



Instruction for
Master degree thesis

Advanced level 30 HEC
Master of Science

Faculty of Forest Sciences
SLU



Instructions for Master Thesis

Anders Alanära

Faculty of forest sciences, SLU
901 83 Umeå

anders.alanara@vfm.slu.se

Contents

Quick reference to “instructions for master thesis”	4
On your own or in a group?	5
Three ways to a master thesis	5
Different types of the master thesis	6
Guidelines for master thesis at SLU	7
Departments rights to examine	7
Course coordinator, examiner and supervisor	8
Course coordinator to a master thesis	8
Examiner	8
Supervisor	8
Second supervisor and external supervisor	9
Assignment, admission and registration	9
Goal with a master thesis	9
Compulsory stages and graduation requirements	10
Grades	10
Decision	10
Grading procedure	10
Literature	11
Expenses	11
Keys or key-card	11
Work plan	11
Title	11
Aim and implementation	11
Agreement between SLU and an external organisation	12
Practical implementation	12
Time plan	12
Contact with supervisor	13
Safety issues (unaccompanied field work, equipment, etc)	13
Field work	13
Laboratory work	13
How to write a scientific paper	13
Completing the master thesis	13
Summary and abstract	14
Preparations for the oral presentation	14
Formalities about the oral presentation	15
Plagiarism	15
How do I avoid the risk of plagiarism?	15
Routines for control of plagiarism	16
What is urkund?	16
Final publication of master thesis	16
Appendix 1. Work Plan for MSc Degree Thesis	17
Appendix 2. Grading criteria's	20

Quick reference to “instructions for master thesis”

§	The Student	The Supervisor, Course coordinator & Examiner
1	Think about ideas of subject and project well ahead. Get in touch with course coordinator at a department or company/organisation outside SLU. Feel free to discuss ideas with teachers you feel confident with.	Course coordinator: discuss the student's ideas; help the student to a suitable company/organisation/department and the best supervisor possible.
2	<u>The student, the supervisor and possible host</u> together identify objectives for the master thesis.	
		<u>Course coordinator</u> arranges examiner
3	<u>The student, the supervisor, course coordinator and possible host</u> together fill in the work plan.	
4		<u>The supervisor</u> informs the examiner. <u>The supervisor and course coordinator</u> approve the work plan. Course coordinator registers the student in LADOK when the work plan is ready.
5	<u>The student</u> fulfills the master thesis according to the work plan and keeps the supervisor informed continuously during the work. <u>The student is responsible for that contact is taken.</u>	<u>The supervisor</u> is available for the student's questions which are answered as soon as possible. <u>The supervisor</u> should take contact with the student in case of missed pre arranged meetings.
6	<u>The student</u> finish the thesis.	<u>The supervisor</u> checks that all comments has been considered and sends the final version of the manuscript to the examiner.
7		<u>The examiner</u> approves the master thesis and grade the performance.
8	<u>The student</u> makes the oral presentation.	<u>The supervisor</u> arranges the oral presentation.
9	The final version of the master thesis is published electronically in EPSILON. The format of the thesis follows the praxis used by the department.	
10		<u>Course coordinator</u> sees to that an approved thesis is registered in LADOK

On your own or in a group?

A master thesis at advanced level, 30 ECTS, at the faculty of forest sciences, SLU Umeå, shall be performed and presented individually. This does not prevent that two or more students can work with the same material, where each of the students has a well defined assignment. The scientific report, i.e. the thesis, shall always be written and presented individually.

Three ways to a master thesis

The three most common ways to a master thesis are:

1. that you yourself identify a subject
2. that departments at the faculty of forest sciences advertise projects suitable for a master thesis
3. that the master thesis is performed in collaboration with a company, authorities or other organizations in the society

- If you yourself would like to identify and influence the choice of subject for your master thesis it is a good idea to start thinking about a project in good time before the planned start. You must also consider if the thesis should be of scientific character or evaluation character (see headline “Different characters of the master thesis”). This process may begin well ahead of time of start of the thesis work, i.e. ½ - 1 year. Try your ideas with a friend or a teacher. Seemingly brilliant ideas can sometimes turn into long and expensive projects and it is not recommended hang on to unrealistic ideas for too long.

- If a department has an idea for a master thesis it is usual that they advertise it on their home page or a notice-board. These ideas can be more or less well defined and are often of scientific character. At times the master thesis can have well defined objectives since it is a part of a bigger research project at the department.

- It is common that a master thesis is performed in cooperation with a company, authorities or other organizations in the society. Also in this case advertising for master students might exist, but you can also bring your ideas and discuss a possible master thesis project. If there is a positive response on your ideas it is recommended that you take contact with a suitable supervisor at a department before your plans has gone too far. Master theses done at companies, authorities or other organizations are often of developing or evaluation character. Inquiry studies, market analysis and study revisions are common as are to draw up special forestry plans for real estates or areas. Worth noting is that external hosts often expect that your thesis is completed within a well defined time. In this case your role is almost as an external consultant and it is important for the reputation of both yourself and the faculty that the host’s expectations are fulfilled. The faculty encourages and supports you to complete the master thesis with an external host. You will develop an understanding for how things work outside the university and valuable contacts are often made. This is also good for the faculty network and the faculty profile.

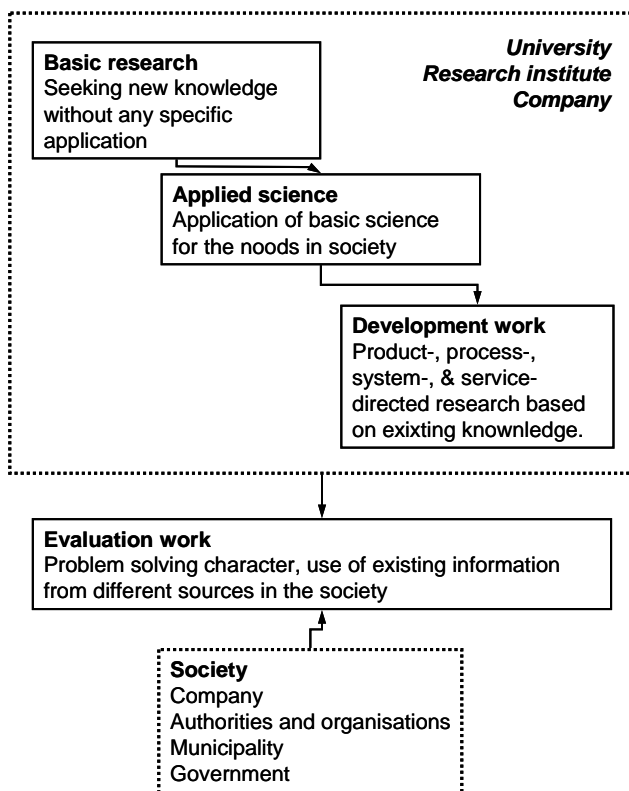
Different types of the master thesis

The character of a master thesis can differ depending on the aim and objectives (see figure down below). Your thesis can have either of the following directions defined within science as (OECD 1970):

1. **basic research** – is characterised by the goal to contribute with new knowledge by systematically testing explicit hypothesis, without being applied to solve a certain problem.
2. **applied research** – is described as systematic work to acquire knowledge to solve a certain problem. This type of research is often based on basic research.
3. **development work** – characterised as activities that systematically use research results and scientific knowledge to create new products, new processes, new systems, new services or considerable improvements of those that already exists.

Beside these three types of thesis there is something that is called **evaluation work**, which is defined as a project with the aim to review and summarise existing information about a question or a problem. This type of work is not considered as research according to the definition above, but the results and conclusions should stand on a scientific base. Evaluation work is not usually done at universities, but more often by companies, authorities and other organizations.

The majority of master theses done at the faculty of forest sciences have the character of *applied research, development work or evaluation work*.



Guidelines for master thesis at SLU

The Rector decided the 18th of June 2007 to stipulate guidelines for master thesis at SLU and these shall be applied completely as from the academic year 2008/09.

The present decision constitutes of common guidelines for independent projects (master thesis) at SLU. The decision clarifies the following:

- Syllabus shall exist for all higher education, including thesis projects.
- A course coordinator shall be present for thesis projects.
- Supervisor and examiner shall not be the same person.
- Academic qualification requirements shall apply to the examiner.
- The thesis project is an important part for fulfilling the graduation goal.
- The responsibility of the university for the implementation of thesis projects shall be more obvious, chiefly through establishment of courses.
- The student shall write a work plan before the thesis project starts.
- All thesis projects that extend at least 15 ECTS shall be examined for plagiarism and be publicised electronically.
- Normally, supervisors can not have the copyright to thesis projects.
- SLU, not the student, have the responsibility for costs during the implementation.

Departments rights to examine

The following table shows departments and the subjects that each department at the faculty of forest sciences has the right to examine.

Departments at the faculty of forest sciences	Subject
Forest Ecology and Management (Umeå)	<ul style="list-style-type: none">• Forest management• Biology• Soil science
Forest Products (Uppsala)	<ul style="list-style-type: none">• Forest management• Economics• Biology
Forest Genetics and Plant Physiology (Umeå)	<ul style="list-style-type: none">• Biology• Forest management (genetics)
Forest Resource Management (Umeå)	<ul style="list-style-type: none">• Forest management
Forest Economics (Umeå)	<ul style="list-style-type: none">• Economics• National economics• Forest management
Southern Swedish Forest Research Centre (Alnarp)	<ul style="list-style-type: none">• Forest management• National economics• Biology
Wildlife, Fish and Environmental Studies (Umeå)	<ul style="list-style-type: none">• Biology

In addition to the departments above there are possibilities to make a master thesis at one of the departments that belonged to the faculty of forest sciences before 2004. At present those departments belong to the faculty of natural resources and agricultural sciences in Uppsala. They have competence in forest science, e.g. forest protection (entomology, mycology & pathology), conservation biology, crop production ecology and bio energy.

Departments at the faculty of natural resources and agricultural sciences	Subject
Ecology	• Biology
Forest soils	• Soil science
Forest mycology and pathology	• Biology
Crop production ecology – subject area broad-leaf cultivation	• Biology
Bio energy	• Forest management

Course coordinator, examiner and supervisor

Course coordinator attends to all formalities regarding the master thesis. All master theses shall have an *examiner* and a *supervisor*. The student always has the right to change examiner or supervisor, even if this includes that another department gets involved. A written request on the change of examiner or supervisor shall be handed to the course coordinator at the department.

Course coordinator to a master thesis

A master thesis is a course to which an accepted syllabus and a course coordinator shall exist. The course coordinator shall help you as a student to find a suitable supervisor and arrange for an examiner. It is the course coordinator (and supervisor) that helps you to write a work plan for the master thesis.

Examiner

The examiner shall work at the course coordinating department at the faculty of forest sciences, SLU. Each department is responsible for arranging examiner in specific subjects. The examiner shall be approved by the faculty board. The examiner shall be a PhD or corresponding in the main subject. The examiner shall not be involved in the practical work of the master thesis, but have a neutral “outside perspective” during the process.

Supervisor

The supervisor, that ought to be a PhD, is usually active at the same department as the examiner, but may work at another department at the faculty. The supervisor shall help the student during the work process according to the work plan. This can be done through pre-arranged appointments or on the student’s request. In any case, the student is responsible for that contact with the supervisor is taken. It is however important for the student with a quick response when help is requested. The supervisor shall, together with

a possible host company, organisation or authorities, see to that the student has access to necessary tools needed to complete the project within the defined time period. The student shall, if there are needs and space, receive a space and computer at the department or at the student places in campus. From the students perspective the supervisor is the most important person during the master thesis work.

Second supervisor and external supervisor

A second supervisor can be arranged for if needed. A second supervisor may be appropriate if some kind of special knowledge is needed for the master thesis. The second supervisor does not have to be a PhD. The second supervisor can work at the department or at another university. An external supervisor is appropriate if the master thesis is done for an external host, company, authorities or other organisations. An external supervisor gives the project higher stability, and the student and supervisor knows who is responsible at the company, authorities or other organisations.

Assignment, admission and registration

The master thesis can be initiated during the whole academic year (autumn, summer or spring term).

To start with, assign to the course “master thesis” at the home page www.studera.nu . You must use the application code for the actual department and subject. Application codes and course curricula are available at www.slu.se click education on the start page and chose courses. If you fulfil the requirements, you will be admitted to the course “master thesis”. Finally, you will be registered on the course when the work plan is finished and approved by the supervisor and course coordinator. The work plan is archived at the department.

Note: If the master thesis project spans over two terms the student shall be re-registered in LADOK.

Goal with a master thesis

Upon completion of the thesis, the student will have:

- used previously acquired knowledge in order to independently solve a problem at advanced level
- a subject-related specialization within the actual field of study
- an in depth scientific understanding of different theoretical and methodological assumptions
- developed scientifically working methods, which includes the ability to discover and formulate a problem, the collection of relevant data and to solve the problem within a given time

- an in-depth ability to communicate scientifically, i.e. being able to write in a correct, well-structured and interesting way, and to orally present the results.

Compulsory stages and graduation requirements

Compulsory stages and graduation requirements are mentioned in the syllabus. Besides possible stages and requirements specifically claimed by the responsible department the faculty of forest sciences have the following general compulsory stages and graduation requirements:

1. You shall accomplish a literature review within the present scientific area in cooperation with your supervisor and possible librarian at one of SLU:s libraries or another library. Extent, thesis character and type of presentation are decided by the examiner.
2. You shall perform an oral presentation of your study at a seminar, in the presence of an adequate audience.
3. You shall write a scientific report (thesis) that is published electronically in EPSILON (electronic publication at SLU).

To graduate, approved requirements according to the above are necessary. The examiner approves the thesis when it fulfils the required scientific and textural level. When all three stages are done and approved you get registered by the course coordinator as “approved” in LADOK.

Grades

Decision

On the 16th of April 2007, the Vice-Chancellor of SLU decided that SLU will use a 4-step grading system from the start of academic year 2008/09. All education at SLU shall be examined according to the scale U-3-4-5, where U represents fail and 5 the highest grade.

Grading procedure

The scientific results of the study are not the primary basis for grading, unless the reason is related to the execution of the work. Independently of the results, the main grading components are the planning, execution and reporting of the work.

The final grade is based on an overall assessment of all learning outcomes. The examiner decides if individual strengths and weaknesses may compensate for each other. To get a grade, all learning outcomes must be fulfilled and approved.

Please find the grading criteria's in appendix 2.

Literature

During your work with the project you will read a considerable amount of literature. A large part of the scientific literature may be found by the internet, without any expenses for the student. Other literature may be needed and could be ordered from libraries in Sweden or out of the country. These kinds of literature may be costly and you ought to discuss the amount of literature needed with your supervisor.

Expenses

Some projects are associated with expenses. For example, it could be travels and accommodation, or certain equipment that is needed for data collection. Larger costs shall therefore be stated and motivated in the work plan. By this, costs are approved by the supervisor and course coordinator.

Keys or key-card

If you need to work within the department areas in the university building after working hours you can obtain a key or a passing card.

Work plan

Before you can begin with your thesis project a work plan shall be drawn up. This shall be approved and signed by the student, the supervisor and the course coordinator at the department (see form for work plan appendix 1). You shall put together a preliminary draft of the work plan and then discuss it with the supervisor and/or the course coordinator and then modify the work plan if necessary. The work plan shall be filed at the department. The student should also keep a copy of the work plan. The work plan contents are:

Title

Preliminary title of the thesis, name on examiner and supervisor, and the departments name and address. Also, your address, tel. nr. and e-mail.

Aim and implementation

As an appendix to the work plan you shall describe the aim with the project and give a short description of the implementation of the project. If the project could be of danger or risk for personal health it shall also be described how safety can be kept at a satisfactory level.

Agreement between SLU and an external organisation

An agreement ought to be written if the master thesis project includes costs/expenses that shall be divided between a department at SLU and an external organisation. An agreement shall also be written if the project (master thesis work) shall be combined with employment by the external organisation. In such case, the time set aside for the actual thesis work (within the employment) shall be defined.

In some cases the external organisation would like that parts of the work or the entire work is confidential. In line with the faculty's syllabus for master thesis projects it is necessary that the thesis is published electronically in EPSILON so that the requirements for graduation are fulfilled. If confidentiality is desired an agreement shall be written and attached to the work plan. The delay can not be longer than 6 months after the approval by the examiner. Under particular circumstances, a delay up to maximum 12 months can be accepted, but requires a decision by the faculty.

Practical implementation

Describe methods and equipment you plan to use. Bring up possible costs/expenses that comes together with the methods you plan to use. It is also important to point out safety aspects of the project and methods. It shall be clearly described how safety is going to be guaranteed.

Time plan

A very important part of the work plan is the time plan. A master thesis project of 30 hp shall correspond to c. 20 weeks of full-time work. It is very common that the student underestimates the time it takes to complete the scientific report (thesis). Down below you find a proposed time plan for a master thesis project. It is not unusual that a project starts during the summer between two terms and that the work continues during the autumn term simultaneously with other education. Even so it is recommended to try to follow the time distribution given in the table down below.

Work phase	Part of available time	
	%	Weeks
Literature search and reviewing	10%	2
Planning of work	10%	2
Collection of data	25%	5
Data analyses and thesis writing	50%	10
Presentation and publication of thesis	5%	1
Sum		20

Contact with supervisor

You shall have regular contact with your supervisor, gladly once a week. Even if you don't have any particular problem with your work it is important that your supervisor gets informed about your work status. Let your supervisor also know how your work follows the work plan.

Remember that as a student you have the right to get good supervision!

Safety issues (unaccompanied field work, equipment, etc)

Field work

It is common that collection of data is done in the field. Safety issues that shall be considered at field work are general risks with working alone and risks related to certain technique or equipment (e.g. electric or motor driven machines).

Laboratory work

SLU has no general rules for laboratory work within education. However, certain rules exist at the different departments. The supervisor is responsible for that information about rules regarding laboratory work is given to the student.

How to write a scientific paper

Scientific papers can be written differently depending on research area and type of publication.

It is strongly recommended that you read a text book about how a scientific paper may be structured and written. A good book that covers this area is – *How to write and publish a scientific paper* – by Robert A. Day. (ISBN 0521365724, ISBN 0521367603 (soft cover)). A short summary of the most important parts of this book can be found in appendix 2.

Completing the master thesis

Your manuscript shall be reviewed by your supervisor several times before it is handed in to the examiner. It is important to work through the manuscript thoroughly before you hand it in for reviewing. Use the spelling-program in your computer. Use double line spacing and page number when you hand it to your supervisor. It is common that the supervisor likes to have the document electronically, and that changes and comments are put directly in the text.

Summary and abstract

The thesis shall contain an abstract that summarise the work. The abstract shall always be placed in the beginning of the thesis, after the title.

Preparations for the oral presentation

The best way to prepare for the oral presentation is to repeat, repeat and repeat again. Try to keep it short, clear and not too complicated. It is good to have your supervisor to listen and give comments. It is also good to rehearse the presentation for a person outside of the project to see if the presentation can be followed by the public.

An oral presentation can be structured in the same way as the written report. There are however some differences:

1. **The time** for the oral presentation is often limited so you need to choose the most important and most interesting things to present. Check the time when you rehearse.
2. Give a good and interesting **background** to the project. This helps the audience to keep their interest during the presentation.
3. You don't need to give a very detailed description of the methods used – take the most important (**material & methods**)
4. You don't need to **refer** to what others have published in the same way as in the written report – focus on your own results.
5. In an oral presentation it is often hard to separate **results and discussion**. When you show a figure or table you can both present the results and discuss what that means.
6. **Figures** are often better to show than tables.
7. **The summary** is often more important in an oral presentation than in a written one – you want the audience to take the message home.
8. Note that there is an **esthetical** aspect in an oral presentation that is very important for the total impression of the presentation.

Feel free to use power-point or other software for your presentation. Think about not to over-do your presentation with colours, sounds or animations.

It is always good to have a manuscript to follow when you present your project!

Formalities about the oral presentation

When the thesis is approved you contact the examiner to decide a date for the oral presentation. The thesis should be printed one week ahead of the presentation date and handed out to the department staff and others that may be interested in listening to the presentation. The number of printed reports is decided together with the supervisor.

An oral presentation of a master thesis at the faculty of forest sciences shall be performed in front of an adequate audience. This means that the majority of the persons in the audience shall have considerable knowledge about the subject. The reason to this is that the audience shall be able to listen critically and give adequate comments on the thesis. The audience is therefore commonly researchers and students at the department, or employees at the company or organisation connected to the project. At presentations outside SLU, the supervisor and examiner should be present at the oral presentation.

Recommended time for the seminar is about 30 min. The seminar should have a chairman that presents the student and the project, and controls the discussion after the presentation. The student should be given the possibility to give the presentation without being interrupted with questions. Questions should be taken after the presentation.

Plagiarism

How do I avoid the risk of plagiarism?

A key to avoid the risk of plagiarism is to refer to all sources of information you retrieve. Below you find a list of sources that must be referred to correctly in your thesis:

- Word or ideas that are presented in an article, book, news paper, TV programme, website, computer programme, letter, or other similar media.
- Information you retrieve by interviews or discussion with other persons, face to face, by phone or in writing. Such sources should be cited as “personal comments”.
- When you copy the whole or parts of a text. Direct citation of a text shall always be surrounded by quotation marks in combination with a reference.
- When you copy diagrams, illustrations, tables, pictures or other visual material. Pictures and illustrations are normally owned by the originator, which means that you need permission to use the material, alternatively by it. Diagram, figures and tables are not allowed to copy, but you can modify the content (redraw) and refer to the source.

As a student, you must be able to guarantee that:

- The thesis is the result of my own work and formulated with my own words, i. e. problem formulation, analyses and conclusion are my own.

- Results and conclusions presented in the thesis are produced for this particular course and have not been used in other approved courses.
- All sources and references used are correctly written in both text and reference list.
- Cited text is correctly reproduced, constitutes only a limited part of the text, and is used to motivate your own statements.
- The work does not contain material that is copied from non designated sources.

Routines for control of plagiarism

Before the thesis is sent in for final publication in EPSILON, the text shall be scanned in “Urkund” for plagiarism. The thesis is normally sent in to Urkund by the course coordinator at the department. If Urkund indicates risk for plagiarism, the course coordinator contacts the supervisor and examiner for discussion.

At doubt of plagiarism, the course coordinator informs the head of the department, who’s decide if the case shall be reported to the Vice-Chancellor of SLU. The Vice-Chancellor decides if the case will go to the board of discipline.

What is urkund?

Urkund is an automatic computer system that has been successfully used at universities all over Europe. The system controls all document against three central sources; Internet, books and articles from publishers, and earlier sent in student thesis.

Final publication of master thesis

In accordance with the vice-chancellor's decision of June the 18th 2007 all undergraduate theses produced at the SLU shall be published electronically in the SLU theses database Epsilon. Please note that this is mandatory. The decision is valid from the autumn semester 2008 and onward.

The publishing in Epsilon is done by the student, or by an administrator at the department - please ask what the procedure is like at your department! The thesis must be uploaded as a single pdf-file, preferably no larger than 5 Mb. Please note that the uploaded file must contain the approved and final version of your thesis!

Find out more at [Publish student thesis in Epsilon](http://epsilon.slu.se/eindex.html) (<http://epsilon.slu.se/eindex.html>), where you will also find links to register and upload your undergraduate thesis.

Appendix 1. Work Plan for MSc Degree Thesis



Swedish University of
Agricultural Sciences

Faculty of Forest Sciences

Work plan for MSc degree thesis

Name:			
Personal code number:		Programme:	
Address:			
Phone:			
E-mail address:			
Course code:		Subject:	
Level: Bachelor <input type="checkbox"/>		Master D <input type="checkbox"/> E <input type="checkbox"/>	
		Extent: 15 HEC <input type="checkbox"/> 30 HEC <input type="checkbox"/> 60 HEC <input type="checkbox"/>	
Kind of degree thesis:			
Basic research <input type="checkbox"/>	Applied research <input type="checkbox"/>	Development work <input type="checkbox"/>	Investigation work <input type="checkbox"/>
Department:			
Supervisor:			
Examiner:			
Assistant supervisor (if any):			
If the assistant supervisor work outside SLU, give name of organisation, address, e-mail and phone:			
Is there an agreement between SLU and external organisation? It could concern finance or secrecy. If there is such an agreement, it must be enclosed to the work plan.		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Preliminary title of degree thesis:			

The aim of the project and a short description of the implementation shall be enclosed to this work plan. If the implementation is associated with risks (i.e. work with motor driven tools, dangerous chemicals or lone work), describe what measures that will be taken to minimize risks.	Yes <input type="checkbox"/>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------

Other information:

Master thesis abroad: Responsible department have signed an insurance for studies abroad at the Swedish Legal, Financial and Administrative Services Agency (Kammarkollegiet) Agreement of exchange _____ Signed by the assistant supervisor at foreign university, company or other institution.	Yes <input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------

Preliminary time table: Start of project (date): Literature search/compilation (no. of weeks): Planning of work (no. of weeks): Collection of data (no. of weeks): Data compilation and report writing (no. of weeks): Final version of the report is handed over to the examiner (date): Approved thesis will be published (date) – in case of delayed publication

Please mark the weeks that will be used for thesis work (30 hp=20 weeks).																											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Responsible teacher certifies that the prerequisites are fulfilled and that the student may be admitted to the course.	Yes <input type="checkbox"/>
------------------------------------------------------------------------------------------------------------------------	------------------------------

The work plan has been established in consultation with and approved by:	
_____ Supervisor	_____ Examiner

Date	Student's signature
------	---------------------

Work plan is approved:	
Date	Course leader signature

When the work plan is approved, the Ladok responsible register on course.	
Accepted in Ladok (date)	By (signature)

Note! Before you start fill in the work plan, it's recommended that you read the instruction for thesis work.

Appendix 2. Grading criteria's



Faculty of forest sciences

Grading criteria's for master thesis 30 HEC

Established by the faculty educational board on the 3rd of June 2008, Umeå. Updated at the faculty educational board meeting on the 15th of June 2009.

Grading criteria's

The scientific results of the study are not the primary basis for grading, unless the reason is related to the execution of the work. Independently of the results, the main grading components are the planning, execution and reporting of the work.

The scope of the master thesis is 30 HEC, which corresponds to one semester or 20 weeks of work. In order to get a higher grade than approved (grade 4 or 5), the faculty forest sciences at SLU have decided that the work can not take longer time than 20 weeks of effective work. Some thesis work needs a field season in the summer when data is collected. In addition, there may be other reasons for why the work is divided up over time and the total time exceeds 20 weeks. The course leader approves exceptions from the 20 weeks rule.

The 20 weeks that are planned to be used for thesis work must be specified in the work plan before the student is registered on the course, as well as the expected date for completion of the thesis and delivery to the examiner (see appendix 1). Normally, the examiner shall not see the thesis before the final version is handed in.

After the delivery of the written thesis, the examiner has 15 workdays to evaluate if all learning outcomes, except the oral presentation, are fulfilled. To evaluate the degree of interdisciplinary depth, a transcript from LADOK has to be enclosed showing all previous courses taken. Before publication in EPSILON, the student can revise the thesis based on the examiners comments. Such revision has, however, no influence on the grade decision.

The oral presentation of the work should be done within three weeks after that all other learning outcomes have been approved.

The students study result shall be reported in LADOK at the latest three (3) workdays after the approval of all learning outcomes and publication in EPSILON. The reporting, however, can take longer time during the period 1 of July to the 15 of August. An exception to the demand on publication in EPSILON can be given if an agreement on secrecy and delayed publication has been established. Such agreement must be attached to the work plan. The delay can not be longer than 6 months after the approval by the examiner. Under particular circumstances, a delay up to maximum 12 months can be accepted, but requires a decision by the faculty.

In order to assess the level of independence in the work, independence in problem formulation and problem solving methods, and also methodology for literature search, the examiner should consult the supervisor and eventual assistant supervisor.

Student who does not fulfil the criteria for approved (grade 3) can within two weeks of time after the announcement of the result correct documented short-comings for a new evaluation. The same rule counts for the oral presentation if not approved. If this time limit is exceeded, only the grade approved (3) can be given.

During the work with the thesis, changes in the time schedule may occur because of different reasons. If such a change will influence the possibility to finish the work within given time, the work plan must be revised and the new plan approved by the course leader.

The final grade is based on an overall assessment of all learning outcomes. The examiner decides if individual strengths and weaknesses may compensate for each other. To get a grade, all learning outcomes must be fulfilled and approved. Below follows a judgement template for grading of learning outcomes.

The student can use previously gained knowledge to independently solve a problem on advanced level.

Grade

Not approved	3	4	5
--------------	---	---	---

Base of judgement

To what extent is the topic chosen connected to previously gained knowledge? Small Large ←-----→
Degree of independence in the accomplishment of the master thesis? Small Large ←-----→

The student can identify a problem, chose a suitable problem solving method, and collect relevant data.

Grade

Not approved	3	4	5
--------------	---	---	---

Base of judgement

Originality in the formulation of problem? Small Large ←-----→
Degree of independence in choice of problem? Small Large ←-----→
Originality in choice of problem solving method? Small Large ←-----→
Degree of independence in choice of problem solving method? Small Large ←-----→
Degree of relevant data collected? Small Large ←-----→

The student can search and collect the literature or other information needed to give the work a scientific perspective.

Grade

Not approved	3	4	5
--------------	---	---	---

Base of judgement

To what extent has a relevant methodology for literature collection been used?	
Small	Large

The student can analyse and discuss collected data on a scientific basis.

Grade

Not approved	3	4	5
--------------	---	---	---

Base of judgement

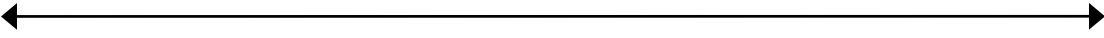
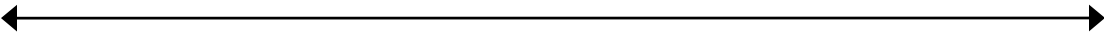
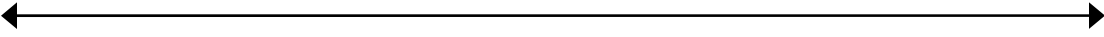
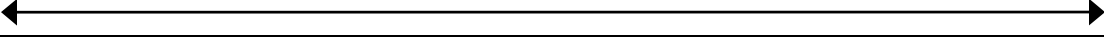
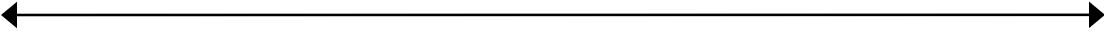

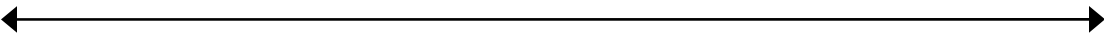
Is analysis correctly chosen and executed?	
Shortcoming	Yes
To what extent are conclusions built on the students own data and other earlier published work?	
Small	Large
To what extent is the students own data discussed in a larger context?	
Small	Large
To what extent is uncertainty in results discussed?	
Shortcoming	Yes
Is the central literature within the field used and correctly referred to?	
Shortcoming	Yes

The student can write a thesis where the study is accounted for in a correct, interesting and linguistically good way.

Grade

Not approved	3	4	5
--------------	---	---	---

Base of judgement

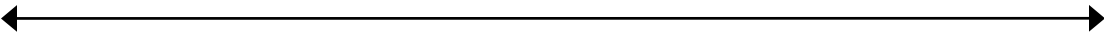
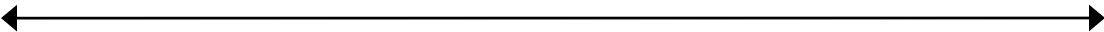




To what extent does the introduction place the subject of the study into a larger context? Small Large		
To what extent is the problem formulation clear and correctly presented? Small Large		
Does the description of material and methods give enough information to recreate the study? Shortcoming Yes		
To what extent are figures and tables clear and possible to understand without any other information than corresponding text? Small Large		
Is the literature list complete? Shortcoming Yes		
To what extent is the text grammatically correct, easy to read and interest evoking? Small Large		
Degree of irrelevant material? Large None		

The student can orally present his/here results in a logic and interesting way with good contact with the auditorium.

Grade

Not approved	3	4	5
--------------	---	---	---

Base of judgement

<p>Has the presentation a clear and logic disposition? Shortcoming</p> <p style="text-align: right;">Yes</p> 
<p>Has a correct and interest evoking introduction to the study been given? Shortcoming</p> <p style="text-align: right;">Yes</p> 
<p>To what extent are figures, tables and pictures understandable and adjusted for the presentation? Small</p> <p style="text-align: right;">Large</p> 
<p>To what extent has the student contact with the audience? Small</p> <p style="text-align: right;">Large</p> 
<p>To what extent are synthesis and conclusions clear and understandable? Small</p> <p style="text-align: right;">Large</p> 
<p>To what extent can the student answer questions and discuss the results? Small</p> <p style="text-align: right;">Large</p> 
<p>Disposition of time? Too short/long</p> <p style="text-align: right;">Good</p> 