Department of Economics and Business Economics' Student Guidelines

for MSc in Economics and Business Administration

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Table of Contents

These Student Guidelines are designed to provide MSc students in Economics and Business Administration at the Department of Economics and Business Economics with answers to a number of questions that they may have in relation to their studies.

All current rules and regulations of the MSc Programme in Economics and Business Administration at Aarhus University can be found in the Academic Regulations: http://studerende.au.dk/en/studies/subject-portals/business-administration/teaching/academicregulations/

These guidelines will supplement and further explain the various regulations and procedures of relevance to the MSc programmes and give advice and suggestions on how to write an MSc thesis.

The Department of Economics and Business Economics offers the following MSc programmes in Economics and Business Administration:

MSc in Business Economics and Auditing (cand.merc.aud.)	
Programme Coordinator: Frank Thinggaard (fth@econ.au.dk)	Programme Administrator: Anne Lisberg Johansen (ajo@econ.au.dk)

MSc in Business Intelligence	
Programme Coordinator: Hans Jørn Juhl (hjj@econ.au.dk)	Programme Administrator: Anne Lisberg Johansen (ajo@econ.au.dk)

MSc in Finance	
Programme Coordinator: Thomas Kokholm (thko@econ.au.dk)	Programme Administrator: Berit Hansen (beh@econ.au.dk)

MSc in Finance and International Business	
Programme Coordinator: Malene Kallestrup-Lamb (mkallestrup@econ.au.dk)	Programme Administrator: Berit Hansen (beh@econ.au.dk)

MSc in International Economic Consulting	
Programme Coordinator: Valerie Smeets (vas@econ.au.dk)	Programme Administrator: Ann-Marie Gabel (amg@econ.au.dk)

MSc in Logistics and Supply Chain Management	
Programme Coordinator: Jens Lysgaard (lys@econ.au.dk)	Programme Administrator: Charlotte Sparrevohn (chars@econ.au.dk)

Head of the department's MSc programmes in Economics and Business Administration is Thomas Quistgaard Pedersen (tqpedersen@econ.au.dk).

Comments on and suggestions for improvements to these guidelines are encouraged and can be sent to Berit Hansen (beh@econ.au.dk).

1. MSc programmes in Economics and Business Administration

The aim of the Department's MSc programmes in Economics and Business Administration is to offer specialist postgraduate education within their respective subject areas. The programmes are international and thus aimed at facilitating career opportunities abroad as well as in Denmark.

The teaching is based on the latest research within many of the more specialised fields of study and the methods employed are based on both qualitative and quantitative tools. This also pertains to the majority of the MSc theses.

Each MSc programme is structured so that it contains a total of 120 ECTS credits. The programmes consist of the following three modules:

Module 1
Compulsory courses: 60 ECTS credits in the 1st and 2nd semester

Module 2
Elective options: 30 ECTS credits in the 3rd semester

Module 3
MSc thesis: 30 ECTS credits in the 4th semester

The one exception to this is the MSc programme in Business Economics and Auditing where electives only constitute 20 ECTS credits.

In the first and the second semester of the MSc programme, students follow compulsory courses and are automatically registered for courses totalling 30 ECTS credits per semester. If students would like to follow more courses in the first or second semester, they are allowed to register for additional courses and these will then replace the elective courses in the third semester.

All programmes require a minimum of 40 hours of studies a week. It is strongly recommended that students study all aspects of the subjects thoroughly. The best way of doing this is by analysing all the cases and completing all the assignments presented throughout the semester, reading and reflecting on the required reading and discussing the texts with fellow students, e.g. in study groups, as well as asking clarifying questions to the lecturers well in advance of the exam date. Generally, we expect our students to be active full-time students.

At Aarhus University, the learning management system Blackboard is used for online management of courses. For each course, there is a Blackboard site where lecturers upload course material and send messages to the students, and where students can upload material to the other students following the course or to the lecturer only. For each degree programme, there is a Blackboard community which is used for sending messages from the programme coordinators and BSS Study Service to all students of the programme and for uploading information matrial to the students e.g. on thesis writing. More information, manuals and FAQ relating to Blackboard can be found here: http://studerende.au.dk/en/studies/subject-portals/business-administration/blackboard/

Most of the department's MSc programmes in Economics and Business Administration have active students' unions (see Contact and links) that aim at creating a positive study environment to make studying about more than attending lectures and sitting exams. The students' unions organise company presentations, visits to relevant businesses, study trips as well as events of a more social character such as barbecues, Christmas parties and bowling outings. Often the boards of the students' unions serve as the programme coordinators' contact persons to the other students following the degree programme and as the spokespersons of the other students, e.g. in connection with semester evaluation meetings.

2. Elective options of MSc programmes

Examples of the elective options and choices (Module 2 above) of an MSc programme are:

- Electives at Aarhus University
- Electives at other Danish universities
- Electives at universities abroad
- Internship
- Summer schools

2.1. Electives at Aarhus University

In principle, there are two main approaches to constructing a portfolio of electives. The student may specialise his/her studies by primarily choosing courses within the subject area of the programme or he/she may focus on courses within other fields of study. Of course, it is also possible for the student to opt for a combination of these two alternatives. Which approach the student's portfolio of electives reflects depends on the profile required in relation to future job aspirations and opportunities.

The Department of Economics and Business Economics offers a wide range of electives in relation to the various programmes, but courses offered by other departments at Aarhus University may also be of relevance.

Electives are specialised courses for which the students in almost all cases need prerequisites corresponding to the knowledge and skills acquired in at least one semester of the programme.

In general, there are two types of electives: short, intensive courses of two to four weeks' duration and traditional courses that run for an entire (or half a) semester. The intensive courses are typically offered within the framework of the AU Summer University.

2.2. Electives at other Danish universities

When compiling a portfolio of electives, it may be a good idea to check what courses other Danish universities offer. A list of electives offered by e.g. University of Southern Denmark or Aalborg University can be found at these institutions' websites. For information on credit transfer, please see: http://studerende.au.dk/en/studies/subject-portals/business-administration/counselling/pre-approval-and-credit-transfer/

2.3. Electives at universities abroad

Aarhus BSS has entered into exchange agreements with more than 200 universities in most parts of the world. Students wishing to participate in an exchange programme have to apply at the beginning of the second semester. Places are assigned on the basis of weighted grade point average after the first semester.

For further information, please go to: http://studerende.au.dk/en/studies/subject-portals/business-administration/study-abroad/.

Please note that students who gain a place on an exchange programme do not have to pay tuition fee.

Students who want to follow specialist courses that are not offered by any of the universities with which Aarhus BSS has exchange agreements can choose to study abroad as free movers. This means that they have to contact a university and make all the necessary arrangements themselves. In most cases, free movers have to pay tuition fee.

2.4. Project-based internship

As part of the MSc programme, students can choose to do a project-based internship. It is a good idea for students interested in this option to read all the information on internship on the study portal of the Economics and Business Administration programme: http://studerende.au.dk/en/studies/subject-portals/business-administration/counselling/project-basedinternship/. From this website the Internship Agreement form can also be downloaded.

First, the student has to establish contact with a relevant company that agrees on the terms of the internship. The next step is to find an internal internship supervisor who has to sign the Internship Agreement form and in this way preliminarily approve the internship. It should be emphasised that it is the students' own responsibility to find a supervisor and a company. Additionally, students should be aware that internships must have academic relevance to their MSc programme.

In brief, the rules are the following:

- The supervisor approves the academic content of the internship.
- The student prepares an internship report which for internships of 2 months' full time work (10 ECTS credits) should be of no more than 44,000 characters (excluding spaces); for internships of 3 months' full time work (15 ECTS credits) the report should be of no more than 55,000 characters (excluding spaces). For a detailed description of the required contents of an internship report, please read carefully the relevant course description for the project-based internship: http://kursuskatalog.au.dk/da/?search=Projektorienteret%20forl%C3%B8b%20%28praktik%29&programme=3182.

The Department of Economics and Business Economics is positive towards the idea of internships, provided that they allow students to combine the theoretical knowledge acquired during their studies with practical experience in a company. An internship should therefore be seen as an integrated part of the MSc programme and not as an "off semester". Please note that students must have used their first exam attempt in all first and second semester courses of the programme before starting the internship. Additionally, it should be noted that doing internships is not an option for students of the MSc programme in Business Economics and Auditing.

It is also possible for MSc students to do an internship as a researcher. The student may then be affiliated with one of the departments at Aarhus BSS.

The procedure for having an internship approved is as follows:

1. The student reads carefully the information relevant to project-based internships on the study portal of the Economics and Business Administration programme (see link above).
2. The student contacts a company that appoints an external supervisor and issues a written agreement of employment, including a description of the tasks to be undertaken – as explained on the study portal.
3. The student is advised to prepare a synopsis, including problem formulation, table of contents, bibliography etc., and have this approved by the internal supervisor. Additionally, the internal supervisor must approve the Internship Agreement form.
4. When the internal supervisor has signed the Internship Agreement form, the student submits this form to BSS Study Service (Fuglesangs Allé 4, 4th floor in building 2610 or Tåsingegade 3, room 021 in building 1443) and is then registered for the internship. This must be done before initiating the internship and no later than 15 August.
5. The deadline for submitting the internship report is 31 January (the submission deadline for the second exam attempt is 31 March; the deadline for the third exam attempt is 31 May).
6. The internship report must be uploaded to WISEflow.

2.5. Summer schools

AU Summer University offers electives at MSc level within various subject areas of relevance to the students at the department. The courses are of two to four weeks' duration and take place in July and August. The majority of the courses are taught by international guest lecturers. For information on the Summer University courses, how to apply as well as various practical matters, please visit: http://www.au.dk/summeruniversity.

Another option is to attend courses at summer schools affiliated with other Danish or international universities. The courses may be basically the same as those offered during the semester or specialised programmes covering a specific area.

3. MSc thesis

The thesis is the final, the most important and for many the hardest part of the MSc programme. However, writing a thesis may also be an extremely rewarding experience as the thesis is based on the student's own individual research into a particular area and it is probably here that the concept of research based education becomes clear to the students.

These guidelines contain advice and suggestions to students about writing a thesis, but also include general guidelines for supervisors. Thesis students should also read the information on the thesis website: http://studerende.au.dk/en/studies/subject-portals/business-administration/bachelors-project-and-masters-thesis/masters-thesis/. From this site there is also access to the web form that has to be filled in before students start writing the thesis and to the department's list of thesis supervisors. The academic regulations describe the general rules relating to thesis writing; see Master thesis – course description: http://studerende.au.dk/fileadmin/www.asb.dk/tilstuderende/studievejledning/kandidaterhvervsoekonomi/studieordning/Master_thesis_-_kursusbeskrivelse_fra_studieordningen_070717.pdf.

For more detailed advice, the following sources are recommended:

Booth, W. C., Colomb, G. G. & Williams, J. M. 2008, *The Craft of Research*, 3rd ed., The University of Chicago Press, Chicago.

Jørgensen, P. S. & Rienecker, L. 2011, *Specielt om Specialer – en aktivitetsbog* (in Danish), Samfundslitteratur, Frederiksberg.

Ryan, R., Scapens, R. & Theobald, M. 2002, *Research Methods and Methodology in Finance & Accounting*, Thomson, London.

Ticehurst, G. W. & Veal, A. J. 2000, *Business Research Methods: A Managerial Approach*, Pearson Education, Australia.

Veal, A. J. 2005, *Business Research Methods*, 2nd ed., Pearson, Australia.

We also recommend the two tools described below which are designed to help students in the entire thesis writing process:

Scribo: http://www.scribo.dk/en/information. "*Scribo - Research Question and Literature Search Tool* is an interactive study tool that supplies the student writer with suggestions and information on research papers and library searches. With a dialogue of 27 questions sequenced to support the work-in-progress, *Scribo* helps the student to process initial ideas and structure the research. *Scribo* further prepares for supervision and helps the student conduct a literature search. With the assistance of Scribo, the student will be better equipped to write a research paper and meet with supervisors and research librarians" (from the above link).

AU Studypedia: http://studypedia.au.dk/en/. "AU Studypedia is an academic study tool you can use when writing assignments, searching for sources and in relation to other working methods that form part of studying. AU Studypedia offers advice, inspiration and exercises about different activities involved in studying at Aarhus University" (from the above link).

The actual writing of the thesis takes place in the fourth semester. Students are advised to start the thesis process already in the beginning of the third semester, or even earlier, by finding a supervisor, addressing the issue of access to data, searching for literature and in some cases contacting a company.

3.1. Finding a supervisor, drafting a synopsis and registering the thesis

The biggest challenge in connection with writing a thesis is often getting one or more good ideas for a topic. Many topics may seem interesting and exciting at first, but turn out not to be suitable or feasible for an MSc thesis. Ideally, the topic should reflect the student's own interests. So when deciding on the topic, the student may consider which courses of the programme have been of particular interest. When the overall topic has been identified, the student can start defining the actual research questions, for instance by looking through the lists of content of relevant research journals. The Internet and various news media may also serve as sources of inspiration.

Another useful source of inspiration for finding a thesis topic could be "AU Job- og Projektbank" where companies and organisations post both study projects, internships and job offers (please see: http://jobbank.au.dk/?lng=eng).

Once the student has decided on a topic, the next step is to look for relevant literature. The search for literature and data for the thesis is also an indication of whether the chosen topic is suitable for a thesis. This is a question of balance: there should be neither too little nor too much literature and sufficient data should be accessible.

These initial studies of the topic should enable the student to prepare a thesis synopsis of 2-4 pages, presenting the central research questions, a tentative problem statement, a working title, the choice of scientific method and theory, data requirements and sources as well as a preliminary list of literature. Preparing a synopsis is not a requirement but a recommendation, and the synopsis is not to be confused with the 1000 character problem statement that must be included when registering thesis title and supervisor in the web form (elaborated below). Writing this problem statement is a requirement. The problem statement is tentative and must include a description of the theories and data that the student intends to use in the thesis.

The synopsis forms the basis for a discussion with prospective supervisors about the thesis and its topic. Generally, students contact the lecturer who seems closest related to the central idea, i.e. whose lectures have dealt with a similar or related topic. For auditing students (cand.merc.aud.), supervisors are appointed by one or more coordinators. See more on page 2 here: List of supervisors – ECON.

It is of course essential that the supervisor has a relevant academic background, but on the other hand, the students cannot expect to find a supervisor who is an expert within their specific thesis topic. The key aspect for the supervisor's acceptance of the proposed synopsis is that it is doable, relevant and of sufficient academic standard. For a project to be doable, it has to be well defined and limited in scope. Sometimes students are too ambitious and propose topics that are too broad in scope, which may lead to frustrations and a lot of work in narrowing the focus at later stages in the thesis process.

It is strongly recommended that students consult the department's list of thesis supervisors or browse through the homepages of faculty members in order to get some insight into their research interests. The student then contacts the most relevant lecturer and asks for a short meeting in order to discuss the synopsis. Often it is a good idea to define a project that is related to the supervisor's research and teaching.

When the student has found a supervisor who has agreed to supervise the thesis, it is time to register the thesis supervisor and tentative thesis title. This is done by entering into a web form the tentative thesis title, a short problem statement of the thesis (max. 1000 characters), the name of the thesis supervisor and basic information, such as name, email address and degree programme, about the student(s). If two students writing the thesis together prefer to have their thesis defence as a group exam, they must indicate this in the web form; otherwise the defence will be held as two individual exams. The deadline for filling in this web form is 1 December. The link to the registration web form can be found on this home page: http://studerende.au.dk/en/studies/subject-portals/business-administration/bachelors-project-and-masters-thesis/masters-thesis/.

Timeline for thesis writing:

June or September/ October	Programme coordinators hold a meeting to advise students on how to find a supervisor and write a successful thesis
1 October	The web form is open for registration and an updated list of thesis supervisors can be found on the study portal
November	Students decide on a thesis topic and find a thesis supervisor
1 December	Deadline for registering supervisor, tentative thesis title and problem statement
1 February- 1 June	Students write the thesis in the fourth semester
1 June	Thesis submission deadline
June	Oral defence of the thesis
1 September	Second submission deadline for students who did not submit their thesis by the initial deadline

3.2. Types of topics and approaches

For the MSc thesis, the students can choose topics containing theoretical, empirical and/or practical aspects. But irrespective of the topic chosen, the use of relevant theory and literature forms a fundamental basis for the thesis. In the initial phases of the process, it may be a good idea to scan recent issues of top academic journals within the field. Also *Social Science Research Network* (www.ssrn.com) is a good source of inspiration, as are working papers recently published by the best universities and business schools.

A theoretical paper. This type of thesis builds on a theoretical model or a generic problem. For instance, an international model can be adapted to Danish rules and regulations or a Danish institutional context, or it can be adjusted to more general conditions. Often a theoretical thesis is based on existing literature studies in which a theoretical problem is analysed using the relevant theory, e.g. through numerical and/or theoretical analyses.

A case study. A case study approach involves an analysis of a specific occurrence in an actual company, e.g. an IPO or the implementation of ABC, reflecting a theoretical question. International journals, such as *Journal of Financial Economics*, often contain a section entitled "Clinical Papers" – the papers found here are examples of case studies. A case study may also use existing cases (e.g. Harvard Business cases) as starting point. The purpose of a case study is to illustrate, analyse and/or assess the use of theories and models in relation to the specific case. A case study is not directly linked to its empirical basis.

An empirical study. In this type of thesis an empirical study of a specific occurrence in an actual company is carried out, e.g. an empirical anomaly or the effect of a Danish regulation initiative. But a comparison of national markets, corporate finance etc. can also be the focal point. Regardless of the specific topic chosen, a thorough analysis based on relevant theories and models is expected. This kind of thesis is the most common; for example the majority of students of logistics and supply chain management opt for it.

An essay. This could also be called a survey or a broad case study. The idea is to gather existing knowledge on a specific topic and to relate theory to empirical observations, e.g. by using questionnaires.

It is imperative to make clear that no types of topic are superior to others and no topics guarantee a high grade. The grade is based solely on whether the topic is thoroughly analysed, the results clearly presented and whether the student demonstrates his/her knowledge of current theories and analyses, competent application of methods as well as independent, critical judgement.

3.3. The thesis supervisor

In the initial stages of the process, the supervisor approves the topic and judges whether it is of the required academic standard. Additionally, the supervisor has to estimate whether the project can be finalised within the deadline. If the supervisor believes that the student's topic is not in accord with the two criteria above, he/she will point this out to the student. For instance, if the supervisor estimates that the topic requires an excessive effort of computer programming, the student will be informed that this topic is too extensive. Ultimately, it is the responsibility of the student that the topic is adjusted to the recommendations made by the supervisor.

The supervisor helps the student to ensure that the thesis process proceeds according to plan. Most students feel that it is impossible to obtain an overall view of the entire thesis process, but the supervisor can assist them with this.

Many students may feel that their ambitions are higher than those of the supervisor. A typical question from a student to the supervisor is: "But am I not supposed to write a thesis with new and original ideas?" The answer is that of course the thesis should contain new material, but ideas can be original in many different ways.

With certain parts of the thesis process, the student cannot expect to get assistance from the supervisor:

- The student has to suggest the topic; no students will receive any help if they attend meetings unprepared. It is not enough to say that the topic should be for example logistics. The student should at least be able to provide ideas for a topic.

- The student cannot expect the supervisor to provide answers to detailed technical questions. The student has to prove his/her ability to go into depth and work independently and systematically even with very detailed questions related to the thesis topic.
- The student cannot expect the supervisor to read through drafts of chapters before submission, except for the introduction and the problem statement.

Students should show up well prepared for all supervision meetings. It is recommended that before a meeting students send to the supervisor suggestions for questions and issues to be discussed at the meeting as well as material, drafts, etc. of relevance to these suggestions.

For any thesis, it is essential that there is no discrepancy between the theory used and the empirical data. Thus, the student should ensure that the theory closely "fits" the questions to be analysed in the thesis. Similarly, it is dangerous to construct and present a fully-fledged analytical framework if this is not being put into actual use or is of no significance to the results.

Occasionally, a student contacts other faculty members at the department in order to get supplementary assistance with a particular problem (e.g. the lecturer of a relevant course). This is quite acceptable provided that the help is very limited and only related to a highly specific problem. As a matter of form, the supervisor should be informed of such enquiries. Remember that the readers of the thesis are the supervisor and an external examiner, and in the examination room they are in charge.

3.4. Layout, content etc.: requirements and suggestions

The following provides both suggestions and an outline of the formal requirements as regards content, layout etc.

A thesis consists of three parts:

1. Abstract
2. The actual thesis
3. Appendices

Abstract. All theses must include an abstract of 1-2 pages, containing for instance: i) motivation for and explanation of the central ideas of the thesis, ii) an overview of the most important results, iii) possible perspectives and iv) perhaps – but not necessarily – an ultra-short outline of the various chapters. The abstract must be written in English – also if the actual thesis is written in Danish.

The actual thesis. The number of characters (excl. spaces) of a thesis written by one student should be maximum 132,000 (equalling about 60 pages); for a thesis written by two students the number of characters (excl. spaces) should be maximum 198,000 (equalling about 90 pages). These numbers include all parts of the thesis: front page, the abstract, list of references etc. Figures and illustrations are also included in these numbers and always count as 800 characters. There is no minimum character requirement for the thesis. It is recommended that all students state the total number of characters on the front page of their thesis.

Also, there are no formal requirements concerning font, line spacing etc., but we recommend using a fairly standard layout, such as 1.5 line spacing, 12 point Times Roman or Arial type font, 2.5 cm top and bottom margins, 3 cm left and right margins.

Appendices. The actual thesis can be supplemented by appendices with important additional material such as technical explanations, computer programs, questionnaires etc. Please note, however, that it should be possible for the reader to understand the text of the thesis without having to look up information in the appendices, i.e. all tables and figures that are directly referred to in the text should be placed in the text. An appendix should be perceived as a supplement. Generally, the supervisor and the external examiner do not read the appendices but only look up information here in cases of doubt or as random checks. If a thesis contains several appendices, they should be numbered consecutively and the first page should provide a list of appendices. Supplementary documentation and appendices are not counted in the total characters maximum.

3.5. Other requirements and suggestions for format and layout

Below are some additional requirements and recommendations that may be useful for obtaining a good result.

Tables and figures. Tables and figures are numbered consecutively. Avoid too many vertical lines in the tables and include only the most important numbers. Generally, a good table contains no more than 8 columns and 16 rows of numbers. All tables should be accompanied by an explanatory note. In principle, the notes should allow the tables to be studied and understood without reading the text. However, analyses and interpretations of the tables and figures are given in the text. If in doubt as to what constitutes a good table, students may take a look in any of the top journals (cf. below). The quality of the tables can be decisive for which grade is given; but creating a good and informative table is a really time-consuming activity.

References. The last part of the thesis provides a list of the literature used, alphabetised by the authors' surnames and Christian names. All the literature and also other sources used have to be listed. The list of references should include sources that are directly quoted as well as sources whose results are reported. Additionally, it should reference sources that have served as inspiration for the thesis. If these sources are not quoted directly in the text, a statement such as: "This thesis is based on ideas from …" or "This thesis is inspired by …" can be included in the introduction. In cases of software programs, students can refer to the user manual, the author, a web address or include an acknowledgement in the introduction. Do not list basic textbooks in e.g. accounting, statistics or finance unless actual quotes have been included or explicit results have been reported. In practice, it seldom causes problems to decide what sources have to be referenced.

The list of references should follow the Harvard Standard citation rules – which can e.g. be found here: https://web.library.uq.edu.au/files/26535/harvard-2002-style-guide.pdf – or the following examples:

Birkoff, G. & Rota, G. C. 1989, *Ordinary Differential Equations*, Wiley, New York.

Campbell, J. Y. 1997, 'Asset Prices, Consumption and the Business Cycle' in *The Handbook of Macroeconomics*, ed. J. B. Taylor & M. Woodford, North Holland, Amsterdam.

Bruze, G., Svarer, M. & Weiss, Y. 2015, 'The Dynamics of Marriage and Divorce', *Journal of Labor Economics*, vol. 33, no. 1, pp. 123-170.

(please note the use of italics).

The format for citing references in the text is as follows:

a) In Birkoff & Rota (1989, p. 23), it is demonstrated that ...
b) Birkoff & Rota show that ... (see Birkoff & Rota, 1989, p. 23).

Traditionally, it has been popular to use theses by former students as sources; there are even a few horrendous instances in which these form the major part of the literature referenced. This practice is facilitated by the AU Library publishing theses electronically, but it is imperative to warn strongly against this approach. Students at MSc level are expected to be able to read original scientific articles published in Danish and international journals. Therefore, the only thing that theses by former students should be used for is finding references to relevant literature, which the students then have to read, analyse and rework.

Please note that the thesis can be written in both Danish (if the supervisor understands and reads Danish) and English. Aspects such as layout and language are important in the assessment of the thesis – much more important than most students imagine. Generally, most theses can be significantly improved by setting aside one or two weeks for proofreading and language revision of the text. For instance, it is important to be consistent in the use of mathematical notations and to ensure that references to tables clearly identify the tables etc. In some cases, layout and language can be decisive factors determining which grade is awarded. Another factor influencing the assessment of the thesis is whether the student can organise and adjust the topic to fit the number of pages given, as this is part of the thesis assessment criteria (cf. 3.9).

An MSc thesis can be written by one or two students. If there are two authors, each author has the right to individualise his/her contribution by highlighting for which parts he/she is responsible. Theses of the Business Economics and Auditing programme are written by one student. However, the programme coordinator may approve that two (but only two) students write together in cases where the thesis topic makes this necessary.

It may make the thesis process easier if the student keeps in mind who the target audience is while writing. The readers of an MSc thesis will usually be the supervisor and an external examiner – and nobody else. The academic level of the thesis and the assumed prior knowledge of the readers should reflect that of a diligent and knowledgeable student from the same degree programme, and the aim should be to impart new knowledge (but the student may of course still consider it relevant to include topics discussed in the degree programme as basis for analysis or background information). This is also the case if the thesis is written in relation to a company. If it is part of the collaboration agreement with the company that the results are presented to the involved company members, then they have to read the thesis as it is: an academic report written for academics. Otherwise, the students must subsequently undertake the task of preparing a summary targeted at the company. In this connection, students should be aware of the possibility of writing an article based on the findings of the thesis to a Danish (or international) journal. For instance, *Revision & Regnskabsvæsen* and *FINANS/INVEST* have on several occasions published articles based on MSc theses.

3.6. Literature retrieval

At the AU Library website, students can get help with information searching and information retrieval: http://library.au.dk/en/students/information-seeking/. In connection with literature retrieval, it may be a good idea to check which of the relevant journals are considered most significant in the field. At several websites, ranking of journals within most of the department's research areas can be found.

3.7. Submission of thesis

Most students will be writing their thesis in the spring semester and for these students the deadline for submitting the thesis is 1 June.

If a student does not meet the submission deadline, he/she has used the first of a total of three attempts at passing the exam. The student is then automatically registered for the second exam attempt and must prepare a modified problem statement which has to be approved by the thesis supervisor. The student then has three months (from the initial submission deadline) to finish writing the thesis which has to be based on the modified problem statement. This means that to some extent the student is allowed to reuse material and analyses from the first period. Therefore, it should be realistic for the student to finalise the thesis within this period of three months.

In those cases where the second submission deadline is also not met, the student has used the second exam attempt and again has to modify the problem statement. Again a period of three months is granted to finalise the thesis, and the student is automatically registered for the third and final exam attempt.

When submitting the thesis, students must choose whether it is to be publicly available or confidential. A thesis containing person and/or company sensitive information must be registered as confidential, in which case it will neither become available for loan at the library nor be published on the Internet. For more information on confidential theses and access to the form Agreement about Confidentiality, please see: http://studerende.au.dk/en/studies/subject-portals/business-administration/bachelors-project-and-masters-thesis/masters-thesis/confidentialtheses/.

3.8. Thesis defence

Within one month of the submission deadline, the thesis will be defended at an oral exam, i.e. for most students the defence will be during the month of June. If the thesis is handed in before the submission deadline, the student should inform the relevant programme administrator of the early submission well in advance, so that it will be possible to schedule the defence for a date within the month following the submission. If students submit their thesis during the last two weeks of May, the thesis is treated as having been submitted at the deadline.

Students may have preferences as to the date and time of the thesis defence. For these to be taken into consideration when scheduling the defence, the supervisor and/or the programme administrator should again be informed well in advance of the submission. When the supervisor and the external examiner have already agreed on a date, the defence will only be rescheduled in very rare cases.

If two students write their thesis together, the oral defence can be held either as a group exam (if the supervisor approves this) or as two individual exams. When registering their tentative thesis title and thesis supervisor, students should indicate on the web form if they want to defend their thesis as a group exam; otherwise the defence will be held as two individual exams.

The defence lasts no more than 60 minutes for individual thesis exams and no more than 90 for an oral group exam. The students initiate the exam by giving a short presentation of the most important results of the thesis. The presentation may take 10 minutes at the most. The first part of the exam focuses on the general aspects of the thesis; in the latter part more detailed questions are discussed. In addition to the student(s) and the supervisor, an external examiner takes part in the defence.

The grade given at the end of the exam is based on the thesis and the oral defence. As the language and layout of the thesis are of utmost importance, students should pay considerable attention to avoiding bad English, spelling mistakes and typos. A badly written presentation of the results may affect the grade negatively even though the ideas, structure, analyses etc. of the thesis are otherwise good.

3.9. Thesis assessment criteria

The thesis is assessed according to the criteria stated in the Study Guide and repeated below:

“**Organisation**: The thesis must be organised in a logical and appropriate manner, with a clear progression of thought from the research question through the analysis to the conclusion, and with the main weight being laid on those parts of the analysis that are crucial for answering the research question as formulated.

Research question: The thesis must contain a clear and precise research question related to a topic which is relevant to the field of study concerned and which allows for independent analytical work, theorising, and reflection.

Delimitation: The thesis must be delimited in such a way that the analyses and discussions are relevant, necessary and adequate to answer the research question posed. The student must demonstrate an overview of the chosen topic by giving reasons for what is included in and what is excluded from the thesis with regard to topics, theories, methods and empirical data.

Analysis: The thesis must contain a clear and precise analysis of the research question posed, with the relevant use of the definitions, concepts, theories and methods of the academic area concerned. The premises and assumptions of the analysis must be clearly presented, and their significance for the results must be discussed. The results of the analysis must be placed in perspective through comparison with other similar studies or by relating them to other research issues in the field. The analysis must also contain substantial independent input from the student.

Relevant literature and documentation: The research question must be analysed with reference to relevant literature in the area to the degree that is necessary for an in-depth analysis of the topic. Arguments, interpretations, descriptions and data from other sources must be documented with precise bibliographical references to the sources.

Conclusion: The thesis must contain clear conclusions, documented and supported by the theories and methods used in the analysis.

Format: The thesis must be laid out clearly and in a manner that communicates well. It must be formulated in correct, clear and fluent language, and it must respect the page limits laid down.

Oral defence: The student must be able to select the central elements of the analysis in the thesis and answer questions in a way that demonstrates an overview of the chosen topic. The student must demonstrate full command of the definitions, concepts, theories and methods of the academic area concerned, and an ability to place the results of the analysis in a larger perspective".

From:
http://studerende.au.dk/fileadmin/www.asb.dk/tilstuderende/studievejledning/kandidaterhvervsoekonomi/studieordning/Kandidatafhandling_formkrav_og_vurderingskriterier.pdf

4. Exams

Examination rules can be found here: http://www.au.dk/en/about/organisation/index/5/56/5602examinationsausrules/. These are the official AU rules on registration for exams, withdrawal of exam registration, conduct during exams, applications for exemption from these rules etc. Information about what to do in case of illness on the day of the exam can be found on the study portal: http://studerende.au.dk/en/studies/subject-portals/business-administration/examination/exam-registration-and-withdrawal/. Here students can also read about registration for and deregistration from exams.

Students have three attempts at passing all courses. As students are automatically signed up for exams in all compulsory courses, they do not have to register for exams in the first and second semester. Students may choose to deregister from an exam, but should be aware that, cf. the study progress reform, all students must pass a minimum of 45 ECTS credits per academic year. Deregistration must take place at least 14 days before the date of the exam. For the third semester, registration for courses and exams is not automatic, but students must make sure to register themselves for elective courses or project-based internship. The final exam schedules of both ordinary and retake exams can be found here: http://studerende.au.dk/en/studies/subject-portals/business-administration/examination/exam-schedules/. At this website there is also a link to "the chronological exam plan". Here students can find information about where their exams are to take place.

4.1. Digital exams

As from 1 May 2014 all exams at Aarhus BSS became digital. To facilitate online examinations, the system WISEflow is used, covering all aspects of the process, i.e. the exam assignment is available from the system, students submit their answers to the system, and examiners enter the grades into the system. Before sitting their first WISEflow exam, students should log in to the system to check their personal settings and to try the available demo exam ("Demoflow"). As students are required to bring their own computer to onsite examinations, they should check the system requirements before the exam, e.g. for closed-book exams a particular type of platform (called FLOWlock) is used which has special system requirements and students have to make sure that their computer meets these requirements. Students must submit their exam papers as one PDF file, but documents in other file formats may also be uploaded. Please note that students are not permitted to bring tablets to written exams. For more information on WISEflow and digital exams at Aarhus BSS, please see the information here: http://studerende.au.dk/en/studies/subject-portals/business-administration/examination/digital-exam/.

4.2. Rules on language at exams

For all written exams in courses taught in English, students must write their answers in English. However, oral exams may be conducted in Danish if the examiner agrees to this. Additionally, if sanctioned by the supervisor, the MSc thesis as well as internship reports may be written in Danish. For the MSc programme in Business Economis and Auditing other rules on language at exams apply. Here the exam language is generally Danish. However, some courses are taught in English and for these courses the exam language is English, but if the examiner is Danish, the students may choose to take the exam in Danish.

4.3. Retake exams

Retake exams for all exams in the spring semester – both midterm and summer exams – will be scheduled for August. Similarly, retakes for all exams in the autumn semester will be held in February (or early March). For specific information on retake exam periods, please see: http://studerende.au.dk/en/studies/subject-portals/business-administration/teaching/timetables/studyplans/. If a student does not pass an exam, it is the students own responsibility to register for the retake exam. Students may only take an exam three times.

4.4. Exam cheating

Recently, we have observed a regrettable rise in the number of cases of exam cheating in connection with written assignments (internship reports, MSc theses etc.).

Exam cheating, plagiarism and other forms of academic malpractice are unacceptable. The Board of Studies has therefore decided that such cases will be duly penalised.

The formal rules on exam cheating and the procedures followed in such instances can be found here:
http://studerende.au.dk/en/studies/subject-portals/business-administration/examination/exam-cheating/.

Below, the department's views as to what constitutes exam cheating are elaborated.

What is exam cheating? The easy examples are:
- Communicating with other students during exams
- Downloading an exam paper from one of the Internet websites offering this "service"
- Letting a twin take an oral exam as a stand-in
- Receiving help from others during take-home exams

Examples like these are trivial – but numerous.

The more intriguing examples concern theses, internship reports, take-home exam papers and other individually written reports in which students undertake independent work:

- The student produces his/her own thesis by copying large parts of another student's paper. Though the text is generally modified – either in an attempt to hide the fraud or to ease the student's guilty conscience (the standard excuse is: "But I have analysed the text and produced my own version …") – it is still considered exam cheating.
- The student borrows a computer program developed by somebody else and uses it to make his/her "own" calculations, but without referencing the source or author (the standard excuse is: "But it's just a computer program – like SAS or EViews").

- By searching the Internet (Google), the student in no time finds a number of texts that are relevant to the topic of his/her assignment. Selected parts of these texts are copied and possibly supplemented with the student's own texts. The problem is that the Internet is awash with easily accessible, ostensibly academic texts and reports on every conceivable topic. It may be tempting for students to "borrow" a bit here and there if they are pressed for time and have difficulty phrasing the text.
- The student uses his/her own paper twice, for instance through credit transfer from another university.

The examples above are generic, but inspired by real-life cases of which we unfortunately detect quite a few.

In all instances of reasonable suspicion of academic malpractice, the examiner will refer the case to the Aarhus University Education Legal Service.

Why do we take such a grave view of exam cheating? It is our impression that in several of the cases which we have detected, the students have convinced themselves that it is actually not all that serious, or they do not even perceive it as a problem. Basically, plagiarism is a form of theft, but additionally some even more important principles are at stake.

Throughout their primary and secondary schooling, many students have become accustomed to using the Internet intensively when searching for source material; and the Internet is definitely a good medium for this. But when pursuing a university level education, the students' use of the Internet for information search must change.

As part of Aarhus University, one of the main objectives of the Department of Economics and Business Economics is to do research and to disseminate this research in the form of publications and teaching. The primary motivational factor for university research is not money; authors of articles published in international journals do not receive payment when their articles are published. The most important incentive for a researcher to publish is therefore the desire for recognition from others – especially one's peers – for having produced original ideas and discoveries. The proof of this recognition is that other researchers quote your work and thus approve it. The quotes may be found in other scientific journals – or in newspapers and electronic media.

If it is discovered that the author of a scientific article has used the work of other researchers without properly citing the source, then this author will bring eternal disgrace on him-/herself. This is of course also the case in explicit instances of fabrication or falsification of scientific results. Even citing one's own previous work without referencing the source is regarded as academic dishonesty and dealt with as such.

Obviously, we have no intention of penalising carelessness such as having forgotten to include one or two references. But any attempt at obtaining a higher grade or any other kind of recognition at somebody else's expense will be viewed as exam cheating. This even pertains to presentations, synopses and other minor works.

To avoid the embarrassment of having an exam cancelled or one of the other sanctions that may be imposed (please see disciplinary measures here: http://www.au.dk/en/about/organisation/index/rules-regulations/01/historisk/au30/), there are a number of rules that must be followed:

- Do not succumb to the temptation to copy/paste from documents on the Internet without acknowledging the source. All direct quotes must be clearly marked in italics or put in quotation marks and the source must be referenced in immediate connection with the quote (cf. section 3.5). When a text is modified, it must be clearly indicated; for instance if irrelevant or insignificant words are omitted, this is shown by inserting three full stops ("…"). If we detect instances of direct quotes where the sources are not identified, we will as a minimum cancel the exam until the matter has been properly investigated. Even cases which merely involve short direct quotes without source acknowledgements can result in exams being cancelled, investigations being initiated and the Dean being notified.
- Do not count on it not being detected. We actively try to discover cases of academic dishonesty.
- As further explained in the section on the MSc thesis, all the literature used for a paper must be listed in References.
- The use of other people's computer programs must be referenced in the text – also if only parts of the program have been used. If subprograms, macros etc. have been developed in connection with this, these can be provided in the supplementary documentation.

On this website you can get more information about exam cheating, including links to a guide to students on how to avoid cheating at exams as well as information about plagiarism and copyrights: http://studerende.au.dk/en/studies/subject-portals/business-administration/examination/exam-cheating/.

5. Becoming a PhD student

Students who like working on and writing their MSc thesis – and have also received good results and high grades during their studies – may consider becoming a PhD student at the Department of Economics and Business Economics.

Undertaking PhD studies entails being a sort of researcher apprentice, with the PhD supervisor and the other researchers at the department functioning as apprenticeship masters. The majority of the time is spent writing an academic dissertation, but PhD students are also part of the academic research environment of the department, participate in doctoral courses, present their research at conferences, teach relevant courses and for approximately one semester visit another university (typically a university abroad and often in the USA) as guest researchers. The academic dissertation generally consists of a number of articles (typically about four). The first article can be based on the MSc thesis.

The Graduate School of Business and Social Sciences offers three PhD programmes: 5+3, 4+4 and 3+5.

- The 5+3 programme enrols students holding an MSc degree in a relevant subject. 5+3 PhD students have three years to complete their PhD studies.
- The 4+4 programme takes in students who are halfway through their MSc studies (i.e. have finalised four years of study). 4+4 PhD students, thus, have four years to complete their PhD studies.
- Students enrolled in the 3+5 programme complete their MSc degree during the course of their PhD studies.

By far the most prevalent is the 5+3 PhD programme. Application to the PhD programmes is either through special openings which will be posted on the website of the Graduate School of Business and Social Sciences or through a general call for applications within the research fields of Aarhus BSS. There are two annual application rounds for the general calls and the online application system will be accessible approximately one month before the application deadline.

Before sending an application, students are recommended to contact a potential supervisor from the department whose research interests are within the area on which they wish to focus. It may also be a good idea to contact one of the current PhD students at the department.

For further information about being a PhD student at Aarhus University, please go to: http://talent.au.dk/phd/. Details on the PhD programmes of the Graduate School of Business and Social Sciences can be found here: http://bss.au.dk/en/research/phd/. The PhD website of the Department of Economics and Business Economics is here: http://econ.au.dk/education/phd/.

6. Contact and Links

Aarhus BSS Student Services:
(for questions on grade transcripts, registration for courses, project-based internships, exams etc.)
Address: Fuglesangs Allé 4, 4th floor in building 2610, 8210 Aarhus V or Tåsingegade 3, room 021 in building 1443, 8000 Aarhus C
Opening hours: 08:00-15:00 (Fridays 08:00-14:00)
Telephone: 8716 4026
E-mail address: studentservices.bss@au.dk

The Student Cuonsellors' Office
(for questions on rules and regulations, planning your studies, applying for exemption etc.)
Address: Fuglesangs Allé 4, room 422 in building 2610/S, 8210 Aarhus V
For opening hours, see: http://studerende.au.dk/en/studies/subject-portals/business-administration/counselling/the-student-counsellors-office/
Telephone: 8716 4331
E-mail address: counsellor.badm@au.dk

Study Abroad and Exchange
Address: Tåsingegade 3, room 021 in building 1443, 8000 Aarhus C
Opening hours: 10:00-12:00 & 12:30-14:00
Telephone: 8716 4116
E-mail address: bss.international@au.dk

Danish Students' Grants and Loans Scheme Office
Address: Fredrik Nielsens Vej 5, building 1448, 8000 Aarhus C
Opening hours: 9:00-12:00 (closed on Wednesdays)
Telephone: 8715 0730
E-mail address: su@au.dk

Additional information of relevance to the MSc programmes can be found on the following websites:
Department of Economics and Business Economics: http://econ.au.dk/
AU – for students: http://studerende.au.dk/en/
Study portal for MSc in Economics and Business Administration (teaching, examination, counselling etc.): http://studerende.au.dk/en/studies/subject-portals/business-administration/

Students' unions:
AUD-udvalget: http://aududvalget.dk/
BIA – Business Intelligence Association: http://bia-bss.dk/
FAA – Finance Association Aarhus: http://www.faaarhus.dk/
Student Union of Logistics at Aarhus University: http://sulo.dk/