had extended the project with extra credits in electives: option of removing them and use them for courses or a mini-project that can take place during the closedown. |
| <p>⇒ For advices under '<b>within the project</b>', you only need to consult the examiner and (if applicable) supervisor. Together with the assessment form, the examiner should include a statement about the now present theoretical component(s) and the duration of practical work during the project.</p> <p>⇒ For advices '<b>outside the project</b>', you need to consult your examiner, supervisor and programme (or track) coordinator.</p> <p>⇒ For <b>changes in the number of credits, new projects or change of supervisor/topic</b>, you should first consult your programme (or track) coordinator and subsequently ask the Board of Examiners for approval.</p> <p>⇒ For all other questions and in case of exceeding the maximal duration, you need to inform the Research Project Coordinator (<a href="#">study guide</a>).</p> |   |

**Middle part:** You have already some data and can work on that.

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| <b>Within the research project</b>   | Analysis of the data.   |
|  | Working on the introduction: diving into the literature of the research field and writing an extensive introduction on the topic.   |
|  | Planning of future experiments and analysis of the possible outcomes.   |
|  | Working on a mid-term report and presentation (using the results up to now)   |
|  | Filling a part of the research project with theoretical components: alternatives below in 2.1 (reproducibility assignment, research proposal, etc.).  |
| <b>Outside the research project</b>  | Pausing the research project to take courses, start the writing assignment or a theoretical mini-project in electives (see 2.2)   |
| <b>Changes in the number of credits</b>  | If you had extended the project with extra credits in electives: option of removing them and use them for courses or a mini-project that can take place during the closedown.                                     |
|  | If you are doing your major research project: consider shortening it to a minor research project and finishing the report (the credits left can be spend on courses or mini-projects – see rules in section 2.3). |
| <p>⇒ For advices under '<b>within your project</b>', you only need to consult the examiner and (if applicable) supervisor. Together with the assessment form, the examiner</p> |   |

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| <p>should include a statement about the now present theoretical component(s) and the duration of practical work during the project.</p> <p>⇒ For advices '<b>outside the project</b>', you need to consult your examiner, supervisor and programme (or track) coordinator.</p> <p>⇒ For <b>changes in number of credits, new projects</b> or <b>change of supervisor/topic</b>, you should first consult your programme (or track) coordinator and subsequently ask the Board of Examiners for approval.</p> <p>⇒ For all other questions and in case of exceeding the maximal duration, you needs to inform the Research Project Coordinator (<a href="#">study guide</a>).</p> |
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**End part of the project (last 2 or 3 months):** You have collected most of the data.

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| <b>Within the research project</b>  | Analysis of the data.   |
|   | Writing the final report: writing of a longer literature-supported introduction exploring what is known in the field.   |
|   | Preparing the final presentation: if urgent to finish the Master's degree, you will discuss the possibility of scheduling an online presentation with the research group.   |
| <b>Changes in the number of credits</b>   | If you are doing your major research project: consider shortening it to a minor research project and finishing the report (the credits left can be spend on courses or mini-projects – see rules in section 2.3). |
| <p>⇒ For advices under '<b>within your project</b>', you only need to consult the examiner and (if applicable) supervisor. Together with the assessment form, the examiner should include a statement about the now present theoretical component(s) and the duration of practical work during the project.</p> <p>⇒ For <b>changes in number of credits, new projects</b> or <b>change of supervisor/topic</b>, you should first consult with your programme (or track) coordinator and subsequently ask the Board of Examiners for approval.</p> <p>⇒ For all other questions and in case of exceeding the maximal duration, you need to inform the Research Project Coordinator (<a href="#">study guide</a>).</p> |   |

### New Research Project applications

You can still apply for a Research Project. The applications for research projects be reviewed by the Board of Examiners as usual. Please, discuss with your examiner the initial plan so your project can have a smooth start with theoretical components. This will give you important insights in the Research Project and will shape it beforehand until the physical activities are resumed.

### Disclaimer

Some Master's programmes have different curriculum or a more fixed programme structure and not all the measures in this document apply. You can check the information in the [EER](#) and contact your Programme Coordinator if you have any doubts.

### When delay is inevitable

The Executive Board of the UU is working on a separate Financial support scheme in cases of circumstances beyond one's control. This concerns financial compensation for study delay as a result of the measures taken regarding the COVID-19 virus (more info [here](#)).

Central to this financial support scheme is that you cannot limit or prevent the study delay by participating in alternative study activities, or by following other study components. The GSLS

strategy gives alternatives to circumvent most of the possibly incurred delays. However, in some situations the study delay will still occur, caused by circumstances beyond one's control as a result of an emergency situation. Delay compensation will NOT be provided when it happens as a result of the student's own choice. If you are in doubt about your options or require an individual strategy to prevent delay, please contact your [Research Project Coordinator](#) or [Academic Counsellor](#).

## **2.1 Options to increase the theoretical component WITHIN the Research Project**

You need to work from home for a longer time period. You can consider increasing the theoretical part of your research project, in consultation with your examiner (and supervisor) as long as the requirement of minimal 7 months of practical work is met throughout your whole Master's Degree. The following assignments can be used and will be explained below in more detail:

- 1) Open science: 'reproducibility crisis' (2-3 weeks)
- 2) Research Proposal on your research project (5 weeks)
- 3) Science & Society: Scientific Outreach (2-3 weeks)
- 4) Other possibilities (in consult with the examiner and programme coordinator and subsequently ask the approval of the Board of Examiners)

### **1) Open science: 'reproducibility crisis'**

Aim & learning outcomes: critical eye on research documentation and extra-experience for writing your own paper.

Open science includes scientific knowledge being more accessible, reproducible and transparent. Ensuring your research is reproducible can be a difficult task. But there are tools, habits, and skills that can help you make your work reproducible, that increase the efficiency of your workflow, and/or the confidence that others have in your project.

More than two-third of the researchers have tried and failed to reproduce another scientists experiment ([check paper](#)). One of the reasons for that is that the transparency of used methods by researchers hardly meets the standard of method recording. When browsing through Method sections of scientific papers, you will find that there is huge variability in the amount of Method details provided and the level of detail can be frustratingly low (even for high-impact journals like *Science*). So even if you would want to replicate such a published experiment, the lacking Method details does not provide you the right information to do so. This is not the science we love and, in general, it is definitely not how science should be practiced.

Find a scientific paper in your field that uses techniques similar to what your own lab does (it could be a paper from the own lab but preferably an external one). After exhaustive reading and understanding of the article, you are asked to reproduce the three main experiments of the paper. Without access to the lab, you should plan every experiment, including every calculation, buffers that should be used, how did you prepare them, material required, etc. All the information should be reported in a lab journal as if you were to perform such experiments. As an outcome of your experiments, other than data (because the experiments cannot be performed), you should write a short report about the degree of completion of the Methods section of the paper chosen. If applicable, point out the information that you were missing and if/why the experiment can/cannot be reproduced in

the exact conditions. Apply these findings when you are writing your own report/paper and be as critical with your own Methods section.

You should discuss with your supervisor if you agree with this assignment since they will be the ones assessing it as part of your research project as a whole.

## **2) Write a Research Proposal within your Research Project**

*The Board of Examiners temporary allows the research proposal to replace part of the practical work of the research project. You will still have to do a separate Writing Assignment – in that case, a literature review – as part of your Master's if you have not done it yet; If you already did a Research Proposal Writing Assignment, you will be allowed to do a second one in your Research Project.*

Aim & learning outcomes: designing a research plan, discussing the possible outcomes and the importance of the given research from a social perspective, why should this be funded and not some other project? How would the world profit from your research?

The research proposal is an application for research funding for a PhD position. Writing successful research proposals is a long process that begins with an idea. You will be using adapted version of the NWO Open Competition Domain Science – KLEIN-1 which is intended for a group leader who applies for a PhD student to do a four-year research project. This grant gives room to describe the scientific proposal and to put it in perspective from a broader scientific and societal perspective. Please, download the template from the [study guide](#).

The rubric for the assessment of the Research Proposal can also be found in the [study guide](#).

## **3) Science & Society: an article for scientific outreach**

Aim & Learning Outcomes: reflecting on your own research work in Life Sciences from a social perspective. What is the impact of your current of research in the bigger picture? Can you explain the aim and impact of your research to a less expert audience?

Scientific outreach is a great way to gain a deeper understanding of science and its applications, and develop valuable communication skills. Using your own research write an article directed to a broad audience about the impact of this research in society. If your results are not relevant/sufficient yet, you can choose a recent paper from your research group, An example of this is [News & Views](#) (in the scientific journal Nature) on-specialist readers about new scientific advances, as reported in recently published papers (in Nature and elsewhere). News & Views articles are short (usually 800–900 words), and have as much in common with journalistic news reports as the formal scientific literature. You should therefore make clear the advance being discussed, and communicate a sense of excitement, yet provide a critical evaluation of the research concerned. Guidelines can be found [here](#).

## **2.2 Alternatives OUTSIDE the Research Project**

You can consider to pause your Research Project in order to do other education that does continue:

### **1) Start your Writing Assignment.**

In this exceptional situation, the Board of Examiners (BoE) will allow that the examiner of your research project is the same examiner of your writing assignment, provided that the second research project will be supervised by another examiner. The topic should be different from your research project and you should send a statement of

your examiner that this is the case along with your application for the Writing Assignment to the BoE.

- 2) Take time for **courses** (if the admission period is already closed, please email the course coordinator. If there are still places available, you will still be allowed to enter the course after being registered by the Master's Administration Office).
- 3) Start a (theoretical) **mini-project in electives**. These are some of the options that you can consider:
  - a. Study on a specific topic with oral exam
  - b. Essay
  - c. Data analysis (with an existing data-set) including writing of a reportThe possibilities are not limited to these options. Consult your examiner or programme coordinator about possible mini-projects, and ask for approval of the Board of Examiners via the general application form.

### **2.3 Changes in the number of credits**

#### **1) Removing the credits used for the extension**

If you have extended your project with extra credits in electives, you have the option to remove these additional credits and use them for courses or a mini-project in electives, that can take place remote.

#### **2) Changing your Major into Minor Research Project**

If you are in the second half of your Major Research Project you might be able to meet the learning outcomes and practical work required for a Minor Research Project. In that case, you may consider changing the Major Research Project into a Minor Research Project in order to finish the current project with the results available, write the final report and prepare the final presentation. Discuss this with your supervisor and programme (or track) coordinator first.

Please, keep in mind that you still have to do a Major Research Project as part of your Master's Degree. Exceptions to this rule (e.g. you were planning on doing a profile or a Minor abroad) should be requested to the Board of Examiners.