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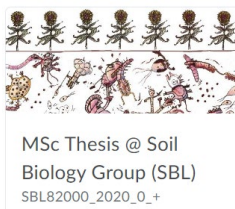
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This folder contains the different chapters of the MSc thesis Course Guide Part B. Part A is available from the ESA portal:

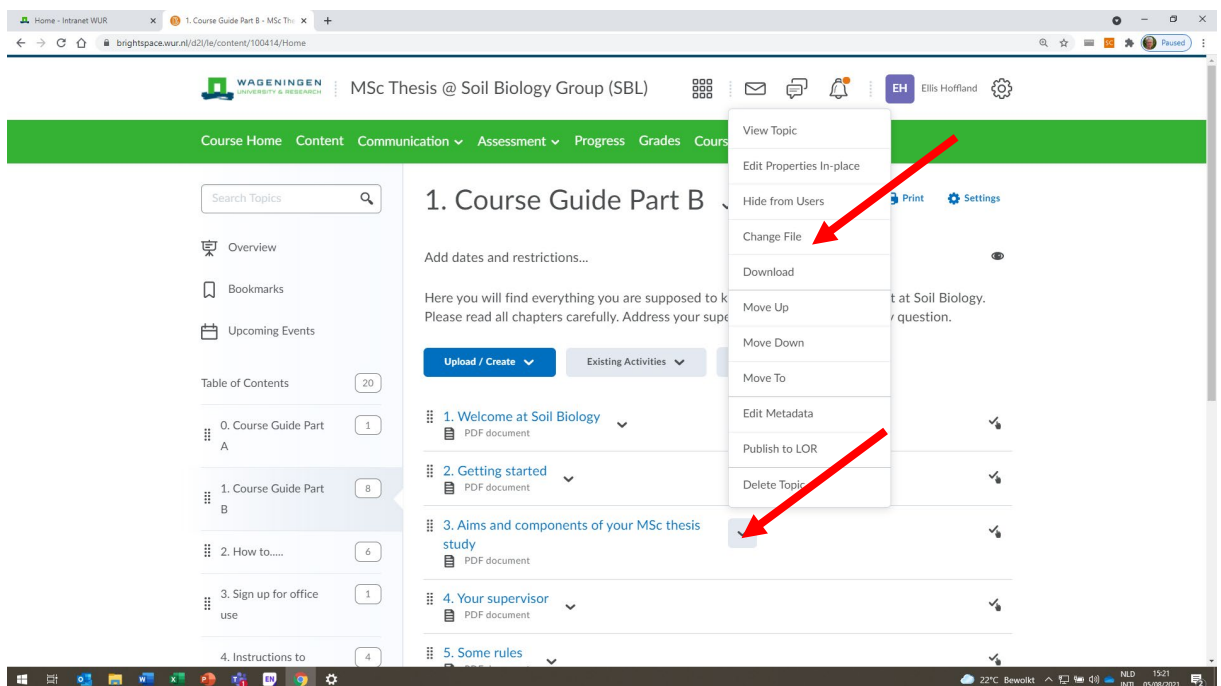
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Course Guide Part A is updated at corporate (WU) level. Part B is SBL specific. Please feel free update the sections of Part B and correct them if necessary:

1. Modify the Word file
2. Replace the pdf file on our Brightspace site (All courses) for MSc courses – Content - Module “1. Course Guide, Part B”



3. Select “Change File” in the pull down menu right next to the title of the chapter, and upload the new document



The screenshot shows a web browser window displaying a Brightspace course page. The page title is "1. Course Guide Part B". A context menu is open over the chapter title, showing options like "View Topic", "Edit Properties In-place", "Hide from Users", "Change File", "Download", "Move Up", "Move Down", "Move To", "Edit Metadata", "Publish to LOR", and "Delete Topic". Two red arrows point to the "Change File" and "Delete Topic" options. The page also shows a navigation menu with "Course Home", "Content", "Communication", "Assessment", "Progress", "Grades", and "Courses". The "Content" menu is expanded, showing "0. Course Guide Part A" and "1. Course Guide Part B". The "Table of Contents" shows "1. Course Guide Part B" with a count of 8. The main content area shows a list of topics: "1. Welcome at Soil Biology", "2. Getting started", "3. Aims and components of your MSc thesis study", "4. Your supervisor", and "5. Some rules".

1. Welcome at Soil Biology

1.1 Who are we and what do we do?

Welcome at the Soil Biology (SBL) group! Opposite to the secretariat you will find a photo gallery to find out who is who. What we do can be found at our website: <https://www.wur.nl/en/Research-Results/Chair-groups/Environmental-Sciences/Soil-Biology-Group/About-us.htm>

If you do MSc thesis work in our group, most of you will participate in our current research. This deals with organisms in soil. Detailed information can be found at <https://www.wur.nl/en/Research-Results/Chair-groups/Environmental-Sciences/Soil-Biology-Group/Research-1/Research-1/Research-topics.htm>

1.2 Our target group

Most of our students study MEE, MPS or MOA. But a large diversity of students have found their way to our department for MSc thesis work. We cater major theses for MSc students in

Study program	Specialization
MEE Earth and Environment	Biology and Chemistry of Soil and Water
MOA Organic Agriculture	Agroecology
MBI Biology	Ecology
MPS Plant Sciences	Natural Resource Management
MES Environmental Sciences	Environmental Quality
MCL Climate Studies	Ecological and Agroecological Systems

Occasionally also students in International Land and Water Management (MIL), Forest and Nature Conservation (MFN), and Animal Sciences (MAS) found interesting topics for (minor) theses with us.

1.3 Mandatory knowledge

A good preparation is the key to success in your MSc thesis. This is why you need to meet our requirements before you can start. Mandatory knowledge is listed in the Osiris Study Handbook, under the course code (usually SBL81836) in the section "Content".

Make sure you also meet the requirements of your MSc programme. If there is a clash between the two requirements, you may need approval of your programme from the Examining Board. Your study adviser should be able to help you.

1.4 Future perspectives

Many of our alumni find a job in research, either at universities or at research institutes throughout the world. Another large group starts a career in consultancy, for instance in the field of climate adaptation or nutrient management. Others find a job in international cooperation or policy.

2. Getting Started

2.1 Prerequisites for a thesis

Consult the description of your MSc programme in the Study Handbook and/or contact your study advisor to find out if you are allowed to execute your MSc thesis with us. If you find a thesis topic in our group that does not fit in your MSc programme, but which, to your opinion, is relevant to your programme, you should contact your study advisor and ask for approval by the Examining Board.

Specific preliminary knowledge is required to enrol in a MSc thesis study at SBL. Requirements (e.g. mandatory courses) for our MSc theses can be found in the online Study Handbook of the academic year in which you started your MSc study, under the codes of our MSc Theses (SBL-81318-81839; refer to <https://wur.osiris-student.nl/#/onderwijscatalogus/extern/start> ; Mandatory knowledge is listed in the section "Content"). If you have done your BSc programme outside WU, you should check with your intended supervisor whether your competences meet our specific requirements.

Essential to your success as thesis student, is good command of English. If you doubt about your level, it is strongly advised to do an Oxford Placement Test at the language centre In'to Languages in Forum. You can go there without appointment. The staff will be able to advise you on which English language course to take. Most of the courses are free.

We expect basic skills in information literacy. It might be useful for you to take the course ECS-65100 Information Literacy (1.5 EC; 4 times per year) prior to the MSc thesis or take an internet-based course (http://library.wur.nl/infoboard/module_2/) to compensate for any deficiencies.

For data management and processing we expect you can work with Excel. We expect basic skills in making calculations, copying formulas, making graphs etc. You can use any tool to get acquainted with excel. Perhaps <http://best-excel-tutorial.com/> would be a good idea.

2.2 Choice of the subject

Potential MSc thesis topics can be found on internet:

https://tip.wur.nl/SearchResult.php?s_LsgID=65&s_ProjectTypeID=&s_StudieID=&s_Zoekterm=&Button_DoSearch=Search%21

If you find a topic of your interest, you can directly contact the supervisor mentioned in this list, and work out further details. If you have difficulties in choosing, you can contact our contact person education: Ron de Goede. You can also come up with your own suggestions for research and find a supervisor among our staff.

In some cases it is also possible to work on a topic at one of the research institutes in Wageningen or elsewhere in or outside The Netherlands. In that case an expert scientist has to be available at the institute for your daily supervision. The supervision responsibility for your project will ultimately rest with your Wageningen supervisor (and examiner).

2.3 Registration

Once you have agreed with your (future) supervisor, make sure the correct thesis code is in your SPA (Study Programme Approval) and approved by your study adviser. This is necessary for us to be able to register your mark.

2.4 Learning Agreement

On the first day of your thesis study, a learning agreement will be made, registering commitments regarding MSc thesis work. Among others, commitments are made on frequency of supervision meetings. You will receive a link to the Osiris learning agreement, where you can make a draft.

3. Aims and Components of your MSc Thesis Study

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The major aim of MSc thesis work is to learn how to conduct a research project, individually and independently, at an academic level. In MSc thesis research you carry out *your own* scientific research project, usually as a contribution to a larger project within our department.

Your thesis study includes four phases, each with its own activities.

3.1 Orientation phase

This phase roughly last 25% of the total amount of time available for your entire MSc thesis. During this phase you:

- work on agreement on the topic of your project with your supervisor
- search for literature in a bibliographic database: Scopus or Web of Science. Do NOT use Google scholar: it offers too limited search options, the quality of the papers is not guaranteed, the references end up messy in Endnote/Mendeley, etc.
- will get a compulsory introduction to the lab. All students who will do lab work need to attend this introduction. You will be invited to this course, which will run on a 6 week interval, by our technician.
- write a research proposal.

Instruction on how to write a research proposal can be found at the Brightspace site of our MSc theses (How to..... write a research proposal).

Instructions on how to search for literature and build-up your own literature database in Endnote or Mendeley can be found at <http://www.wur.nl/en/Expertise-Services/Facilities/Library/Students.htm>

This phase concludes with

- A seminar on your draft research proposal. You should make appointments for a seminar date with your supervisor and the secretary well in advance. Plan a dry run for the presentation with your supervisor a few days before the seminar. Instructions be found at the Brightspace site of our MSc theses (How to give a seminar).
- An agreed (by your supervisor) and approved (by your supervisor and our administrator) research proposal including a budget.
- A list of methods that you will be planning to adopt with indicative timelines. This list will be sent to our technician ultimately one week before you plan to start in the lab. Our technician will provide you with a date for the specific method training sessions.

In the exceptional case that you are unable to produce a research proposal of sufficient quality, your daily supervisor, together with your thesis examiner, may decide to terminate your thesis project.

3.2 Execution phase

This phase roughly last 50% of the total amount of time available for your MSc thesis. You can only start this phase after successful completion of the orientation phase. It may partly overlap with the reporting phase.

The execution phase includes the performance of your experimental work or modelling study (laboratory, pot and/or field work and/or computer modelling).

- You must plan your activities in the lab and greenhouse well in advance, depending on availability of our technicians.
- Lab facilities, materials (chemicals), space, instruments can only be used after consultation of our technicians.

It is of utmost importance that you fill out a lab journal, to keep accurate records of what you did, how you did it, what you found out and what was discussed on a day-to-day basis. For instructions see "How to..... keep a lab journal" at the Brightspace site of our MSc theses.

It is mandatory to record data in line with our instructions in "How to..... manage data" at the Brightspace site of our MSc theses for instructions.

Half way the execution phase there will be a progress evaluation during which you discuss your progress and potential grade. In the exceptional case of severe problems regarding dedication, skills, knowledge or communication, your daily supervisor, together with the thesis examiner, may decide to terminate the

thesis project. The rubric, available as part of the Course Guide, can provide a clear picture of what goes well and where improvement and extra supervision is needed. If you experience any shortcomings in your supervision, this is a good moment to discuss it. If progress has not been achieved as planned due to other reasons (e.g. illness, problems in supervision), the planning of the rest of the project may need to be adjusted, and new feasible end goals defined.

3.3 Reporting phase

This phase may partly overlap with the execution phase.

- arrangement, analysis and presentation of the results
- interpretation of results and drawing conclusions
- writing a thesis report and/or scientific publication(s) (see Brightspace for instructions: How to.... write a MSc thesis).
- presenting your results at a seminar (see How to.... give a seminar).

3.4 Examination

On the final day of your project you will complete your thesis study with an oral presentation of your results (seminar) and an oral defence. Instructions on "How to..... give a seminar" can be found at our Brightspace site. You should make appointments for an examination date with your supervisor and the secretary (seminar) weeks in advance, also to ensure your examiner can make it. Plan a dry run for the presentation with your supervisor a few days prior to the seminar+examination.

The final oral defence consists of a discussion with your supervisor and examiner. If you have been supervised by a PhD student, s/he will be present as well. It is important that you bring a copy of your thesis to facilitate the discussion. The discussion focuses on the contents of your thesis, in which your knowledge, understanding, insights, as well as creativity and scientific attitude are evaluated. You are expected to be able to place your results and conclusions in the context of the field of science and to indicate possibilities for applying your findings in practice. Assessment criteria are in the rubric.

During the examination you will receive the reasoning behind your thesis grade including specific feedback on all aspects of the assessment. We will use the rubric, which is available as part of the Course Guide. The final grade will be recorded in the WU MSc thesis assessment form in Osiris. Your final grade will be the weighted average of the performance (40%), research report (50%), oral presentation (5%), and oral defence (5%). The minimum grade for each category should be at least 5.5 for a pass.

3.5 Delay and resit

The start and end date of your thesis is registered in the learning agreement. In order to pass the course, you usually get feedback on a complete draft report once. In the exceptional case that the quality of the second draft report (usually the final version) is unacceptable, you will get a second possibility to discuss this draft before you hand in the final report. If the final report is insufficient but your supervisor expects that you will be able to finish the project within 2 extra months, the final date will be extended. Afterwards the final report will be graded and the mark will be registered in Osiris. If you are not able to hand in a satisfactory report within 2 extra months, you should start your MSc thesis study all over again (not necessarily with the same supervisor, in our chair group).

3.6 Final formalities

Your grade will be registered in Osiris once data files have been transferred in an acceptable way to your supervisor. Perhaps other files should be transferred as well – please consult your supervisor in advance.

4. Your Supervisor

Your supervisor is an expert member of the scientific staff of our group. When you contribute to a PhD project, the PhD student will normally be your daily supervisor, supported by a tenured staff member.

Your supervisor, together with the rest of our staff, is supposed to facilitate your project. S/he should create a supportive and inspiring environment for your project. It is the supervisor's responsibility to *help* you with keeping good progress in your work; *you* are finally responsible. Although your thesis project is a learning experience, you are encouraged to act independently as much as possible when resolving problems and in difficult situations. However, your supervisor will always be available for feedback and support, as indicated in the MSc thesis contract.

On average you can roughly count on contact with your primary supervisor for 1 h per week, unless circumstances do not allow such a frequency. The actual frequency and duration of meetings may vary, depending on the nature of your thesis project and the phase you are in.

You cannot expect your supervisors to teach you on knowledge or skills that we regard prerequisites for starting an MSc thesis study in our group (see section 2.1).

A good working relation with your supervisor is a prerequisite for good cooperation. When you encounter problems with your supervisor, it is wise to discuss these with him/her immediately. When this does not help, you can ask another member of the group to assist. If you experience any shortcomings in your supervision, the intermediate evaluation would be a good moment to discuss and agree on improvement.

5. Some Rules

5.1 Thesis rings

From the very first week of your thesis project onward, active participation in our MSc Thesis Rings is compulsory. In Thesis Rings you will give and receive feedback on academic writing. They should help you improve your research proposal and thesis.

You are supposed to attend minimally 10 meetings of a thesis ring during your MSc thesis study during which you give feedback to drafts of fellow students. You will submit four drafts of your research proposal and thesis (in parts) yourself in (minimally 2, but usually) 4 meetings, during which you will receive feedback. Your supervisor will give feedback on your written products only after they have been discussed in the Thesis Rings. This requires good planning. The draft of your thesis will only be reviewed by your supervisors if you have attended (12-)14 Thesis Rings. Finally you must have attended 14 thesis rings before you can complete your thesis. Your final grade will only be registered after you have met this requirement.

Thesis Rings are scheduled usually every Tuesday 12-13 h and need maximally 1 hour preparation. Please carefully read instructions on the Brightspace site of our Rings (listed as "MSc SOQ Thesis Rings"). This Brightspace site also shows in which Ring you are and where to meet.

5.2 Seminars

During your period as an MSc thesis student with us, you are supposed to attend all our seminars by students from the Soil Biology group. You will receive announcements by e-mail. Attendance of the seminars is meant mainly to broaden your view on the scientific field of soil biology and to engage in scientific discussions. You can also learn how to give a seminar yourself by listening to others. You should attend minimally 10 meetings. Your final grade will only be registered after you have met this requirement.

5.3 House rules

There are few house rules. These have been developed to make sure that the available facilities can be used optimally. Some of these rules are to secure your own safety.

- You are most welcome to use a desk and desk top computer in one of our students' offices (Lumen B.209 and 211). You should clear your desk every day, such that other students can use it in your absence.
- Lumen is open between 7:00 and 22:00 h. You may expect a fine as a consequence of presence outside these hours.
- Working alone in the lab not allowed.
- If you need to work in the lab or greenhouse outside office hours (Mo-Fr 8-17 h), you must consult your supervisor and the responsible technicians first.

5.4 Greenhouse instructions

When working in the greenhouse, you need to be acquainted with, and comply with the General Instructions Greenhouses Unifarm. These are available on the Brightspace site of our MSc theses, under the module "Course Guide".

5.5 Software

Use

- Official (not open source) software to facilitate exchange with your supervisor
- MS Word for editing
- Scopus or Web of Science for literature searches

- Endnote or Mendeley (in combination with MS Word) to build your own data base of relevant papers, to insert references in your text and produce a list of references for your research proposal and thesis
- MS Excel for data management and processing in line with our data management plan (refer to "How to manage data" at our website*).
- R or SPSS or Genstat (not Excel) for statistics. Discuss with your supervisor which should be used.

5.6 Plagiarism

Plagiarism means that you present a work or part of a work without acknowledging the source. Plagiarism is considered a serious academic offence, and Wageningen University & Research performs plagiarism checks on student assignments. For further information refer to <http://www.wur.nl/en/Expertise-Services/Facilities/Library/Students/Citing-and-plagiarism.htm>