

Master Thesis Manual

Econometrics and Management Science

2021-2022

Contents

Contents	2
1. Foreword	3
2. General	4
a. Goals of the thesis	4
b. Starting requirements	4
c. Graduating in two master <i>specialisations</i>	4
d. Graduating in two master <i>programmes</i>	4
e. Combining the thesis with an internship	5
f. Copyright	5
g. Ethical use of data and the General Data Protection Regulation	5
h. Thesis coordinators	5
3. Thesis trajectory and timeline	6
a. Trajectory	6
b. Timeline	6
c. Thesis Workflow	8
d. Delay	8
e. 1 May deadline	8
f. Requesting an extension of the deadline	9
g. Stopping the thesis yourself	9
h. Personal problems	9
4. Formulating a thesis topic and finding a supervisor	10
5. The thesis proposal	11
6. Supervision	12
a. Do's and don'ts	12
b. Problems with your supervisor	13
c. Second assessor	13
7. Writing the thesis	14
a. Language	14
b. Title page	14
c. Referencing	14
d. Plagiarism	14
e. Self-plagiarism	15
f. Formatting + Number of pages	15
g. Programming Code and Appendices	15
8. Handing in the thesis	16
a. Procedure for handing in the thesis	16
b. Defence and graduation	16
c. Defence dates	17
d. Online defence	17
e. Postponing your defence	17
f. Thesis Repository	17
g. Establishment of the grade	18
h. Assessment criteria for the thesis	18
9. More information	19

1. Foreword

The master thesis will be the final work of your master. In the master thesis you show that you are able to independently perform scientific research and can thus truly call yourself a Master of Science!

Read the information in this manual carefully. For further information you can visit the Thesis Hub on Canvas. All the information about writing your thesis at ESE can be found there. You will for example find links to online modules about writing the literature review, formulating research questions, scientific writing, referencing, Matlab, creating figures and tables, and much more. Make sure to follow these modules if your skills in these areas are a bit rusty. Also have a look at the links to various useful online resources, manuals, and the overview of thesis related courses and events.

Communication regarding registration and supervision takes place via Sin-Online, Canvas and your student e-mail. Hence, check these regularly. If you forward your student e-mail to your personal e-mail, make sure that messages from Sin-Online and Canvas do not end up in your spam.

Best of luck with writing your master thesis!

2. General

a. Goals of the thesis

The learning goals of the master thesis are as follows:

- You show that you can formulate a proper research question which can be analysed using your knowledge of econometrics and/or operations research.
- You decide upon the correct data and appropriate methodology to answer the research question.
- You show that you can work independently.
- You apply your econometric and/or operations research knowledge to do proper inference.
- You show you are able to translate the results from your analysis to answer the research question and to report your research in a scientific report and a presentation.

For more information on the assessment criteria of the master thesis, go to the section “Handing in the thesis”. Read the criteria carefully *before* you start writing your thesis.

The focus of the thesis can be either theoretical, where the main contribution is developing new methodology in econometrics or operations research, or empirical, where the added value (mostly) comes from analysing a (new or existing) dataset to address a relevant economic question.

b. Starting requirements

The thesis is written at the end of the master programme and needs to address a topic from your master specialisation. You therefore need to have made sufficient progress in the master programme before you can start writing your thesis. If you still need to finish three or more courses, we strongly recommend to not start with your thesis.

c. Graduating in two master *specialisations*

If you are doing two master specialisations within the same programme you need to write two different theses. This means two different subjects, two different supervisors and two different defences / graduation ceremonies. Each thesis should be worth 16 credits. Keep in mind that if you do two master specialisations, you will nonetheless only get one diploma, as the specialisations are part of the same master programme.

If you choose to do two different master specialisations you need to be aware that after finishing the first master specialisation, you have to pay the high institutional tuition fee for your second master specialisation. You can avoid this by finishing both master specialisations at the same time. In section 8e you can find more information about postponing your defence in case you still need to finish your second specialisation.

d. Graduating in two master *programmes*

If you (plan to) do two different master programmes, for example a master in Econometrics and a master in Law, or a master in Economics and a master in Econometrics, you need to write a separate thesis for each programme. Naturally, you also need to write two theses if you do a master programme at ESE and a master programme outside the EUR.

When doing two different master programmes, you can graduate one programme without having to pay the high institutional tuition fee for the other programme. You do have to make sure that you are enrolled for your second master programme before you graduate the first.

e. Combining the thesis with an internship

You are allowed to write your thesis in combination with an internship at a firm or institution, subject to prior approval by the thesis coordinator. The coordinator will determine whether the proposed research project meets the criteria and learning goals of a regular master thesis. You are responsible for finding a suitable internship yourself. You are also responsible for negotiating the terms of the internship (length, payment) with the firm or institution. More information about internship contracts and agreements can be found on the Internship Hub on Canvas. To access it, go to FEB63017 in Sin-Online and subscribe. The thesis supervisor acts as academic internship supervisor, and monitors the scientific level of the thesis research conducted during the internship.

f. Copyright

As author of the thesis, you in principle have the copyright. This means that you have the right to make the thesis public and to reproduce it. If others would like to use your thesis, they cannot do so without your prior permission.

During the thesis process you collaborate closely with your supervisor. In some cases the supervisor may give suggestions that can be regarded as original ideas that the supervisor may wish to use for future publications. If you would like to use such ideas in your thesis, this might have consequences for the extent to which you are allowed to disclose or distribute the (preliminary) contents of your thesis. In such cases, you need to make further arrangements with your supervisor regarding disclosure and distribution.

In case the supervisor provides you with data or if you collect data in a way suggested by the supervisor, you can only use this data for the purpose of the thesis. You are not allowed to publish the data, make the data available to any third party, or let any third party inspect the data without your supervisor's approval.

g. Ethical use of data and the General Data Protection Regulation

When working with personal data make sure that you handle it with care and comply with the regulations outlined in the General Data Protection Regulation. On the Thesis Hub you can find the guidelines you need to follow when collecting, handling and storing data.

h. Thesis coordinators

Each master specialization has its own thesis coordinator, who plays a key role at the start of the thesis process, in particular related to the approval of your research topic and the appointment of a supervisor, see Section 4. The thesis coordinators also act as contact persons in case you have any questions about the thesis process and procedures.

Master specialisation	Thesis coordinator	E-mail
Quantitative Finance	Dr. R-J. Lange	masterthesis-ql@ese.eur.nl
Business Analytics and Quantitative Marketing	Dr. A. Alfons	masterthesis-baqm@ese.eur.nl
Econometrics	Dr. W. Wang	masterthesis-ect@ese.eur.nl
Operations Research and Quantitative Logistics	Dr. W. van den Heuvel	masterthesis-orql@ese.eur.nl

3. Thesis trajectory and timeline

a. Trajectory

We distinguish the following stages in the thesis process:

1. Getting started: Formulating the thesis topic, and requesting a supervisor;
2. Writing the thesis proposal;
3. Conducting the research and writing the thesis;
4. Approval and submission of the thesis;
5. Defence of the thesis and graduation.

The following sections provide more detailed information about these different stages.

There is a limited number of starting moments for the thesis trajectory, as shown in the table below. The listed starting dates refer to the deadline for submitting the Thesis Topic Approval Request form, as explained in detail in section 4 of this manual. Irrespective of the starting date, the deadline for finishing your thesis is May 1 of the subsequent academic year. Outside the moments listed below it is NOT possible to start your thesis.

You are strongly advised to make use of the first opportunity to start the thesis trajectory in February. Keep in mind that the designated period to work on your thesis is block 4 and 5. Your supervisor's availability outside this period might be limited. Once you have registered, we expect that you are dedicated to your thesis and work hard on it. It is important to make a detailed planning which is approved by your supervisor.

Round	Submission of Topic Approval Request	Deadline
Round 1	Sunday February 27, 2022, 23:59	May 1, 2023
Round 2	Sunday April 17, 2022, 23:59	May 1, 2023
Round 3	Wednesday August 31, 2022, 23:59	May 1, 2023
Round 4	Sunday January 8, 2023, 23:59 (only for students who passed the Case Studies course)	May 1, 2024

b. Timeline

We distinguish three rounds of the thesis trajectory, both with and without an internship. A thesis without an internship takes about 15 weeks to finish. A thesis with an internship takes about six weeks longer. We describe the different rounds below.

Round 1: Standard trajectory, thesis without an internship
In the standard trajectory, you start working on your thesis in the week directly after the final session of your Case Studies seminar, and submit the final version of your thesis in the week of July 1. This is the only trajectory for which we guarantee a defence in the academic year 2021-22. For all other options, we do not give such a guarantee.
To start in this round, you have to submit the thesis approval request via the Thesis Hub latest Sunday February 27. You are notified of the approval decision in the week of March 7. If your topic is approved, you are also informed about your supervisor. Your first meeting with the supervisor takes place in the week of March 21. To finish within the academic year 2021/22 your first draft should be ready in the week of May 30, and the version for the second assessor in the

week of June 13. You can then submit your final version in the week of June 27. These dates are not strict deadlines, but they are target dates. A delay may mean that you cannot graduate in 2021/22.

Round 1: Thesis with an internship

To start in this round, you have to submit the thesis approval request via the Thesis Hub latest Sunday February 27. You are notified of the approval decision in the week of March 7. If your topic is approved, you are also informed about your supervisor. Participating in this round does not require that your internship starts early April; it can also start later in April or May. You schedule your first meeting with the supervisor after the start of the internship. If you start early April, you can target at submitting your first draft in the week of July 11, the version for the second assessor in the week of July 25, and the final version in the week of August 8. Whether this works out depends on the availability of your supervisor and second assessor, which may be limited because of holidays and conferences.

Round 2: Thesis without an internship

This round is meant for students whose topics have not been approved in round 1. You have to submit the thesis approval request via the Thesis Hub latest Sunday April 17. You are notified of the approval decision in the week of April 25. If your topic is approved, you are also informed about your supervisor. Your first meeting with the supervisor takes place in the week of May 2. You can target at submitting your first draft in the week of July 11, the version for the second assessor in the week of July 25, and the final version in the week of August 8. Whether this works out depends on the availability of your supervisor and second assessor, which may be limited because of holidays and conferences.

Round 2: Thesis with an internship

To start in this round, you have to submit the thesis approval request via the Thesis Hub latest Sunday April 18. You are notified of the approval decision in the week of April 25. If your topic is approved, you are also informed about your supervisor. Participating in this round does not require that your internship starts on May 1; it can also start later in May, or by the beginning of June. You can target at finishing your thesis in October 2022.

Round 3: Thesis with or without an internship

This round is meant for students who want to focus on resits first. If you want to use this opportunity, you have to submit the thesis approval request via the Thesis Hub latest August 31. You are notified of the approval decision in or before the week of September 12. If your topic is approved, you are also informed about your supervisor. Since most supervisors have other teaching obligations that take priority, the schedule at the end of this document is highly tentative for this round. Furthermore, be aware that the deadline to hand in the thesis is 1 May 2023, so you will have to get started straight away and work hard to make sure that you finish your thesis before the deadline.

Round 4: Thesis with or without an internship

This round is meant for students who want to follow lectures and concentrate on exams in block 1 and 2. You can only use this opportunity if you have successfully passed your Case Studies course. If you want to use this opportunity, you have to submit the thesis approval request via the Thesis Hub latest Sunday January 8. You are notified of the approval decision in the week of January 16. If your topic is approved, you are also informed about your supervisor. Since most supervisors have other teaching obligations that take priority, the schedule at the end of this document is highly tentative for this round.

c. Thesis Workflow

The thesis process is managed via the Thesis Workflow, the digital thesis guidance and assessment system in Sin-Online. It is used for:

- Registration of theses.
- All communication between you and your supervisor: registration of planning, agreements and interim versions (e-mails and attachments), feedback from your supervisor, milestones reached and confirmed deadlines.
- Handing in of the proposal and thesis.
- Registration of scan on plagiarism.
- Assessment of the thesis and the associated process.

More information about how to work with the Thesis Workflow can be found in the *Thesis Workflow Manual* on the Thesis Hub. It contains step-by-step instructions, including screenshots, regarding the activities mentioned above.

d. Delay

It is possible that you experience delay while writing your thesis. If this happens, take action immediately and discuss with your supervisor how you can get back on track. In case you continue to find it difficult to stick to your planning, talk to the study advisor for advice. More information about graduating within the academic year and what happens in case you cannot hand in your thesis in July, can be found in section 8c.

e. 1 May deadline

If you experience a serious delay, keep in mind that you need to finish your thesis before May 1 of the subsequent academic year. Hence, when you register for your thesis in the academic year 2021-2022, you have to finish your thesis before May 1 2023. If you do not meet this deadline, the Examination Board will stop supervision and you will be awarded the result 'fail'. If this happens, you will need to start over with a new topic and a new supervisor.

The number of times you can start over with your thesis is limited to two times. You should only register for thesis supervision when you can devote sufficient time and energy to your thesis. If you have not finished your thesis after the third attempt, you need to get in touch with a study adviser for a special thesis trajectory.

If you decide to combine your thesis with an internship, keep in mind that the deadline of 1 May 2023 also applies. Hence, make a detailed planning and make sure that you can work regularly on your thesis during your time at the organization.

f. Requesting an extension of the deadline

Personal circumstances that caused a severe delay in writing your thesis are considered when the decision to stop the thesis is made, provided that they are reported on time and that proof is included that the circumstances affected your ability to work on the thesis, such as a doctor's statement. Personal circumstances need to be reported to the study advisers at least **six weeks before** the thesis deadline. Personal circumstances reported after the deadline will not be taken into consideration.

g. Stopping the thesis yourself

In case you already know that you will not be able to hand in the final version of your thesis before the 1 May deadline and you do not have personal circumstances, it might be advisable to stop your thesis yourself. Stopping on time will enable you to participate in the next "supervisor allocation" round of your master specialisation. If you wait till after the supervisor allocation round, all supervisors and students have already been matched and it might be difficult to get a new supervisor. If you would like to stop, report this to your supervisor. Note: be aware that if you stop your thesis yourself you will still receive a "fail" for the thesis in Osiris.

h. Personal problems

In case you experience personal problems that may cause delay of the thesis process, guidance can be given by study advisers, student counsellors or university psychologists. For more information about guidance for personal problems you can contact the study advisers. The study advisers and the university psychologists run a Thesis Group. If you experience difficulties in motivating yourself to work on your thesis, you can participate in one of these groups. For more information about the thesis group given by the study advisers, contact the study advisers or visit an open consultation hour. For more information about the thesis group offered by the university psychologists, see: <https://www.eur.nl/en/education/practical-matters/advice-counselling/workshops/thesis-group>.

4. Formulating a thesis topic and finding a supervisor

In November there will be a kick-off session during which you receive all necessary information about registration and the thesis process. Attendance of the thesis kick-off session is mandatory.

The first step of the thesis process is finding and formulating the topic that you want to investigate. Use the Topic Approval Request (TAR) form on the Thesis Hub on Canvas to describe your topic. You should give a description of the topic you want to investigate, research questions, links to the literature, and a description of the data and methods you intend to use. You should submit the TAR form to the thesis coordinator of your master specialization via the thesis website. After the deadline for each starting moment (see the table in Section 3), the thesis coordinator will evaluate all submitted TARs. The thesis coordinator will decide whether your topic is suitable, that is, whether the topic implies research at the level of the Master programme, and whether the research is feasible (enough data available, methods can solve the problem). If the topic is approved, the thesis coordinator appoints a faculty member to act as supervisor, based on availability and research interests. The thesis coordinator will aim to achieve the best possible match between the thesis' research topic and the supervisor's expertise, taking into account a balanced workload of the supervisors.

There are three ways of finding a topic.

1. The topic follows from the internship that you take.
2. You propose your own topic, based on your own creativity.
3. You apply for one of the topics offered by potential supervisors. These topics are made available via the Thesis Hub in Canvas early in block 3. Potential supervisors indicate an area in which you can do research by a broad description and a couple of key references. You apply for one of these topics by filling in the TAR form, proposing your own research question, and the data and methods you want to apply.
Topics are only made available early in block 3, and have a limited capacity. Topics are withdrawn when the maximum number of students (typically two or three) has been reached.

Once assigned, the supervisor then takes over from the coordinator regarding supervision of the thesis. He or she will supervise you during the writing of the thesis and is the one to turn to for all questions related to the thesis.

5. The thesis proposal

A thesis in Econometrics & Management Science comprises 16 ECTS, with an addition of 4 ECTS for the proposal. The credits for the proposal are listed as FEM21030 Thesis Proposal E&MS. This special treatment of the thesis proposal suggests that this is an important stage of the thesis process. It is!

The thesis proposal should clearly define the research project, how it will be conducted and in what time frame. It provides the structure for the thesis itself, and contains more information and detail than the TAR form. It forms the basis for your cooperation with the supervisor and, in case of an internship, the supervisors at the firm or institution. Its writing takes up the first four to six weeks. Make sure that you invest sufficient time and effort in your proposal, it will make writing your actual thesis much easier!

A proposal typically contains the following elements:

- Definition of the problem/question. What constitutes the problem? Which aspects are important?
- Relevance: Why and for whom is the research interesting and relevant? Is it of scientific relevance, and/or is it of interest for practical applications?
- Literature: What kind of results have been obtained in previous research on this topic? How does the research relate to the existing literature?
- Motivation: Why is the research necessary? Why is the existing knowledge on this topic insufficient? How will the research address these issues?
- Methods: Which (econometric) methods and techniques will be applied in your research? Why are the methods appropriate here?
- Data: What kind of data are needed and available for the research?
- Time frame

The proposal must be approved by the supervisor. Approval implies that the research project has the potential for a good master thesis. The proposal is binding: if you conduct the research as it is laid out in the proposal and the quality is sufficient, the thesis is ready to be submitted and will achieve a satisfactory grade. Of course, deviations from the proposal might turn out to be necessary (because of data quality, unreliable methods, etc.); this is common when conducting original research. Such deviations will be established in mutual consultation between you and your supervisor(s). These deviations should not require a completely new start.

The time frame is an important ingredient of the thesis proposal. It provides an approximate schedule for the work that needs to be done, culminating in a deadline as to when the thesis will be ready to be submitted. The supervisors are available for comments, feedback and help with the thesis during the period in the time frame. After that, supervisors are likely to have other obligations (teaching, research, or supervision of other students), and their availability will be significantly more limited.

The thesis proposal is not graded on a 1 to 10 scale. Instead, the (academic) supervisor gives a pass (approval) status to the proposal. The proposal needs to be approved before the thesis can be completed. The (academic) supervisor sends a form to the exam administration to inform them that the thesis proposal has been approved.

The proposal will be checked for plagiarism. Just as in the thesis, plagiarizing in the proposal is fraud. More information about referencing and plagiarism can be found in chapter 7.

6. Supervision

During the thesis process you are supervised by a faculty member of the Department of Econometrics. You should meet on a regular basis with your supervisor to discuss the progress of your research. In case of an internship, these meetings can take place with only the academic supervisor, with only the external supervisor(s) or with all supervisors. It is advisable to make agreements on the frequency of the meetings with your supervisor(s) and to put these in the proposal.

The list below shows what you can expect from a thesis supervisor:

1. A kick-off meeting to discuss the research plan.
2. A meeting to thoroughly discuss comments on the concept thesis proposal.
3. A number of face-to-face meetings to discuss the progress of the thesis.
4. A detailed reading of the draft version of the thesis with a thorough discussion in a meeting.
5. A detailed reading of the final version.
6. Contact via the Thesis Workflow during the entire process to discuss smaller issues.

The sequence of the meetings mentioned in points 3--5 can be chosen to fit your and the supervisor's preferences. Supervisors typically distribute a short guideline with details about the structure of their supervision.

a. Do's and don'ts

To ensure a fruitful cooperation and smooth contact with your supervisor, follow the do's and don'ts below.

Must-do's

- Make a thesis planning with your supervisor. Determine when you would like to hand in the thesis and define the dates on which you should hand in certain parts of your work. Also discuss during which periods you and your supervisor are not available.
- Share the final planning with your supervisor in the Thesis Workflow and ask for his or her approval. This is a mandatory part of the thesis process.
- Send your work to your supervisor several working days in advance of a meeting.
- Address all comments of your supervisor before you ask for new feedback.
- Take the full responsibility for writing your thesis. You are expected to take the initiative in all steps of the process.
- Carefully read this thesis manual and follow the described procedures and guidelines.

Recommended do's

- Use the first meeting to determine what you can expect from your supervisor and what your supervisor can expect of you. For example, agree upon how and how often you will stay in touch and when you can expect feedback on your work. This can prevent misunderstandings and delays.
- Make a short summary of all agreements that you made during your conversations with your supervisor and send it to your supervisor using the Thesis Workflow.
- Ask for a meeting with your supervisor if you have many or complex questions. During a(n) (online) face-to-face meeting you will often get the most valuable feedback.

- Always send the best work you can do. The better the quality of your work, the more high-level the feedback will be.
- Be explicit about the questions you have and the parts of your work on which you want feedback.
- You may expect timely feedback on your work. If feedback takes longer than normal or longer than the agreed upon feedback period, get in touch with your supervisor. Be polite.

Don'ts

- Do not send e-mails to your supervisor. All written communication needs to be through the Thesis Workflow.
- Do not constantly ask small questions to your supervisor. Save them up and ask them all at once.
- Do not ask questions about practical matters to which the answers can be found on the Thesis Hub or in this manual. Check the manual and Thesis Hub first before contacting your supervisor.
- Do not ask / expect your supervisor to do part of the work for you. For example, your supervisor will not correct programming code, nor will he or she correct all your typos, nor will he or she provide you with the set-up of your research.
- Do not ask your supervisor to give a preliminary indication of your grade. Do also not ask what you need to do to reach a certain grade. This is against ESE policy and the supervisor will not answer these questions.
- Do not expect your supervisor to work nights or weekends just so you can finish your thesis on time. If you hand in your work late, you run the risk that you will not get your feedback in time, and you will have to accept the consequences of missing the deadline.

b. Problems with your supervisor

In case you encounter problems with your thesis supervisor, discuss these with your supervisor and try to resolve your differences. If you cannot find a solution together, you can go to the master thesis coordinator of the specialisation or to the study adviser.

c. Second assessor

The second assessor judges your thesis once it is ready. The main task of the second assessor is to ensure that your thesis is assessed independently and fairly. He or she will also ask several questions during your defence. The grade is determined jointly by the supervisor and second assessor. The master thesis coordinator will assign the second assessor. In order to guarantee independent assessment by the second assessor, you usually will not have direct contact (except during the defence).

It can happen that your supervisor has approved your thesis but the second assessor feels that it is not (yet) good enough. When you have handed in your thesis well before the deadline, you will have the opportunity to improve your thesis based on the comments of the second assessor and supervisor, and hand in the new version of your thesis in time before the deadline.

7. Writing the thesis

a. Language

The thesis needs to be written in English.

b. Title page

The front page should contain the following information:

ERASMUS UNIVERSITY ROTTERDAM

Erasmus School of Economics

Master Thesis [programme xxx]

Title thesis

Name student: xxx

Student ID number: xxx

Supervisor: xxx

Second assessor: xxx

Date final version: xxx

The content of this thesis is the sole responsibility of the author and does not reflect the view of the supervisor, second assessor, Erasmus School of Economics or Erasmus University.

c. Referencing

Good referencing is essential. The reader of your thesis must always be able to find out where you found the information. That is why you always need to indicate in your text when you use the work of others. The reader can then consult the bibliography to find the source. It is not allowed to simply copy something from someone else. This is plagiarism which is fraud.

The APA guidelines for referencing are widely used in Economics journals. You need to use this reference method in your thesis. If you have done your bachelor at ESE, you have learned the APA reference style in the Skills classes. Please refer to the Thesis Hub to review these guidelines.

d. Plagiarism

The final version of the proposal and of the thesis will be checked for plagiarism. Examples of plagiarism are quoting or paraphrasing phrases and ideas of others and presenting it as your own work. A concrete example of plagiarism is copying a text from the internet into your proposal or

thesis without indicating this by means of quotation marks and by providing a clear reference to the source of this text. Plagiarism is a serious crime. It is fraud, even though you may not have done it intentionally. If someone finds out that you have committed plagiarism, you will be reported to the ESE Examination Board. The sanction depends on how serious the committed fraud is.

For more information about different forms of plagiarism and how you can avoid plagiarism in your proposal and thesis, have a look at the manual “What is plagiarism and how to avoid it” on the Thesis Hub.

More information about fraud: <https://my.eur.nl/en/ese/master/fraud>

e. Self-plagiarism

If you copy-paste a piece of text from an assignment or paper you wrote earlier in your bachelor or master in your thesis, without inserting a reference to this previous work, it is called self-plagiarism. Just as “regular” plagiarism, this is not allowed. If you want to refer to work you have done in the past, you should use the regular referencing method you also use for other resources. Also note that it is not acceptable to copy-paste large pieces of text from previous papers or assignments. Your thesis is original work, which can build on a previous assignment, but cannot be a copy. The plagiarism check will also detect self-plagiarism.

f. Formatting + Number of pages

When writing and formatting your text, please keep in mind the following:

- Include a table of contents and page numbers.
- Use a professionally looking font-type that is easy to read. Use font size 11 or 12. The font size can be slightly smaller (10) for table contents, table notes, and footnotes.
- Format your tables and figures according to academic standards. Do not copy – paste output from statistical programmes! The book *Academic Writing Skills for Economics and Business Administration* (Karreman et al., 2017) contains guidelines for formatting your tables and figures.
- Page margins should be around 2.5cm (1 inch) on all sides.
- Use 1.5 line spacing to enhance readability and allow the supervisor to write remarks around the sentences.
- Aim for a thesis with a main text of around 40 pages. The main text should not exceed 50 pages, including tables and figures, but excluding references and appendices.
- In case you use uncommon abbreviations, include an overview of the abbreviations used and their meaning. As a general rule, prevent the use of abbreviations as much as possible. The first time you use an abbreviation in the text, always write it out in full.

g. Programming Code and Appendices

You should submit the code of the programs you have written as separate, executable files. Upload a ZIP-file with your programming code files in Sin-Online. Make sure to also include a short description of the programming files in your thesis. Please stick to the conventions discussed in the programming courses with respect to programming style and the placement of comments and explanations.

You can also add appendices with supplementary material, such as additional tables and figures. However, if you discuss these tables and figures in detail in your main text, they should be part of the main text.

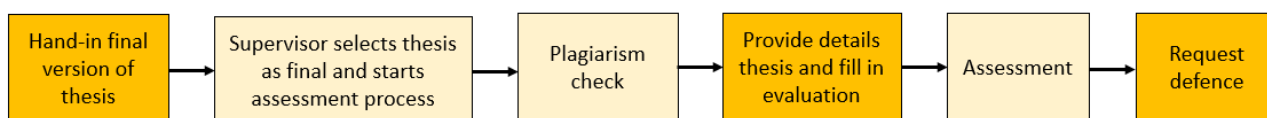
8. Handing in the thesis

a. Procedure for handing in the thesis

For detailed step-by-step instructions on how to hand in your thesis in the Thesis Workflow, please consult the *Thesis Workflow Manual* on the Thesis Hub. You submit the final version of your thesis by attaching it to a regular message to your supervisor in the Thesis Workflow. The thesis needs to be in .pdf format. Your supervisor will then select this version of your thesis as the final version. This step immediately activates the plagiarism scan. In addition, the supervisor will change the status in the Thesis Workflow to “Start final thesis assessment”. You will receive a confirmation e-mail that the supervisor has set your thesis as final. Please check if the supervisor has selected the correct version. The process then consists of the following steps:

- A button will appear which you need to click to start the assessment process. If this button is greyed out, the plagiarism scan is somewhat delayed. As soon as the plagiarism scan is completed the button will become active.
- Click the “Start final thesis assessment” button and provide the necessary details about your thesis. As part of the process you also need to fill in an evaluation about the thesis process and your programme.
- Assessment takes place.
- You are notified when assessment is complete, and can request your defence.

Below you can find a graphic overview of the different steps in the hand-in process. The dark-yellow boxes are steps you need to take, the light yellow boxes are steps taken by the supervisor or second assessor.



Discuss with your supervisor when (s)he and the second assessor are available for assessment and if they can both be present on your preferred defence date and time.

b. Defence and graduation

The defence is combined with your graduation and takes place on campus. It is an individual ceremony during which you will defend your thesis and, if all goes well, is concluded by your graduation. This means that you can only request your defence after you have completed all your courses and the thesis. On the EUR website about graduation you will find the steps you need to take to request your defence:

<https://www.eur.nl/en/education/practical-matters/graduation/ese>

Read this information carefully.

Once you have a date in mind on or before which you would like to graduate, discuss with your supervisor when you need to hand in your thesis. Especially during the summer months the supervisor and second assessor might not always be able to immediately evaluate your thesis. Naturally, also make sure that you both your supervisor and second assessor are available on your preferred date and time for the defence.

For more information what you can expect during your defence, read the *Master Graduation Manual* on the Thesis Hub.

Note that your enrolment is **not** automatically terminated when you graduate. You need to terminate your enrolment yourself. More information and the procedure to unenroll can be found here: <https://www.eur.nl/en/education/practical-matters/registration/terminating-enrolment>

c. Defence dates

On the EUR Graduation website you can find the available defence dates and corresponding deadlines before which you need to request your defence in order to defend on this date. Note that if you have a specific date in mind on which you would like to graduate, make sure that you hand in your final thesis well before the associated defence request date. The plagiarism check needs to be done and your supervisor and second assessor need time to assess your thesis. Preferably follow the suggested date as provided on the website or discuss with your supervisor when you should hand in your thesis.

If you request your defence on or before **15 August 2022** and defend in the first three weeks of September, the graduation date on your diploma will be 31 August, which is still within the current academic year. You thus will not need to re-enrol for the new academic year. We do, however, encourage you to defend your thesis in July or August. In the summer period, your supervisor will often have less time to supervise you, hence, it is advisable to do most of the work before summer. Be aware that 15 August is a hard deadline and if you request your defence after 16 August, your defence will take place in the new academic year and you thus need to re-enrol. There are no exceptions possible. In case you need to re-enrol you only need to pay tuition fee for the months in which you are enrolled. The defence can take place throughout the whole academic year.

d. Online defence

The default is that the defence takes place on campus. In case you need an online defence you can request this via Osiris Student. Note that requests for online defences are only granted when you have a valid reason, for example because you and/or your family are abroad or because of medical reasons. File your request for an online defence before you file your request to graduate. If your request for an online defence is granted you will be informed about the further procedure.

Note that also for online defences, the latest date on which you can request your defence in order to graduate within the academic year is **15 August 2022**.

e. Postponing your defence

It can happen that you have finished your thesis but still need to finish some courses or still need to finish your second master specialisation. In such cases you can start the assessment process in the Thesis Workflow and the supervisor and second assessor can already approve your thesis. You then simply postpone requesting your defence until you finished your other coursework. This way you can also prevent that your thesis is stopped on the final deadline on 1 May.

f. Thesis Repository

All approved ESE theses are entered in the EUR Thesis Repository (<http://thesis.eur.nl/>), the digital thesis repository of the Erasmus University. You can choose whether your thesis should remain private, meaning it cannot be accessed by others, or if it can be made public.

g. Establishment of the grade

When you hand in your thesis, it is independently assessed by the thesis supervisor as well as the second assessor using the assessment criteria below. You can only request your defence when both the supervisor and second assessor judge your thesis to be sufficient (grade 5.5 or up). The final grade will be determined right after your defence.

h. Assessment criteria for the thesis

These criteria are the characteristics of a good thesis. Note that they do not form a calculation instrument for the final grade.

Objective and main question

- The subject matter is clearly defined.
- There is a clearly formulated main question.
- The research has academic and/or practical relevance.
- The research contributes to the current practical or academic debate.

Theoretical background

- The concepts and theories used are relevant for the main research question.
- The literature used is of high-quality and up-to-date.
- A theoretical framework is developed which is coherent with the main research question.
- The literature is reviewed critically and shows a good understanding of the topic.

Methodology

NB: This can apply to data collection and analysis, as well as to literature research.

- The research design and methods for handling data are appropriate for answering the research question.
- The research method is clearly justified, described and repeatable.
- The discussion of the methods shows an understanding for methodological issues.
- Contribution to methodology is clear and well-thought-out.

Analysis and Results

- The steps in the analysis are well-presented and clear.
- The analysis is accurate, reliable, comprehensive and verifiable.
- The results reflect the analysis steps and are presented in a concise and systematic way.
- Figures and charts are clear and supportive of the results.
- Alternative explanations of the results are discussed and, if possible, tested.

Conclusions

- Conclusions are consistent with findings and provide an answer to the research question.
- Suitable implications and recommendations to the research field and/or society are given.
- A critical reflection on potential limitations is provided.

Structure

- The language used is well-readable (grammar, spelling and style), academic and to the point.
- Terminology is used consistently.
- The structure of the thesis supports the readability.
- The arguments provided are coherent, logical and convincing.
- Non-textual elements are supportive to the results.
- Literature references are complete, consistent, and correct.

Defence

- Structure of presentation aligns with the content of the thesis and provides a clear overview of the undertaken work.
- Mastery of subject and ability to defend and justify arguments and choices made.
- Explanations of the findings are suitable for a broad audience.

Relevance, added value and originality

- The thesis makes a relevant contribution to the knowledge within the field of study.
- Individual vision, originality and creativity are clearly displayed.

Process

The thesis supervisor will assess the student's research and writing process on the following criteria:

- Work rate
- Independence
- Attitude and dedication

9. More information

When you have read this manual, you are on to a good start with your master thesis. Also make sure to have a look at the other information on the Thesis Hub. There are many useful documents and links, including:

- Online Skills modules about defining research questions, writing the literature review, referencing, data-analysis, creating figures and tables, Matlab, and other thesis related topics.
- Manuals about the Thesis Workflow, the defence + graduation ceremony, and avoiding plagiarism.
- Links to the online trainings offered by the University Library. You can find all available trainings here: https://service.ubib.eur.nl/training_support/#/?k=v4a2hz
- Links to other useful online resources.
- An overview of short courses / workshops which are useful for writing the thesis.
- An overview of thesis related events, such as thesis awards and graduate conferences.