FACULTY OF SCIENCE
Master Forensic Science

RESEARCH PROJECT PROTOCOL

Content

1. RESEARCH PROJECT

The research project is a mandatory part of the masters programme in Forensic Science and is scheduled for 36 European Credits (6 months). As entry requirement for starting the research project generally all courses have to be completed, including the Literature Thesis. However, it is allowed to start the project with maximally 6 EC out of Forensic Elective or Specialistation courses still to be completed.

2. OBJECTIVE OF A 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 by empirical scientific research methods and to learn to work independently. In addition, the student gets an impression of the possibilities on the job market after graduation, and has the opportunity to discover gaps in his knowledge or skills and fill these.
The research project will be carried out in a forensic setting, such as a forensic science laboratory, the police, or related organizations, or within the university on a forensic science related topic. Also, students may carry out the research project at an equivalent organization abroad. 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 learning objectives of the research project comprise, that after completion of the research project, the student:

- is able to formulate a clear research question relevant for forensic science and design a plan to answer that question
- is able to develop and validate a hypothesis using the appropriate experimental design
- has thorough/state-of-the-art knowledge in the area of the research project based on the relevant literature
- is able to carry out experiments and accumulate sufficient reliable data
- is able to process (statistics etc.) these data and critically judge the obtained results in relation to the goals and the line of research of which the research project is part
- is able to describe and critically discuss the above activities in a written report, in which the methodology is accounted for and the original phrasing is substantiated
- is able to present and discuss the results to a scientific audience
- is able to function in a professional environment

3. OUTLINE OF A RESEARCH PROJECT

A research project usually begins with a study of the topic. Studying the relevant literature is included in the project time. However, practical work such as laboratory experiments, fieldwork or computer simulations, make up the larger part of a research project. The research project should be completed with a written report on which, generally speaking, about 20% of the time allotted to the research project will be spent. The research project is completed with an oral presentation and a defense.
Research projects can vary enormously. Most students participate in existing projects but some write their own research proposal (plan sufficient time for this!). The intensity of supervision can also vary; it therefore is very important that unambiguous agreements are made between student and supervisor prior to the research project. This research project protocol can act as a guideline when making these agreements.
Examples of previous research projects can be found in the library database of the UvA (http://www.scriptiesonline.uba.uva.nl > advanced search > programme Forensic science).

4. EXAMINER AND SUPERVISOR

In a research project several people are involved, most notably the examiner and the (daily) supervisor.

The *examiner* is responsible for the research project and is a permanent member of staff at the Faculty of Science, or has an appointment as professor with an endowed chair or as part-time professor at the Faculty of Science, or is appointed as an examiner by the examination board. The examiner evaluates the project halfway together with the supervisor and the student. He/she assesses the research project as a member of the assessment committee.

The *supervisor* is the first point of contact for questions regarding the project. He/she is a forensic expert and a permanent member of staff, or a PhD student, at the Faculty, institute or company where the research project takes place. The supervisor supports the student in writing the plan of work at the beginning of the project, evaluates the research project halfway, and finally assesses the project as a member of the assessment committee.

Supervision during a research project should be well structured. A supervisor is expected to teach students any techniques needed for the research project. During the research project the supervisor should be available to discuss problems within a reasonable time. Daily (informal) discussion is not unusual. A supervisor should ensure that there is always somebody available for urgent questions.

5. APPROVAL PROCEDURE

Students should apply to the Examination Board for approval of a research project by filling in two forms.

First of all, the *Research project contract* has to be used to describe the research project; this form should be filled out together with the supervisor. A description and a time-schedule of the research project have to be included, see paragraph 6.

Secondly, the *Request for approval on the master program* has to be filled out, with the courses you have already completed or you are still planning to commence. Both forms can be found in the appendix of this protocol and can be downloaded from the Research Project page at Blackboard.

The student should hand these two forms to the secretary of the Examination Board (see chapter 12 of this protocol for contact details)at least **4 weeks** before the planned starting date. After the project and the master program have been approved by the Examination Board the student will receive the signed forms from the secretary of the Examination Board.

6. DESCRIPTION AND PLANNING OF THE RESEARCH PROJECT

The student should hand in a description of the research subject in consultation with the involved supervisor. This description must contain the following items:

1. Research phrasing (title, hypothesis, (sub-)questions),
2. Methods and materials (specification of research project, the techniques used, which new techniques you will learn),
3. Initial literature,
4. Planning of the research
5. If applicable: fieldwork,
6. Time schedule and planning of activities for the total research period, including report and oral presentation.

7. PLANNING, PROGRESS REPORT AND EVALUATION

After the project has been approved the student starts with the work. **After 2 weeks**, a plan of work has to be written by the student in consultation with the supervisor, with more detailed information about the planned activities, milestones, expected results, etc. This plan has to be sent to the examiner and the secretariat of the IIS.

Halfway, the progress of the project has to be evaluated. Therefore, a progress report related to the project proposal has to be written by the student (approx. 2 pages). The student is responsible for organizing a meeting with the supervisor and examiner (in special cases, e.g. for projects carried out abroad, the contact may occur by mail or phone). During this meeting the progress report has to be discussed and signed by the examiner and the supervisor. Also the evaluation form has to be filled out and signed.

This is an important moment during the project; the evaluation should help the student improve the quality and progress of the project. The evaluation form can be found as appendix to this protocol or can be downloaded from the Research Project Page at Blackboard. The signed progress report together with the signed evaluation form has to be sent to the examiner as well as to the secretariat of the IIS.

8. REPORT WRITING

The report should be written in English. The format, in which the research report is submitted, depends highly on the project itself. In general, you can pursue the following guidelines.

The report should be an account of:

- all the researched (sub)questions arising from the project, including those of which the results failed, or of which the results are irrelevant for the final conclusion,
- all used methods and techniques,
- discussion of all discovered results, including those which are not relevant to the final conclusion
- consulted (cited) literature.

The following information should be stated on the front page of your report:

- title of the research project,
- the number of EC,
- period during which research project was carried out,
- name of student and student ID,
- MSc in Forensic science,
- name of examiner(s)/ supervisor(s),
- name of research institute,
- date.

The following book is used as a standard for writing in science:

Title: 'How to write a successful science thesis: the concise guide for students',
Authors: W.E. Russey, H.F. Ebel, C.Bliefert,
Year: 2006, Publisher: Weinheim:WILEY-VCH
ISBN: 3-527-31298-6 Pb, 978-3-527-31298-6 Pb.

9. ASSESSMENT

Report

The research project will be assessed by the assessment committee, formed by at least 3 persons, i.e. the supervisor, the examiner and a member of the examination board. If the supervisor cannot attend the assessment, he/she should fill in the assessment form and send this to the examiner. On the blackboard site for the MSc Forensic science dates are published to which students can register for their presentation and defense. The student has to arrange the assessment committee.

Three weeks before the defense a draft version of the report has to be sent to the examiner who will then judge if the report is admissible for graduation.

At latest **one week** before the defense, the student:

- has to provide every member of the assessment committee with a final copy of the report, plus a copy of the progress report and the halfway evaluation form.
- has to submit their thesis digitally via the Ephorus tool which checks for plagiarism. You can find the Ephorus tool on the Blackboard Research Project page under "Submit thesis".

Abstract

Students are also required to hand in an abstract of their thesis to be included in the research project guide. This abstract will be used in a research project guide in which coming 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 publicity.

As stated on the assessment form, handing in the abstract is required in order to complete the research project, therefore students are asked to do this before their presentation and handing in the assessment form. A format of the abstract can be found on the research project blackboard site, this format must be used in order to submit the abstract. The student submits the abstract by uploading in to blackboard via the "Submit Abstract" tool on the Blackboard Research Project page.

Presentation

In order to plan a presentation, the students contacts the secretary of the Examination Board (see chapter 12 for contact details) to request the attendance of a member of the examination board. The secretary will then contact the student about a suitable data, time and room.

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 defense of 15 minutes, during which the assessment committee and other attendees can ask questions. Thereafter in 15 minutes the final grade for the research project will be determined by the members of the assessment committee taking the practical work, the report, the presentation and the defense into account. The grade should be stated on the assessment form, and should be explained to the student. If the members of the assessment committee cannot come to a uniform/concise grade, all members write their grades on paper after which the Examination Board will set the final grades.

A form signed by the student and the members of the assessment committee should be dispatched to the IIS secretariat so that the grade awarded to the students can be registered. The final version of the report has to be uploaded (for the procedure see www.student.uva.nl/fs > graduation > getting your diploma).

10. YOUR RIGHTS

Try to solve a complaint or conflict with the person in question, if necessary with the student advisor present as an independent third party. Problems that cannot be solved in this manner may be submitted to the Board of Examiners. Judgments of the Board of Examiners can be appealed at the Examination Appeals Board. The student advisor can help you find your way when serious problems occur.

11. IMPORTANT

On the *Research Project Contract* it is requested to fill in a time schedule for your research project. In practice, it turns out that most students extend the amount of time for the actual research, and do not leave enough time for their report. Students are advised to plan the research project carefully and to stick to the time schedule. Students are advised to make a more detailed plan before starting the practical work, and to discuss this with their supervisor. If this plan is jeopardized by extra work not included in the plan, the student and supervisor should discuss this and come to an agreement. Planning problems may always be discussed with the student advisor.
The maximum period for extending the originally planned deadline is six months. If this period is exceeded, the examiner and supervisor may grade the project as being unsatisfactory.

12. CONTACT

Secretary of the Board of Examiners:

Submit your request:	http://student.uva.nl/fs/contact/examinations-board/examinations-board.html
Name:	Ellen Algera
Email address:	exambfsc-science@uva.nl

Study advisor

Name:	Denise van Wees
Email address:	Studieadviseur-IIS@uva.nl
Phone number:	+31 (0)20 525 5589 +31 (0)20 525 5190
Room number:	C2.118

IIS secretariat

Room	C2.116a

Postal address:	University of Amsterdam Institute of Interdisciplinairy Studies PO box 94224 1090 GE Amsterdam

13. APPENDIX: FORMS BELONGING TO THE RESEARCH PROJECT PROCEDURE

1. Request for approval on the master program
2. Research project contract
3. Planning Research Project
4. Mid-term Evaluation Research Project
5. Assessment Research Project

Request for approval on master program

July 2013

Master Forensic Science

Student's name :..... StudentID : .....

Bachelor background: ..... Cohort : .....

Core Curriculum Forensic Science	EC	Completed	Completion Expected (provide date)
Criminalistics and Analytical Chemistry	6	☐	
Forensic Science – Between Crime Scene and Research	6	☐	
Reasoning and Formal Modelling for Forensic Science	6	☐	
Research Methods	6	☐	
Complex Crime Scenes	6	☐	
Forensic Statistics and DNA-evidence	6	☐	
Criminal Law and Expert Evidence	6	☐	
Chain of Evidence	6	☐	
Policy, Ethics and Media	6	☐	
Literature Thesis Forensic Science	5	☐	
Colloquia Frontiers of Forensic Science	1	☐	
Research Project Forensic Science	36	☐	
Total	96		

Specialization Courses (pre-approved list or approved by the Board of Examiners)*	EC	Completed	Completion Expected (provide date)
		☐	
		☐	
		☐	

(Forensic) Elective courses*	EC	Completed	Completion Expected (provide date)
		☐	
		☐	

* elective and specialisation courses 1st and 2nd year must add up to 24 EC with at least 12 EC specialisation courses and at least 6 EC forensic elective.

signature Examination Board

date: .....

under the conditions that:

I) missing courses are completed conform planning;
II) changes in the program need approval by the examination board

Please scan this form and submit your request at: http://student.uva.nl/fs/contact/examinations-board/examinations-board.html. You can use the scan facilities available at the Science Library, Science Park.

Extracurricular Courses*	EC	Completed	Completion Expected (provide date)
		☐	
		☐	
		☐	
		☐	

*extracurricular courses are not part of your core curriculum. In case you are planning to take extracurricular courses at a different university or faculty, please add all available info on the content of the course(s) on which you have based this exemption request: course description, study guide, etc.

signature Examination Board

Date: .....

Research Project Contract

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1) Personal details

Name : _____ Student ID: _____

Address : _____ Postal code/City : _____

E-mail Address : _____ Phone: _____

Cohort : _____ Bachelor Specialisation : _____

2) Host organization information

Research institute : _____

room nr : _____

Research group : _____

Supervisor : _____

E-mail Address : _____

Examiner : _____

E-mail Address : _____

3) Planning

Starting date : _____ Evaluation date : _____

Interruptions : _____ Final date : _____

Credit points : 36 EC (equivalent to 1008 hours)

Workload : _____ weeks _____hours/week

4) Assessment

Experimental work: process & attitude comprises	40 % of the final grade.
Product: knowledge & reporting comprises	40 % of the final grade.
Presentation & defence comprises	20 % of the final grade.

5) Project proposal

Title research project : _____

_____

Summary (max. 10 lines) : _____

See other side

Project description (maximum 1/2 page, including goal, motivation, relevance for forensic science, a time-table roughly indicating how many weeks are scheduled for preparation, for the actual practical work, and for writing the report):

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6) Signatures

Student	Supervisor	Examiner
date:	date:	date: .....

7) Please scan this form and submit your request at: http://student.uva.nl/fs/contact/examinations-board/examinations-board.html. You may use the scan facilities available at the Science Library and Study Centre, Science Park.

8) Approval

Examination Board

Amsterdam, (date) _____

Planning Research Project
Master Forensic Science

July 2013

Student's name : .....

Student ID : ..... Cohort: .....

Supervisor : ....

Title research project: ....

.....

1) Plan of work
(max 1 page) including activities, resources, timelines, and milestones

See other side

2) Expected results

(max 1 page) including short and long term results, potential problems and pitfalls, manner of publication, target group (scientific paper/poster, oriented towards intelligence, investigation, evidence)

3) Signatures

Student	Supervisor

Date : .....

4) Please scan this form and send it to : studieadviseur-iis@uva.nl. You can use the scan facilities available at the Science Library and Study Centre, at Science Park.

Mid-term Evaluation Research Project

July 2013

Master Forensic Science

Student's name : ..... Student ID: .....
Supervisor : ..... Date: .....
Title research project:..... .....

1 = poor, 2 = sufficient, but needs improvement, 3 = satisfactory, 4 = good,

Experimental work	**supervisor's opinion**				**student's opinion**			
	1	2	3	4	1	2	3	4
1 Use and selection of suitable literature	☐	☐	☐	☐	☐	☐	☐	☐
2 Design of experiments/Use of methods	☐	☐	☐	☐	☐	☐	☐	☐
3 Appropriate processing and interpretation of accumulated data	☐	☐	☐	☐	☐	☐	☐	☐
4 Adequately responding to supervisor's comments /feedback	☐	☐	☐	☐	☐	☐	☐	☐
5 Creating and adjusting a realistic planning	☐	☐	☐	☐	☐	☐	☐	☐
6 Keeping to planning and deadlines	☐	☐	☐	☐	☐	☐	☐	☐
7 Commitment and perseverance	☐	☐	☐	☐	☐	☐	☐	☐
8 Initiative and creativity	☐	☐	☐	☐	☐	☐	☐	☐
9 Independence and learning skills	☐	☐	☐	☐	☐	☐	☐	☐
10 Cooperation	☐	☐	☐	☐	☐	☐	☐	☐
11 Self assessment	☐	☐	☐	☐	☐	☐	☐	☐

Progress report	**supervisor's opinion**				**student's opinion**			
	1	2	3	4	1	2	3	4
1 Clear and relevant formulation of the problem statement and research questions	☐	☐	☐	☐	☐	☐	☐	☐
2 Understanding and reviewing the subject matter	☐	☐	☐	☐	☐	☐	☐	☐
3 Theoretical underpinning	☐	☐	☐	☐	☐	☐	☐	☐
4 Demonstrating forensic relevancy	☐	☐	☐	☐	☐	☐	☐	☐
5 Scientific originality / relevancy	☐	☐	☐	☐	☐	☐	☐	☐
6 Readability/accessibility / use of language in the thesis	☐	☐	☐	☐	☐	☐	☐	☐
7 Structure / composition	☐	☐	☐	☐	☐	☐	☐	☐

Student's opinion about the quality and amount of the supervision of the research					☐	☐	☐	☐
the facilities					☐	☐	☐	☐

	supervisor's opinion				**student's opinion**			
Progress	☐	☐	☐	☐	☐	☐	☐	☐
Progress report	☐	☐	☐	☐	☐	☐	☐	☐
Academic level	☐	☐	☐	☐	☐	☐	☐	☐
Overall assessment	☐	☐	☐	☐	☐	☐	☐	☐

In case of a negative evaluation, please clarify on the back. Also describe the arrangements necessary for improvement.

Will the final date of the research project remain unchanged? Yes / no
If not, please indicate the reason of the delay and the new final date Date .....

Signatures

Student	Supervisor	Examiner

Clarification negative evaluation(s):

Description(s) of arrangements necessary:

Please scan this form and send it to : studieadviseur-iis@uva.nl. You can use the scan facilities available at the Science Library and Study Centre, at Science Park.

Assessment Research Project

July 2013

Master Forensic Science

Student's name	:	Student ID: .....
Title research project	:	
Credits	: ..... EC	
Supervisor	:	email address:.....
Examiner	:	email address:.....
Member examination board	:	

Conditional items research project*

Checked in Ephorus	□ No	□ Yes, score .....%
Content checked for plagiarism	□ No	□ Yes *Content must be checked if score is > 20%*
Abstract submitted in Blackboard	□ No	□ Yes

** If one (or more) of the conditional items are answered with 'no', signature of member of the Examination board cannot be placed and total grade cannot be registered in SIS.*

Explanation of the grading procedure

Usually, the supervisor and examiner discuss the determination of the grade. If the supervisor and examiner are in disagreement about the grading of the research project, the member of the Board of Examiners will have a final vote. In exceptional cases, if the supervisor cannot be present at the presentation, the form needs to be signed by the supervisor in advance and sent to the member of the Examination board.

If each grade is 5.5 or more, the final grade is calculated by weighing the grades conform their weight factors. The final grade must be given in integer (whole) or half points between 6 and 10. Any final grade higher than 7.0 must be motivated. The final grade 5.5 cannot be given. For grading standards see page 3 of this form.

Grade Experimental work: process & attitude (40%)	Grade Product: knowledge & reporting (40%)	Grade Presentation/Defence (20 % of final grade)	Final grade research project

Signatures Date : .....

Student	Supervisor	Examiner	Examination Board

Feedback (any final grade higher than 7.0 must be motivated):

A final assessment discussion will take place between student and assessment committee, in which the strong and weak points of the student's performance are discussed and the overall grades are motivated by the assessment committee. The grading criteria may be used as a guideline of what aspects are generally considered as important in arriving at a final grade.

This form has to be dispatched by the member of the Board of Examiners to the Secretariat of the IIS at the following address:
University of Amsterdam, Science Park 904, C2.116A, 1098 XH Amsterdam

Assessment Research Project – grading criteria

July 2013

Master Forensic Science

Experimental work

1 = poor / 2= moderate / 3 = average / 4 = good / 5 = excellent

Criteria process	1	2	3	4	5
1 Use and selection of suitable literature	☐	☐	☐	☐	☐
2 Design of experiments/Use of methods	☐	☐	☐	☐	☐
3 Appropriate processing and interpretation of accumulated data	☐	☐	☐	☐	☐
4 Adequately responding to supervisor's comments /feedback	☐	☐	☐	☐	☐
5 Creating and adjusting a realistic planning	☐	☐	☐	☐	☐
6 Keeping to planning and deadlines	☐	☐	☐	☐	☐

Criteria attitude	1	2	3	4	5
1 Commitment and perseverance	☐	☐	☐	☐	☐
2 Initiative and creativity	☐	☐	☐	☐	☐
3 Independence and learning skills	☐	☐	☐	☐	☐
4 Cooperation	☐	☐	☐	☐	☐
5 Self-assessment	☐	☐	☐	☐	☐

Product

Criteria knowledge	1	2	3	4	5
1 Formulation of the problem statement and research questions	☐	☐	☐	☐	☐
2 Understanding and reviewing the subject matter	☐	☐	☐	☐	☐
3 Presentation and interpretation of the results	☐	☐	☐	☐	☐
4 Theoretical underpinning	☐	☐	☐	☐	☐
5 Description and motivation of methodology	☐	☐	☐	☐	☐
6 Demonstrating forensic relevance	☐	☐	☐	☐	☐
7 Clarity of conclusions and recommendations	☐	☐	☐	☐	☐
8 Critical reflections on the research performed	☐	☐	☐	☐	☐

Criteria reporting	1	2	3	4	5
1 Readability/accessibility / use of language in the thesis	☐	☐	☐	☐	☐
2 Structure / composition	☐	☐	☐	☐	☐

Presenting

Criteria presenting	1	2	3	4	5
1 Context and content of the subject	☐	☐	☐	☐	☐
2 Media use	☐	☐	☐	☐	☐
3 Quality of narrative style	☐	☐	☐	☐	☐
4 Interaction with the audience	☐	☐	☐	☐	☐
5 Discussion/defence	☐	☐	☐	☐	☐

Qualification standards for grading
Reasons to use in the feedback for understanding the grade.

Grade 4: Safety (procedure) is at risk.

Grade 5: It is reasonable to assume that final level will not be achieved within a considerable period of time.

Grade 6: Research project meets the minimum standards for a master research project:
- There is little creativity, personal or original contribution, or
- The investment in forming ideas is for student and supervisor the same, or
- The student depended on guidance by the supervisor.

Grade 7: Research project meets the minimum standards for a master research project and:
- Personal or original contribution is of value, and
- There is more investment in forming ideas from the student than from the supervisor.
- The student required some guidance by the supervisor.

Grade 8: Research project meets the minimum standards for a master research project and:
- Personal or original contribution is of value, and
- There is a large investment in forming ideas from the student, and
- The level of independence is high, and
- The student required little guidance by the supervisor.

Indications for this level are:
- that the final product is publishable or could be presented at a symposium, or
- that the candidate is suitable for a PhD track.

Grade 9: Research project meets the minimum standards for a master research project and:
- Personal or original contribution is high, and
- Almost all investments in forming ideas are from the student, and
- The level of independence is very high, and
- The student required little or no guidance by the supervisor.

Indications for this level are:
- that the final product is ready to be published, presented at a symposium, or could be nominated for a national prize.
- that the candidate will most likely get accepted for a PhD track.

Grade 10:
Same as grade 9 and the final product can compete with publications of recognized scientists in the field concerned, as evidenced by a publication in a scientific journal with a high impact factor. The thesis is of high importance in the development of the academic field.