



RESEARCH PROJECT INFORMATION FOR SUPERVISORS & EXAMINERS

The entire approval and assessment procedure is processed via the personal project page of the student in DataNose. We kindly request supervisors and examiners to study the following information so that they are aware of the procedures and responsibilities. All documents referred to (*Research proposal format, Author guidelines*, and assessment forms) can be found online at the [CLHC website](#). An overview of the assessment procedures can be found at page 7.

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CONTACT INFORMATION

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RESEARCH PROJECT

The Research Project is a mandatory part of the Master Forensic Science and is scheduled for 36 European Credits (6 months). Students are required to complete a research project in which they address a scientific question that is relevant to forensic science and to the forensic community.

The Research Project covers practical work as well as a research proposal and a scientific article written in the English language, and a defence of the thesis during a 20-25min presentation before peers.

OBJECTIVE OF THE RESEARCH PROJECT

The Research Project provides students with first-hand experience in working with established scientists during a prolonged period of time. The objective of a research project is to give the student an opportunity to acquire practical experience with empirical scientific research methods and to learn to work independently. In addition, the student gets an impression of the job opportunities in the field and to develop their ambitions. Students will use, and develop, the skills acquired during the master's programme while exploring an academic research question and developing a scientific approach in addressing it.

After completion of the research project, the student is able to:

1. formulate a sound and innovative research question for a forensic science topic based on state-of-the-art insights in scientific literature
2. write a detailed research plan including an experimental design and hypotheses on a forensic science topic in the form of a scientific research proposal
3. conduct scientific research independently by carrying out experiments to accumulate robust and repeatable data
4. plan independently, set and meet deadlines and realise the deadlines to finish a research project on a forensic science topic in an agreed time-frame
5. process and statistically analyse the data and critically evaluate the results obtained in relation to the applied research methodology

6. test and evaluate hypotheses with respect to a forensic science research question on the basis of the findings
7. recommend future research to further advance the knowledge and understanding of a forensic science topic
8. advise on how to apply and implement the findings of a research project in forensic practice
9. write a consistent, well-structured scientific manuscript in academic English on a forensic science topic on the basis of the findings of the scientific research
10. present the results of the forensic research project orally to a scientific audience
11. function professionally and collaborate and interact with colleagues in the institute where the scientific research is conducted
12. conduct scientific research that meets generally accepted scientific integrity standards

ROLE OF THE SUPERVISOR

The supervisor is the first point of contact for the student for questions regarding the project. The supervisor is a scientist (PhD candidate or academic staff member) or a forensic expert at the Faculty, institute, or company where the research project takes place.

Supervision during a research project should be well-structured. A supervisor is expected to teach students any techniques needed for the research project. Also, the supervisor should give feedback to the student about their professional skills and attitude. During the research project the supervisor should be available to discuss problems within a reasonable time. Daily (informal) discussion is not unusual and progress meetings take place regularly (weekly/monthly). A supervisor should ensure that there is always somebody available for urgent questions.

The supervisor supports the student in writing the research proposal and scientific article at the (respectively) beginning and end of the project, by giving feedback on drafts, never by re-writing or editing. In case the supervisor is not familiar with writing and reviewing research proposals and/or scientific articles, there should be a second supervisor involved whom can support the student with the writing assignments.

The supervisor advises the examiner in the assessment of the research proposal, evaluates the project halfway together with the examiner and the student, and advises the examiner in the assessment of conducting scientific research (including the assessment of the project management skills, performing scientific research, and the professional attitude), the final report and the presentation at the end of the project.

ROLE OF THE EXAMINER

The examiner is a permanent member of staff at the Faculty of Science, or has an appointment as a professor with a special chair or as a full chair professor, at the Faculty of Science, AUMC or NFI. The examiner has a PhD and has a relevant background in forensic science. CLHC coordinators are often examiners. The MFS Examinations Board can make an exception if these criteria are not met, but the examiner in any case needs to have a PhD and a relevant forensic background.

The examiner is appointed by the MFS Examinations Board and in this capacity has the responsibility for the grading process, as well as the mandate to register the different components and the final grade. The examiner is responsible for the assessment of the academic level of the research project.

The examiner assesses the research proposal, evaluates the project midterm together with the supervisor and the student, and assesses conducting scientific research (including the assessment of the project management skills, performing scientific research, and the professional attitude), the final report and the presentation at the end of the project. The supervisor advises the examiner in the grading.

Grading procedure

For every grading moment the procedure is as follows: supervisor and examiner first individually review the work using the forms available at the [CLHC website](#). After which they should consult with each other to come to a final grade; the supervisor has an advisory role in this. (If the supervisor is not familiar with the grading form, the examiner should explain the form.) Final assessments will be filled in and registered by the examiner via DataNose using the digital assessment forms.

COMPONENT 1: RESEARCH PROPOSAL (10%)

During the first 4 weeks, a research proposal must be written by the student, with detailed information about the research questions, theoretical background, planned activities, milestones, expected results, etc. Parts of the proposal can be incorporated in the final report, for example the theoretical background is usually an important part of the introduction.

After 4 weeks, the student will upload the research proposal on DataNose. The supervisor and examiner are notified via an automatic email once the student has uploaded the document. The examiner can access the uploaded document online; the supervisor should receive the research proposal from either the student or the examiner.

An important aspect of the research proposal is for the student to receive feedback on the proposal which the student can then implement in the on-going project. Therefore, **the deadline for grading the research proposal is 10 working days.**

The research proposal has to be written using the dedicated template available at the [CLHC website](#). The proposal assessment will be performed by the supervisor and the examiner.

The process is as follows:

First, both the supervisor and examiner individually fill in the [Research proposal assessment form](#) which can be found at the [CLHC website](#) in the form of an Excel file with which the grade can be calculated automatically. Next, the supervisor and examiner will discuss and together will come to a final assessment; the supervisor has an advisory role in this. The assessment of the Research Proposal will be filled in by the examiner via DataNose using a digital assessment form.

WHAT TO DO IF THE PROPOSAL IS INSUFFICIENT?

In order for the student to pass the course, all components and the final grade have to be sufficient, i.e. at least a five and a half. It can occur that the work the student delivers is not of sufficient academic quality. If it turns out that the proposal is not sufficient, the following procedure should be followed:

- the student will be informed that the proposal is not sufficient and will get feedback on how to improve the proposal.
- the student, supervisor, and examiner decide on a new deadline to hand in the improved proposal (max. extension allowed is two weeks after the assessment meeting). In addition, please contact the Research Project coordinator and a revised proposal can be resubmitted to DataNose by the students afterwards (see contact information page 1).
- **NB: The final version will be judged taking into account that the first attempt was not sufficient. The new proposal cannot be graded higher than a 7.0. A 7.0 is only appropriate in the event that the second attempt has remarkably improved the proposal.**

COMPONENT 2: INTERIM ASSESSMENT (0%)

The supervisor and the examiner evaluate the project midterm (after 3 months) together with the student. Therefore, the student either writes a progress report, gives a presentation or uses some other form. The supervisor and examiner should be able to assess the work done so far, the preliminary results, the work planned ahead and if the original set-up and time planning are still realistic or that changes need to be made. This is an important moment during the project; the evaluation should help the student improve the quality and progress of the project.

The student is responsible for submitting the progress report or the presentation slides to the supervisor and examiner and for organising a meeting with the supervisor and examiner (in special cases, e.g. for projects carried out abroad, the contact may occur online). As a preparation for the meeting, both the student (in DataNose) and the supervisor individually fill in the [Interim Assessment form](#). During the meeting, the progress has to be discussed and the online *Interim Assessment form* has to be filled out and signed online by the examiner. The interim assessment is not marked for a grade.

Very important! : The interim assessment is to a large extent the midterm evaluation of the conducting scientific research component, including assessment of the project management skills, performing scientific research, and the professional attitude. If the progress of the project and/or the professional attitude and development of the student raises question marks, this has to be discussed during the interim assessment, giving the student feedback on how this can be improved.

Please note: In case of a progress report, it is not necessary for the student to write a progress report with a perfect lay-out and with perfect sentences. The progress report should give the supervisor and examiner an idea about the status quo of the project. In addition, we strongly advice that the student sketches a rough outline of the final article with bullet points and key words and also present a piece of written work so the supervisor and examiner can assess the quality of the writing.

FINAL ASSESSMENT

The final assessment consists of three components: Conducting scientific research, the final report and the defence.

COMPONENT 3: CONDUCTING SCIENTIFIC RESEARCH (30%)

The conducting scientific research component assesses the student's project management skills (such as time management skills), performing of scientific research (such as problem solving) and professional attitude (such as how the student gives and receives feedback). These aspects are also discussed during the interim assessment. The grade for this part of the RP is determined by the Supervisor and the Examiner but typically the input of the Supervisor is leading based on the experience of working with the student throughout the research project.

COMPONENT 4: FINAL REPORT: SCIENTIFIC ARTICLE (40%)

The final report should be written in academic English in the format and size of a scientific article. The Master Forensic Science uses a specific format that is mandatory for the student to use. The [Author guidelines](#) can be found on the CLHC website. Please review this template.

This template closely resembles the format of the Elsevier journals Forensic Science International, Forensic Science International: Genetics, and Digital Investigation. Information not relevant for the main article (such as sub questions, methods, techniques or results not described in the article) should be added to the appendix or supplementary materials.

Please note: if particular sections are not applicable to a specific forensic field the guideline format can be adapted after discussion with the supervisor.

Very important! : Students are not supposed to copy the exact lay-out of a journal. For example, it is not allowed to copy the main heading which is on the first page at the top of an article and it is not necessary to use two columns of written text. This could cause the impression that it is published work and that could cause copy right issues. Students must use the available template.

COMPONENT 5: DEFENCE (20%)

The defence assesses the student's communication and presentation skills as well as how well the student has grasped the subject. Students have been trained and assessed on their presentation skills extensively throughout the master. In addition, they can visit other Research Project presentations to learn what determines the quality of a defence. Important to note, is the fact that this presentation is aimed at an audience of scientific peers.

The language of the scientific presentation is English. The presentation is open to an audience and will take 20-25 minutes, followed by a public defence of 15 minutes, during which the supervisor, examiner, and other attendees can ask questions.

FINAL ASSESSMENT PROCEDURES

Three weeks before the defence it is recommended that the student shares a concept version with the supervisor to receive final feedback. In case of confidential results, the supervisor should also review the abstract students have to hand in.

At the latest 7 working days before the defence, the student:

- has to submit the final version of the report on DataNose. A check for plagiarism will be done automatically and should be checked by the examiner (access to the plagiarism report is available as a link next to the uploaded thesis). The article must meet scientific integrity standards with respect to referencing to the work of others. Irrespective of the score, the examiner checks if the student has worked according to the academic standards. If after correction of the score (i.e. for short sentences, references, and quotes):
 - a relatively small number of reported matches remains, this can be discussed directly by the examiner with the student as part of the feedback.
 - a significant number of reported matches remain, the examiner informs the student and supervisor and an improved version of the thesis needs to be submitted by the student.
 - The examiner contacts the Research Project coordinator immediately in case of significant scores and when there is a suspicion of deliberate plagiarism and potential fraud. The coordinator will inform the Examinations Board that will assess the case and decide on required measures.
- has to indicate if the report may be viewed publicly in the UvA Dare database. If the student indicates this is allowed, the examiner will automatically receive an email to confirm whether or not it is allowed to make the thesis publicly available. In general MFS RP reports are not made publicly available because of the sensitive nature of the work and to ensure that the work can be used for a scientific publication in a later stage.
- has to submit an abstract of the thesis and upload an accompanying image. This abstract will be used in a research project guide in which upcoming second year students can find previous projects to use for their orientation on research project possibilities. If a thesis is confidential and not to be available publicly, the students has to hand in a public version of the abstract which is suitable for publication.

At the latest 5 working days before the defence, the supervisor and examiner will judge if the report is admissible for graduation (Go/ No-Go moment). The report is not admissible if the grade would be lower than a five and a half; which can be checked with the *Report assessment form*. **The examiner will communicate the decision directly to the student.**

Prior to the defence, the supervisor and examiner both review the report independently. The supervisor and examiner individually fill in the *Report assessment form* which can be found on the CLHC website in the form of an Excel file with which the grade can be calculated automatically. If the supervisor is not familiar with the grading form, the examiner should explain the form.

There is an Excel file available for the conducting scientific research and defence assessment as well. The supervisor also fills in the *Conducting scientific research work form* prior to the defence in order to advise the examiner.

Directly after the defence, the supervisor and examiner will discuss and determine the final grade of the Research Project together taking the research proposal, conducting scientific research, the report, and the defence into account; the supervisor has an advisory role in this. The supervisor and examiner directly after the session or on agreed later point in time provide detailed feedback to the student, explaining the grade and also providing tops and tips so the student can improve his/her knowledge and skills. The supervisor and examiner also ask the student to provide feedback on the process and the supervision. The final assessment will be filled in by the examiner via DataNose using a digital assessment form.

WHAT TO DO IF THE SUPERVISOR OR EXAMINER CAN'T BE PRESENT AT THE DEFENCE?

In exceptional cases, e.g. the supervisor is from abroad or has sudden obligations, the presentation can be done without the supervisor. In that case, the supervisor and examiner should discuss the conducting

scientific research and the report grading beforehand. The examiner will grade the presentation and the final assessment will be filled in by the examiner via DataNose using a digital assessment form. The examiner is advised to have a colleague present during the presentation for professional consultation. The defence cannot continue if the examiner can't be present, because the examiner has the official authority to hand in the final grade. In case the examiner cannot be present the defence has to be rescheduled.

WHAT TO DO IF THE REPORT IS INSUFFICIENT?

In order for the student to pass the course, all components and the final grade have to be sufficient, i.e. at least a five and a half. It can occur that the work the student delivers is not of sufficient academic quality. If it turns out that the final report is still not sufficient 5 days prior to the defence the following procedure should be followed:

- the defence will go ahead and will be graded.
- the conducting scientific research component will be graded.
- the student will be informed that the report is not sufficient and will get feedback on how to improve the report.
- the student, supervisor and examiner decide on a new deadline to hand in the report (max. extension allowed is one month after the original defence date) and inform the coordinator of the Research Project Course (see contact information page 1).
- **NB: The final version will be judged taking into account that the first attempt was not sufficient. The new report cannot be graded higher than a 7.0. A 7.0 is only appropriate in the event that the second attempt has remarkably improved the report.**

Note: If the deadline for writing the final report is exceeded by more than 3 months without prior notice by the student to the programme management, the thesis will be assessed as insufficient.

WHAT TO DO IF THE DEFENCE IS INSUFFICIENT?

In order for the student to pass the course, all components and the final grade have to be sufficient, i.e. at least a five and a half. It can occur that the work the student delivers is not of sufficient academic quality. Although very rare, if it turns out that the final defence is not sufficient the following procedure should be followed:

- the report and conducting scientific research will be graded.
- the student will be informed that the defence is not sufficient and will get feedback on how to improve their presentation skills.
- the student, supervisor and examiner decide on a new date for the defence (max. extension allowed is one month after the original defence date) and inform the coordinator of the Research Project Course (see contact information page 1).
- **NB: The final assessment will be judged taking into account that the first attempt was not sufficient. The new grade cannot be higher than a 7.0. A 7.0 is only appropriate in the event that the second attempt has remarkably improved.**

WHAT TO DO IF THE CONDUCTING SCIENTIFIC RESEARCH IS OR IF SEVERAL COMPONENTS ARE INSUFFICIENT?

In order for the student to pass the course, all components and the final grade have to be sufficient, i.e. at least a five and a half. It can occur that the work the student delivers is not of sufficient academic quality. Although extremely rare, it can happen that the conducting scientific research or that several components turn out to be insufficient at the end of the project. Regarding conducting scientific research, the interim assessment should have given an indication already and the student should have had the opportunity to improve based on the feedback from the interim assessment. Especially if at the end of the project both the conducting scientific research component and the report are still insufficient and the student in general has delivered work of poor academic quality, the most likely outcome will be that the student will have to do a new research project preferably at another department and/or institute. The supervisor and examiner

should inform the student and the coordinator of the Research Project Course as soon as possible if this is the case.

WHAT TO DO IF THE SUPERVISOR AND EXAMINER DISAGREE ABOUT THE GRADING?

In the grading process, the supervisor has an advisory role and the examiner is appointed by the MFS Examinations Board and in this capacity has the responsibility for the grading process, as well as the mandate to register the different components and the final grade. Examiners usually have seen many projects and therefore have a good understanding of the overall academic quality of projects. However, the supervisor has seen the student perform throughout the project on a weekly, sometimes daily basis and the examiner should take this into account. Usually supervisor and examiner are not far apart in terms of the assessment as they are supported by the assessment forms. However, in rare occasions it can occur that supervisor and examiner differ of opinion too much even after consultation with each other and can't come to an agreed upon filled-in assessment form(s). If this is the case, the supervisor and examiner should contact the coordinator of the Research Project Course as soon as possible. The coordinator will try to mediate and find a compromise with respect to the grading. If the mediation is unsuccessful than another examiner will be assigned to review the work and the grading. The views of this second examiner will be binding.

Please note: The entire approval and assessment procedure is processed via the personal project page of the student in DataNose. The electronic system will inform the supervisor and examiner on the progress through automated emails. For every grading moment the procedure is as follows: supervisor and examiner first individually review the work using the forms and formats that can be found online at the [CLHC website](#), after which they should consult with each other to come to a final grade. The supervisor has an advisory role in this. (If the supervisor is not familiar with the grading form, the examiner should explain the form.) Final assessments will be filled in and registered by the examiner via DataNose using digital assessment forms.

NB: In case the supervisor is not familiar with writing and reviewing research proposals and/or scientific articles, there should be a second supervisor involved who supports and evaluates the student with these written assignments.

Milestones	Student	Supervisor (advisory role in grading process)	Examiner (appointed by Examinations Board to assess and register the grades)
Before starting approval procedure	Contacts and discusses with supervisor and examiner about the set-up of the project.		
4 weeks before start (at the latest)	Fills in DataNose Research project Approval form	Are notified via an automatic email after approval by the Research Project coordinator.	
After 4 weeks	Submits Research Proposal in DataNose	Are notified via an automatic email; Review, grade and provide feedback on the Research proposal within 10 working days using the Research Proposal Assessment Form .	
Interim Assessment	Organises an interim assessment meeting with supervisor and examiner Submits Progress report, gives an mid-term presentation, or other form.	Are notified via an automatic email; Evaluate quality and progress of the project; Prior to the meeting the supervisor fills in the Interim Assessment Form . Examiner fills in and signs the Interim Assessment Form at the meeting.	
3 weeks before defence	It is recommended that the student shares a concept version with the supervisor to receive final feedback. In case of confidential results, the supervisor should review the abstract		
7 working days before defence	Submits final report and abstract	Are notified via an automatic email	
5 working days before defence (at the latest)		Advices the examiner whether the report is admissible for completion of the project.	Judges whether the report is admissible for the completion of the project and should confirm if it's a Go or No-go directly to the student.
5 until 0 working days before defence		Reviews final report and fills in the Report and Conducting scientific research Assessment Forms	Reviews final report and fills in the Report Assessment Form . Checks the Turnitin results (e.g. % overlap with other sources)
Defence	Gives final presentation	Determine final grade of the Research Project together using the Research Project Assessment Forms taking the research proposal, conducting scientific research, the report, and the defence into account.	

CALCULATION OF THE FINAL GRADE

All components will be graded on a scale from 1 to 10, with a maximum of one decimal after the point. These grades are used to calculate the final grade. In order to pass the course, all components and the final grade have to be sufficient, i.e. at least a five and a half. When a student has not fulfilled this requirement, the examiner will register the mark 'did not fulfill all requirements' (NAV) whether or not the averaged grade is sufficient.

The components will be weighted as follows:

1. Research proposal (10%)
2. Interim assessment (0%)
3. Conducting scientific research (30%)
4. Report (in the form of a scientific article (40%))
5. Presentation/defence (20%)

RELATION between LEARNING OUTCOMES, ASSESSMENT COMPONENTS and EXIT QUALIFICATIONS of the MASTER

The table of specification (in Dutch toetsmatrijs) displays the relation between the learning outcomes of the course (see page 1), the assessment components of the course (see above) and the exit qualifications (EQ) of the Master's Forensic Science (see below).

Table of specification

Learning Outcome	Components	EQ 1	EQ 2	EQ 3	EQ 4	EQ 5	EQ 6	EQ 7	EQ 8	EQ 9	EQ 10
1	1, 2, 4								x		
2	1				x						
3	2, 3, 4				x						
4	1, 2, 3					x					
5	2, 3, 4				x						
6	2, 3, 4				x						
7	2, 4, 5				x						
8	2, 4, 5								x		
9	4									x	
10	5									x	
11	2, 3					x					
12	2, 3, 4							x			

Exit qualifications of the master

At the end of the study programme, graduates will be able to:

Knowledge and understanding

1. explain the forensic process in detail, including the actors and their roles, and understand the judicial context.
2. describe the most common traces and the corresponding forensic expert areas, the scientific principles of the techniques used in those areas and the appropriate methods for the analysis and interpretation of the data generated.

Applying Knowledge and understanding

3. apply their forensic knowledge to a basic forensic case including the definition of appropriate hypotheses and the use of the Bayesian paradigm for the interpretation of evidence.
4. independently identify relevant forensic issues, to formulate appropriate research questions, to develop an experimental set-up and to design a project plan and implement that plan.
5. work professionally with others in multidisciplinary and multicultural teams in unfamiliar environments related to the field of forensic science.

Making judgements

6. review situations critically and in a systematic way and to draw inferences on the basis of incomplete information while being aware of the limitations of these inferences.
7. assess and interpret the role of forensic science in society and determine the standards that are required for forensic investigations and reflect on associated societal challenges and issues.
8. recognise the forensic relevance and potential of state-of-the-art scientific developments in their science discipline and to integrate these developments to make innovative forensic contributions

Communication

9. communicate findings and conclusions with solid argumentation both orally and through written reports to expert and non-expert audiences in a legal, scientific and broader societal context.

Learning skills

10. independently acquire knowledge, skills and competencies in new situations, to reflect on their contribution and to plan their future professional development accordingly.