



GUIDE FOR THESIS AND ACADEMIC WRITING



**KESKI-POHJANMAAN AMMATTIKORKEAKOULU
MELLERSTA ÖSTERBOTTENS YRKESHÖGSKOLA**

B: AJANKOHTAISTA – AKTUELLT

**GUIDE FOR
THESIS AND ACADEMIC WRITING**

KESKI-POHJANMAAN AMMATTIKORKEAKOULU, 2011

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FOREWORD

In 2005-2006, common guidelines for university of applied sciences final project work were drawn up in national working groups. The present *Guide for Academic and Thesis Writing* (formerly called *Guide for Thesis Writers*) was drawn up based on the above guidelines. Programme-specific instructions may accompany the Guide. Sections of the guidelines can also be used when advising students who write reports other than theses.

The following individuals from the Central Ostrobothnia University of Applied Sciences have been involved in compiling and writing up material for the Finnish version of the Guide: Hanna-Riina Aho, Katarina Broman, Pirjo Forss-Pennanen, Ulla-Mari Kivi, Hilikka Koskenkorva, Margita Kronholm, Pia-Lena Leskinen, Tapio Malinen, Maija Maunula, Marko Ovaskainen, Pekka Paajanen, Pirkko Pehkonen, Hanna Salomäki, Marja Savolainen, Maarit Tammisto, Tuija Tolonen, Riitta Viirret, and Marjo-Riitta Ventola.

The Guide was updated based on feedback received from COU faculty. The updating group was made of Pekka Hulkko (chairman), Pekka Paajanen, Saija Paloranta, Timo Taari, and Maarit Tammisto (coordinator). Esko Johnson and Birgitta Niemi edited the English version of the Guide.

The updated Finnish version of the Guide has been effective since 1 August 2010 in all COU degree programmes that are taught in Finnish. The updated English version is to be used in all English-language programmes, starting May 2011.

On behalf of the working group:

Pekka Hulkko
Director of Education

Maarit Tammisto
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FOREWORD

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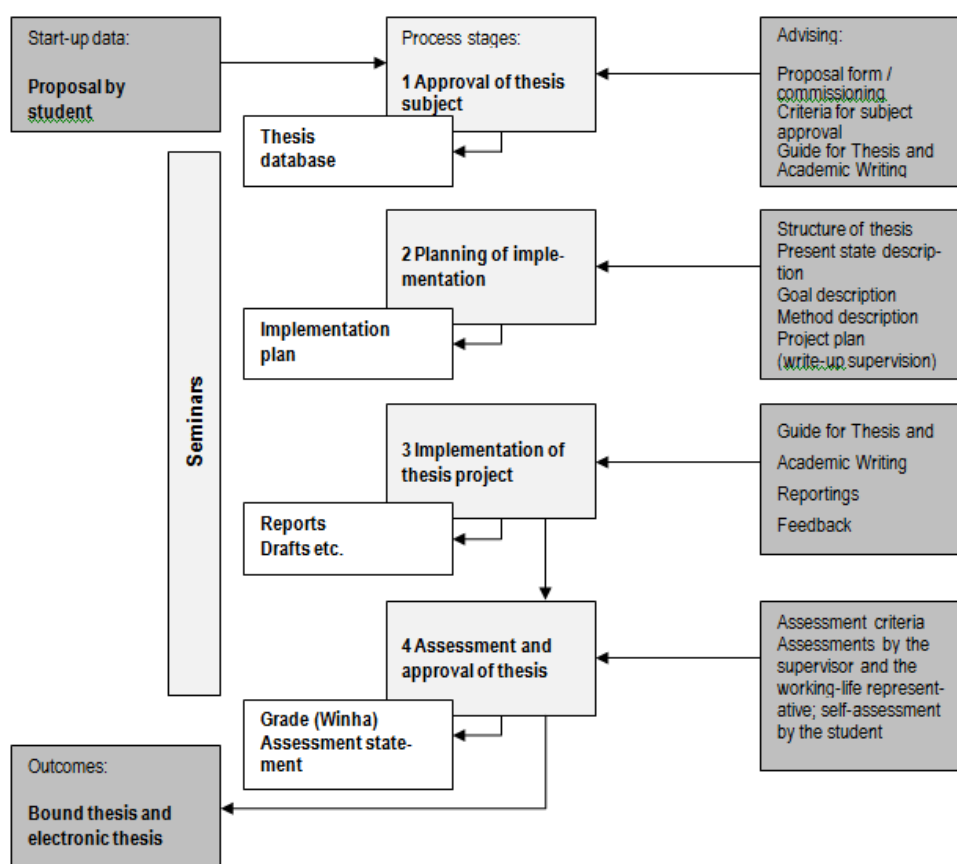
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1 PROCESS DESCRIPTION OF FINAL PROJECT

The final project is an extensive, practically oriented development or research venture that is completed towards the end of degree study. The project acts as a bridge between study and work, facilitating a student's transfer to duties requiring professional expertise. The aim of the final project is to develop and demonstrate a student's ability to apply knowledge and skills acquired in his/her study to practical tasks requiring professional expertise.

An appropriate subject, the student's familiarity with the subject area, project planning, time management skills, co-operation and interaction skills; documentation skills and process supervision - all of these contribute to a successful outcome. Indicators that are used to evaluate the process include grades (1–5) and duration of the project in weeks. The degree programme team is responsible for the development of the final year project process. Graph 1 presents the process of the final project, and Table 1 describes the supervision of the process.



GRAPH 1. Process description of final project

TABLE 1. Process supervision

Start-up data	Task	Outcomes	Supervision and instruction (critical success factors)	Responsibility
	Selection of subject	Thesis contract	Thesis contract form Working life project CENTRIA project Own project http://www.jobstep.net/	Student
Thesis contract	Approval of thesis subject and appointment of the supervising teacher	Informing the student and the supervising teacher; database entry	Subject approval criteria Supervising teacher's criteria Prerequisite studies	Head of Degree Programme
Commissioning party's requirements and desires	Drawing up and approving of the commissioning contract	Signed contract for thesis (contract of commissioning)	Thesis contract form	Supervisor
Proposal for final project (contract of commissioning)	Planning and approval of implementation	Preliminary implementation plan (project plan)	Implementation plan (descriptions of present state and goal state; methods; points of supervision)	Student Supervisor
Preliminary implementation plan	Kick-off seminar	Approved implementation plan	Guide for Thesis and Academic Writing/ kick-off seminar	Student Supervisor
	Implementation of final project; writing up the report	Written documents and other evidence	Guide for Thesis and Academic Writing/ documentation	Student
Progress report; review of problems encountered; follow-up advice; schedule	Interim report	Written and/or oral feedback	Implementation plan Content advice Write-up advice	Student Supervisor
	Interim seminar		Guide for Thesis and Academic Writing/ interim report	Student Supervisor
Written documents and other output	Review of thesis report	Changes Permission to publish	Guide for Thesis and Academic Writing/ review of content and language	Supervisor/ Student
	Final seminar		Guide for Thesis and Academic Writing/ final seminar	Student
Permission by supervising teacher	Maturity test	Hand written, approved maturity test	Maturity test guide	Student
	Publication of thesis	Bound and electronic thesis report	Guide for Thesis and Academic Writing/ publication of thesis	Student
Evaluation by commissioning party Bound final project report	Approval and assessment of thesis	Grade entered in Winha Assessment statement	Guide for Thesis and Academic Writing/ evaluation criteria Assessment form of thesis Self-evaluation	Head of Degree Programme Supervisor

2 SUPERVISION OF THE FINAL PROJECT

The final project is a demanding project, carried out independently by the student. It promotes the student's professional growth, during which the student will demonstrate knowledge and understanding of core areas in the field. Because the key objective of the final project is to train a student in independent work and problem solving, the main responsibility for the project always lies with the student. The university of applied sciences will provide systematic project supervision, the purpose of which is to support the student in the final project work process. The supervision also includes assistance to resolve various problems and questions.

The student gets supervision both in issues related to the topic and the write-up of the thesis. It is the duty of the student to contact the COU language teacher who advises on language and writing issues, and the student must do this both during the course of the final project and when writing up the thesis.

2.1 Choice of subject

The subject for the final project is selected from among professional study. It is very important that the selection and delimitation of the subject are clear and exact. Sufficient time should be allocated for this stage.

Students should consider the following types of questions:

- Where should I begin?
- What subject interests and motivates me?
- What subject best supports professional competence and development towards expertise in the area I am interested in?
- What are important and current issues in my own field?

The higher education institutions and the student's own resources should be taken into consideration when selecting the project subject. The supervisor also has an important role,

in cooperation with the student, to brainstorm, define and delimit the idea. The supervisor's experience enables him/her to advise how to plan the objectives and content of the work so that it can be completed in the time equivalent to a 15 ECTS course. The final project is undertaken as a business or working life commission or as part of some other larger entity, for example a CENTRIA project. Project subjects can be found through, for example, the student's active contacts with potentially interesting contractors, through the Jobstep.net database, internships, teachers, and so on. The degree programme director or degree programme team approves the subject.

2.2 Supervising teacher

Each final project has a supervising teacher that the student can contact in mutually agreed ways and times. This teacher is familiar with the subject area and is qualified to teach at the university of applied sciences. The supervising teacher's role is to guide and support the student throughout the final project process.

Once a suitable subject is decided and the work is in progress, the way that the supervisor's role evolves will depend on how the work is conducted. In cases where the work is very practical to the company, organisation or other commissioning party, the representative of the company who has been assigned responsibility for the project plays a significant role. In this case, the supervisor from the educational institution is responsible for ensuring that the project meets the institutional requirements and that the work load is appropriate to the assigned credits. Suggestions on literature and source material are also the responsibility of the supervising teacher.

The supervisor supports the student in the planning and implementation of the final project. Work on the project begins during the second or third year of study. A prerequisite for beginning the project is completion of a course on final projects/thesis work.

After having been appointed, the supervisor's first task is to enter the subject, supervisor, working life representative and tentative schedule into the database by the student's name.

2.3 Supervision and team meetings

Supervision or guidance of the final project supports the student's professional development and requires an independent work approach on the part of the student. The student negotiates meeting times with the supervisor, ensuring these are regular and sufficiently often.

The student and the supervisor prepare for the supervisory meetings. Students should arrange directly with the supervisor time periods during which they can meet. Students arrive at the meetings well prepared: questions concerning or related to the final project and the work process have been thought out in advance. Students make adequate notes during the meetings to facilitate the progress of their work. Prior to the meeting students provide supervisors with a paper copy of that section of the project to be discussed in the meeting as well as questions to be considered for the supervisor to read beforehand. Students should remember that supervision time is limited. It would be useful for supervisors to keep a record of the issues discussed during meetings.

Purposeful meetings between the supervisor, student and project contractor are important in commissioned final projects. Either the student or the supervisor arranges an initial meeting with the working life representative, during which a contract of commissioning is drawn up and research and development tasks are discussed.

The student is responsible for the project's theoretical information base and the locating and collecting of material required for the construction of the practical section. The student finds source material independently. Any costs incurred through inter-library loans will be met by the student. The student will collect material for the practical sections independently, possibly, however, collaboratively with the contractor. Data collection methods should be appropriate to and support the research or development task and relate to the task and its theoretical background. In addition to libraries, the student has at her/his disposal a wide range of electronic material, which will be introduced during, for example, the course on interpreting information. Data collection is part of the learning process.

2.4 Seminar work and group guidance

An important part of the supervision and guidance process is the seminars connected to final project work during which group guidance is offered. Seminars also refer to a group teaching methodology whose primary objective is to familiarise students with the different stages of research, and to meetings during which students will gain a deeper understanding of a specific theme through presentations and discussions.

The students of each supervisor form groups in which they learn how to work on final projects. They also gain a deeper understanding of their own subject area through participation in seminars in which the progress of final projects is presented, important general issues relating to final project work are handled, and students' questions and problems about their final projects are dealt with. The seminars also deal with various initial and progress reports which the author defends while the other students and supervisor act as opponents. A minimum of two seminars are arranged: a start-up seminar and a concluding seminar.

Seminar objectives are as follows:

- provide practice for students in discussions that promote the development of their own profession
- deepen theoretical understanding of the curriculum
- guide students towards critical thinking

The following is an example of a seminar's agenda:

- The meeting is opened by the Chair, who introduces the seminar theme, the final project student(s), opponents, and him/herself.
- Students working on final projects present the central issues of their work. This introduction acts as a preparation for a general discussion.
- The opponents evaluate the work.
- The Chair briefly comments on the presentations to form a basis for discussion and the general discussion on the subject begins.
- Finally, the supervisor or the teacher takes the floor. During this presentation the Chair draws up a brief summary of the held discussion.

The Chair is responsible for the seminar's progress and time allocation, and allocates the floor to the discussion participants in a 'first-come-first-serve' order. The Chair, the writers of the thesis, and the opponents prepare discussion questions in advance. At the conclusion of the discussion, the Chair draws up a summary of the discussion.

The opponents' task is to familiarise themselves beforehand with the final project and critically evaluate it in writing and orally. In the actual seminar they evaluate the project and present questions to the authors.

Opponents focus on the following:

- the final project as a whole
- the final project's subject area (topicality, significance, degree of interest)
- setting of the research problem
- employed methodology and possible research data
- information sources
- results and conclusions
- language and style issues
- layout

The seminar is interactive, during which not only the opponents, but also the other group members participate actively in the discussion. The author responds to questions and justifies his/her solutions.

The project plan (plan of execution) is presented in the first seminar. The following three sections of the plan are presented: central concepts and literature review, data collection and treatment methods, and timetable. If the final project is a development venture, the current situation and objective description with its limitations, methodology, schedule and supervision are also presented.

The research plan is presented after the implementation plan. This is to ensure that the student has managed to successfully establish an adequate theoretical foundation for the work. Following this, the supervisor gives the student advice and instructions on how to improve the practical components of the project and how to develop the other sections as well as the

overall quality of the project. The guidance continues after the research plan has been approved. The aim is to have the student independently complete the work.

The uncompleted final project is first returned to the supervisor for evaluation and s/he gives the student suggestions on final changes or corrections. The supervisor gives permission for the work to be presented in a seminar for finished final projects. When the supervisor considers the project to be finished, s/he evaluates it with other possible supervisors (for example the teacher who guides on language and writing issues). If the work has been commissioned, the contractor also attends the evaluation session.

2.5 Final version of the project report

The final project manuscript is submitted to the supervisor for comments. The supervisor points out areas where the student needs to make corrections, and once these have been made, the student delivers the corrected work to the supervisor or supervisors for evaluation.

The final project is reviewed within a maximum of four weeks. The corrected and evaluated final project is presented at the seminar. The student can take the maturity test after the thesis is approved.

3 THESIS STRUCTURE AND THEORETICAL FRAMEWORK

The structure of a final project is determined by the chosen framework, subject or problem. A final project completed at a university of applied sciences may be one of three types: the research, product, or production type of work.

3.1 Structure models

Research based work is structured according to the theoretical framework and practical applications. The framework determines how you select empirical components of the work: problem definition, methodology selection, interpretation of results, and the drawing of conclusions.

The structure of research based work is as follows:

- introduction
- theoretical framework, methodology and data
- results
- discussion and conclusions.

A report of functional work and a project report is a thesis connected to practice (thus, it is also known as a practice-based thesis). This type of thesis does not necessarily have a written theoretical framework, which may, however, be included to as an appendix. The links to the theoretical framework are seen in the practical solutions.

The structure of functional work and a project report is as follows:

- introduction
- an overview of the phenomenon or description of the environment
- description of the product or function
- evaluation and discussion.

The aim of a production-type thesis work is to design and produce a particular product or service. Thus the content may be divided into various production stages around which the work is structured.

The structure of thematic (i.e. topic based) work is as follows:

- introduction
- topic 1
- topic 2
- topic 3 and so on
- conclusions.

A thesis of a problem solving type begins with a description of the problem and its delimitations. The text may alternate between the theoretical framework and practical applications. Essential to this type of thesis are the process description and the evaluation of the solutions given.

The layout of a thesis with a problem solving structure is as follows:

- introduction
- description of the data or the problem
- description of the problem solving process
- solution(s) with evaluation.

3.2 Theoretical framework

It is essential for the student to write up the theoretical framework of the thesis clearly because doing so he or she also explains the solutions and as well as documents his or her knowledge. The theoretical framework is based on previous research and theory, and the student's own research activity and experiences supplement the framework. Thus the framework also includes tacit knowledge.

In a university of applied sciences thesis, the writer demonstrates his or her own perspective on the subject with the help of the framework. The writer defines the concepts and examines the phenomenon from various perspectives and studies the relationship of the

phenomenon to other comparable phenomena. The writer deals with the subject in the light of theories and critically deals with the knowledge and concepts selected for the framework.

3.3 Writing the theoretical framework

The three models below outline how a rigorous theoretical framework is written.

- (a) Research based thesis, i.e. a thesis that is clearly based on a framework and an empirical section

The theoretical framework is written up by summarising (paraphrasing) selected sources. The framework must also include the student's own reflections and discussion of the selected sources. In other words, the student uses his/her own words to write the information that he/she has read, and, following this, indicates with in-text references the sources he/she used. Direct quotations that have no source references must not be used. Such copy-paste practice would also violate intellectual property rights. **Plagiarism is strictly forbidden.** Plagiarism means any activity where the writer presents somebody else's manuscript, article or text as his or her own work (Hirsijärvi, Remes & Sajavaara 2009, 26). Thus, using someone else's text directly in the thesis **without supplying any quotation marks** is also understood as plagiarism, even if the source of information is provided. Only relevant information is provided in the framework; in other words, only what is necessary for the empirical part, and material that does not directly contribute to the subject is left out. Conclusions are not presented at this stage. (Link: [COU Code of Ethics](#))

- (b) A thesis based on problem solving

A thesis based on problem solving does not have a separate framework. Rather, here the framework goes in a zipper fashion throughout the entire thesis. Thus the framework and practical sections alternate in the work, ensuring a balance between theory and practice. The framework is written up using quoted sources, and this is done in the student's own words. The source references are placed in the text. Plagiarism is strictly forbidden; see above.

(c) Working life reports, project reports

Working-life reports and project reports also have no theoretical framework section. This may, however, be included as an appendix. The theoretical framework only includes information that is essential to the work. All unnecessary material is excluded.

3.4 Writing up the discussion

One of the objectives of the thesis is to demonstrate the writer's professional growth. This development is especially shown in the discussion section through a logical and argumentative assessment of one's own work. The discussion section also serves outside readers.

The discussion section begins with a summary of the work's objective(s), methodology and results. It also includes an assessment of one's own work and the methods employed. All research problems introduced at the beginning of the work should be examined in the discussion section, even if some questions are left without an answer.

The discussion also includes justified suggestions and recommendations of further work for the contractor. The discussion presents justified ideas for further development. What has been learned is also documented here for the benefit of future writers.

4 EVALUATION

The final project is evaluated by the supervisor or supervisors on a grading scale of excellent (5), good (4 or 3), or satisfactory (2 or 1). Following the degree programme practice, the supervising teacher consults for external evaluation the working life expert who guided the student in his/her work.

The evaluation focuses on the following:

- setting of objectives
- theoretical framework and references
- planning of final project
- execution or outcomes of the final project
- written presentation
- process management.

Each criterion is described on an evaluation scale (see Table 2). The evaluation relates to the entire final project process, and the grade is not only based on the average of each sub-area. The evaluation statement form has space for freely worded assessment comments in which each criterion can be dealt with in more detail. In the form there is also space for assessment by the working life representative. The student evaluates his/her own performance using a separate self-evaluation form.

Students are encouraged to receive peer evaluation during the final project process. This primarily takes place during the writing stage, in the seminars, where skills of giving and receiving feedback are practiced.

TABLE 2. Assessment scale

Assessment feature / target	Satisfactory 1	Satisfactory 2	Good 3	Good 4	Excellent 5
1. Goal setting - Working life orientation - Significance of subject - Objectives, specifying of tasks - Delimiting scope of research	The objectives of the research study can be identified but are not clearly stated. The thesis work is poorly delimited. The necessity of work is poorly justified.	Existing information has not been fully utilized for setting the objectives. Realistic objectives of thesis project. A narrow theoretical framework.	The subject has a working-life orientation. Clear and realistic objectives. The report structure is presented and solutions are justified if the structure is different from the ordinary.	The work is professionally interesting. The objectives are carefully set and based on an extensive needs analysis. The theoretical framework is valid and justified for the outcome of the project.	The work will develop the student's professional knowledge and create added value for the commissioning party. The work is innovative. The subject is examined from a new perspective.
2. Theoretical framework - Appropriateness - Logic - Critical stance - Use of source material - Concept definitions	The theoretical framework is not appropriate. The student's knowledge of the subject area is inadequate. A scanty, one-sided and inconsistent way of using of sources. Key concepts are poorly defined.	The theoretical framework is inconsistent and narrow. A haphazard use of the selected sources. Course books and second-hand sources mainly used as a knowledge base. Definitions of concepts are inadequate.	The theoretical framework is constructed appropriately for the outcome of the work. Uncritical and ungrounded but versatile use of sources. The key concepts are quite well defined.	The theoretical framework is logical and comprehensive. The sources are critically used and well integrated with each other. The sources conduct a dialogue.	The theoretical framework is extensive and well justified. The framework has a sufficient range of current, reliable and original sources. Sources published in foreign languages are also used. The key concepts are very well defined.
3. Planning of thesis work - Implementation of work - Research methods - Schedule - Scope of work	The plan is superficial or not documented at all.	The plan is not fully logical or it has lacks.	The plan is logical and consistent. The plan is feasible, but the choices are not sufficiently justified. Work responsibilities and stakeholders are defined.	The plan is justified and realistic. The plan pays attention to factors that are critical for the thesis project objectives. Justification and consequences of choices made are discussed.	The plan utilises the framework skilfully. The plan is flexible, balanced and objective.
4. Implementation of work/outcome - Presentation of outcome - Attainment of objectives - Evaluation of outcome - Suggestions for development and further work	The outcome does not match the set objectives. The outcome is weak. The documentation of the implementation or of the outcome is inadequate.	The outcome matches the set objectives only partially. The implementation of the outcome is inadequate. The documentation of the implementation or of the outcome is mostly well done.	The outcome is implemented following the standard solutions and mainly complying with generic quality conceptions in the professional field. Knowledge and research data on the subject area are utilised for the thesis project outcome. Consideration of the target is group adequate.	The outcome is a justified entity and its implementation is logical. The outcome and discussion of the work are well connected with the theoretical framework. The evaluation of the outcome is systematically done.	The outcome is justified, and it has potential for impact. The theoretical framework is critically utilised for evaluating the outcome. Relevant cultural and esthetical values skilfully considered in the outcome.

(Continues)

TABLE 2. (Continues)

<p>5. Written presentation</p> <ul style="list-style-type: none"> - Logical structure - The scope of the report is minimum 30 p. - Finalised according to the guidelines - Use of language 	<p>The report text is intelligible but not easy to read. The text does not fully follow the expected style register. Inconsistent organisation of text. The work does not comply with guidelines as to presentation or scope. The graphs and tables (/pictures and recordings) are of poor quality or ambiguous or work lacks necessary graphs and tables. Sources and source references not appropriately given.</p>	<p>The organisation of report has lacks. The text has errors, but it fulfils the requirements of the style register. The graphs and tables (pictures and recordings) are flawlessly presented, but fail to add significant value to the work, or the work is not illustrated at all. Some inadequacies of layout and language.</p>	<p>The organisation of the report is logical. The report text is fluent and mostly error-free. The graphs and tables (pictures and recordings) add value to the work. The sources and in-text references appropriately given. The layout mostly follows the guidelines.</p>	<p>The organisation of the report is logical and clear. The report text is fluent and error-free, and it is written in adequate style. The high-quality graphs and tables (pictures and recordings) clearly add value to work. The layout follows the guidelines.</p>	<p>The organisation of the report is flawless, clear, and well-connected. The text is written in a fluent and error-free academic style. The graphs and tables (pictures and recordings) are superbly done and add significant value to work. The layout follows the guidelines without exception.</p>
<p>6. Process management</p> <ul style="list-style-type: none"> - Independence of working - Time management - Management of guidance and instructions - Presentation of the thesis project 	<p>The thesis process lacks independence. The guidance and instructions provided are utilised only to some extent. Delays in the thesis project schedule due to process management problems.</p>	<p>The guidance and instructions are partly utilised. The thesis process is completed with the support of guidance.</p>	<p>The guidance and instructions provided are utilised quite well. The thesis project is carried out in a standard way. The process is well managed schedule-wise. The student assesses his/her own learning.</p>	<p>The guidance and instructions are utilised in a fluent, independent and extensive way. The project is a well-managed entity from the beginning till the end. The student evaluates his/her learning skilfully.</p>	<p>The student demonstrates excellent skill of process management. The work is innovative, novel and creative. The student assesses his/her learning very skilfully.</p>

5 REPORTING

The final project divides into three sections: the first, the main and the final sections.

The first section

Title page

Abstract

(Abstract in another language)

(Concept definitions)

(Preface)

List of contents

Main section

Introduction

Subject treatment

Results

Conclusions and discussion

Final section

References

Appendices

5.1 First section

The first section of the report comprises a title page, an abstract (abstracts), an optional preface and a table of contents. The information in this section is called bibliographical data.

5.1.1 Title page

Spacing of the title page is 1.0, and all of text in the title page is bolded. Text begins 4 cm from the left hand side of the page. A margin of about 10 cm is left at the top of the page. Next come the author's name or authors' names (font size 14 pt). Below this comes the name of the thesis in capital letters (font size 16 pt). Further down in this page "Thesis", and "CENTRAL OSTROBOTHNIA UNIVERSITY OF APPLIED SCIENCES", name of degree programme, and the date of finalising the thesis (e.g. May 2011) are written (in font size 14 pt), so that the date is placed in the last line.

The name of the thesis is considered properly. It should be as informative and interesting as possible. As a general rule, the writer should provide a heading and a thesis name that are easy to read and describe the subject adequately. Sometimes it may be necessary to name the work so that the main heading gives the subject area and the subsequent heading defines the perspective taken for the subject. (Example: Main heading DEVELOPING THE REPORTING PRACTICES OF MANAGEMENT, subheading The City of Kokkola as an example). (Link: [a sample of title page.](#))

5.1.2 Abstract

The aim of the abstract(s) is to provide an overall picture of the work. It divides into bibliographical details (i.e. the name of the university of applied sciences; degree programme, student, supervisor or supervisors; name of the thesis, and key words) as well as a summary of the final project. The abstract is placed on a separate page and laid out in an abstract template provided by the institution (link: [Thesis abstract.](#)). The style of language is declarative, brief and written in the passive voice. Abbreviations, symbols or typographical highlights are to be avoided, and no reference is made to graphs or tables. The keywords describe the core content of the thesis, and the words are arranged alphabetically. To help finding suitable key words, the writer may use vocabularies and ontologies such as Finnish Ontology Library Service ONKI available at <http://www.yso.fi/onki3/en/>.

The abstract(s) must be written in full sentences, that is, not as a list. The structure of the abstract is the following:

- details of the contractor
- subject and objectives
- methods
- results and conclusions.

As much as possible, the abstract is written in the simple past tense; especially the writer's own contribution to the work is written in the past tense. The abstract should enable the reader to understand the content of the final project without having to read the actual thesis report. The abstract is checked by a COU English teacher. Some degree programmes may also require an abstract written in Finnish or English. The layout and principles of writing the English abstract apply to other language versions.

5.1.3 Concept definitions and foreword

The preface is not compulsory. If the thesis has professional terms and concepts that are hard to understand and thus need to be defined, a list of concept definitions is created. The list may also include abbreviations. The list is written with 1.5 spacing and placed after the abstract page. It may comprise a brief description of the background, place of execution, contractor and an acknowledgment of the assistance provided by individuals in the preparation of the work. Acknowledgements of gratitude are written briefly and tactfully. Each person's name should be accompanied by their title, occupation or both. For any abbreviations of titles, only the commonly accepted ones should be used (e.g. MA, MSc). If the work has two authors, the share of each of the two authors is explained in the preface. The preface is written on a separate page to follow the concept definitions, but if the latter are not included, the preface must come after the abstract page.

5.1.4 Table of Contents

The table of contents follows the preface on a new page. It is headed TABLE OF CONTENTS and should be concise and informative. A good table of contents enables the reader to easily visualise the entire work and its structure.

The table of contents consists of main headings and no more than two heading levels. The number of the sub-heading must start at the same location where the previous level heading starts. All headings are written exactly as they are found in the text. Therefore, it is recommended that the table of contents is created automatically, which ensures that the headings found in the report text and in the table of contents are identical. Headings in the table of contents are written in font size 12 pt. The last entries, REFERENCES and APPENDICES, have no numbers. (Link: [a sample of a table of contents](#).)

5.2 Main section

The main section of the final project has the introduction, treatment of the subject, research results, summary, and a discussion section. The introduction is to create interest in the subject and to lead the reader into the subject. It also tells the reader about the writer and his/her expertise. The introduction allows the reader to evaluate how well the writer understands the subject. This is why the final version of the introduction should be the last section that is written up.

The section where the subject is treated must be linked to the chosen structure and the theoretical framework. It aims to demonstrate the appropriateness and necessity of the final project and to display the reliability and pragmatic nature of the results. The conclusions and discussion sections provide links to the subject area chosen and research problem presented in the introduction. The conclusions and discussion sections also give answers to research the questions presented. The discussion section deals with the consequences and implications of the final project.

The research method and research approach depend on the selected subject and related problem setting. The selected method should ensure that the final project offers a solution or addresses the problem in a way that is as reliable and trustworthy as possible.

5.2.1 Introduction

The introduction is the writer's own lead-in into the content of the report. In the introduction, the writer first introduces the background and aim(s) of the work, then the limitations of the study. After this, the writer presents the research problem(s) and content of the report in an outline. The writer also describes his/her own objectives and intentions. The writer can also express the research questions literally in the form of questions.

Significant source material used in the work can also be presented in the introduction and the central concepts of the study can be discussed briefly. The introduction of a thesis that has about 50 pages should be 1.5–3 pages. No sub-headings or source references are used in the introduction.

5.2.2 Subject treatment and work structure

How the work is treated and structured depends on the selected thesis structure and the theoretical framework. The structure can be used as a preliminary frame when still considering the final structure, but in the finalised thesis version, the headings need to be more informative and have better links to the thesis overall.

The structure of the thesis must support the treatment of the subject and the solution(s) to the problem so that the theoretical framework provides a clear justification for how these solutions were reached. In research-based thesis work, the theoretical framework is discussed first. Following this, the methods employed and the research data are presented.

In a functional final project, the theoretical framework has the role of background information, so that the treatment of the subject is built around the description of the phenomenon, environment or product. The selected theoretical framework is presented in an appendix.

In production type and problem-solving type theses, the presentation of issues can be structured around various subject entities, in which the theoretical framework and applications alternate. These entities can progress by topic or theme. In all types of structures it is important that the subject is treated in an organised and logical manner.

5.2.3 Results and discussion

The answers, results or solutions to the research problem(s) are presented in the results and discussion section. The writer examines the results based on the research problem(s), theoretical framework, and methods that he/she employed. If necessary, the results can be illustrated with graphs and tables. The writer must make sure that he/she presents, highlights and discusses the data in the graphs and tables in writing.

In the discussion section, the results are compared with the literature and sources used. The impacts and implications of the problem solutions or the results obtained can also be predicted and described based on the literature and research findings. The writer must ensure that all problems and questions presented receive an explicit answer.

5.3 Final section

The final section of the thesis comprises the references and appendices. The references listed tell the reader what sources the writer has used in the work. Thus every source mentioned in the list of references must be quoted in the actual text, and the references list must give all the sources used.

5.3.1 References

The list of references comes after the treatment of the subject and before the appendices. The heading REFERENCES is written in capital letters. The reference list includes all sources that have been used in the report text. Thus, the sources of graphs and tables must also be listed. They are listed alphabetically according to the authors' surnames. Source

references are always given when quoting someone else's work. The reader must be able to find details of the cited works in the reference list using the name in the citation.

The reference list is page numbered. The page numbers continue from the previous section. Bibliographical details necessary for locating the cited works are included in the reference list as instructed in more detail in this guide (see section 7). The details include the author's name, year of publication, name of the work or article, name of the series, journal or magazine, number and page numbers, edition – if there are several – and the place of publication and the publisher.

5.3.2 Appendices

The appendices make up the final part of the project. Page numbers are not used in this section. Instead, each appendix is numbered in sequence: APPENDIX 1, APPENDIX 2 and so forth, in the upper right hand corner. If the appendix is multi-paged, pages are numbered APPENDIX 3/1, APPENDIX 3/2. Reference to the appendix is always given by using the appendix number.

The in-text reference includes no sub-numbering of the appendix page. Also, no reference is given to a graph or table in the appendix, but the in-text reference is always given to the particular appendix only. Example: A default style sheet was designed for the three clients (see APPENDIX 1).

6 LAYOUT ISSUES

When beginning the write-up of the project, the writer must check the word processing programme settings to ensure that these are set according to the instructions given in these guidelines. It is a good idea to keep these guidelines close at hand during the entire write-up process.

6.1 Text settings

Font

The recommended fonts are Times New Roman 12 pt, Arial 12 pt and Palatino 12 pt.

Line spacing

Line spacing must be 1.5. However, single-spacing (spacing 1.0) is used for the title page, the abstract, the possible preface, the table of contents and the list of references as well as any extended quotations included in the text.

Page numbers

Page numbers are put in the upper right hand corner of the page. Page numbers begin with 1, the introduction page, and continue sequentially until the end of the list of references.

Margins

A margin of 2.5 cm is left at the upper and lower edges of the page. The left margin is 4 cm and the right 1.5 cm. Words can be hyphenated. Both sides are justified. Only the left hand side is justified in the list of references.

Paragraphing

Paragraphs are separated from each other using blank lines, but other than this, the lines are written in full. It is a good idea to vary the paragraph length. The recommended paragraph length is 8–12 lines. Any headings at the bottom of the page should have a minimum of two lines typed below it.

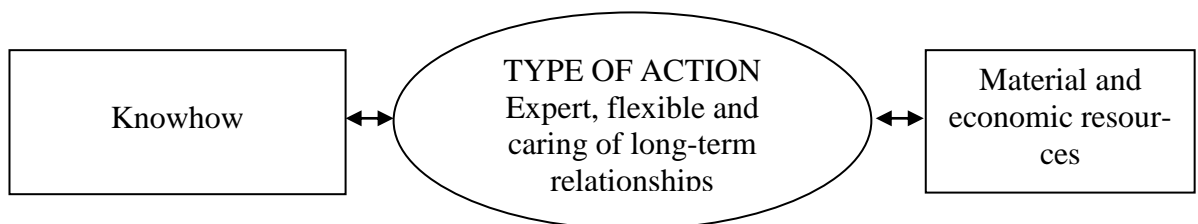
6.2 Chapter headings and numbering

Headings should be brief, precise and descriptive of the content. Main chapters always begin on a new page. Chapter sections and sub-sections are assigned a numerical index after which two spaces are left after the last digit before the heading and full stops are not used. Two blank lines are left after the main heading, and one blank line after sub-headings. Two blank lines are provided above sub-headings.

Main headings are written in upper case letters, all others in lower case letters. All headings are in bold and written in font size 12. Note that when the chapter has sub-sections, for example chapter 5 is sub-divided into 5.1, at least two sub-sections need to be included under the one main heading, that is, both 5.1 and 5.2); see section 5.2 above. Unnumbered headings must be avoided.

6.3 Tables and graphs

The term *graph* covers all means of illustration used in the report other than *tables*. Tables are numbered separately, and so are graphs. The word TABLE is written in upper case letters above the table. This is followed by the table number and a full stop. The name of the table comes after the full stop and this is not followed by a full stop. Note that the word GRAPH is written in upper case letters below the graph and the word is followed by a full stop and the name of the graph. In the text, both tables and graphs are referred to by their number. If a table or graph from another source is used as a basis, it can be adapted to suit the thesis. Reference to this source is normally given at the end of the caption in parenthesis. See Graph 2 and Table 3 below for examples of these.



GRAPH 2. Success factors for competitive edge (adapted from Anttila & Iltanen 2001, 27)

If the table continues over to the following page, (Continues) is written at the bottom right of the page. The number of the table followed by (Continues) is also written at the top left of the following page, e.g., TABLE 16 (Continues); see e.g. pp. 14–15 above for an example.

TABLE 3. Age distribution of respondents

Age group	Share %	No. of men	No. of women
Under 35 years	16.5	4	2
35–44 years	51.4	16	3
45–54 years	24.3	8	1
55 years or more	8.1	2	1

A table or a graph is not an end in itself. When correctly used, the table and the graph presents the same information in a more condensed and descriptive manner than half a page of text. Yet, the writer must offer conclusions and explanations based on the tables and graphs, so that they do not remain fragmented or disconnected from the rest of the report content. If there are several tables or graphs, they are also given in the table of contents (see the example, section 5.1.4).

6.4 Abbreviations

Abbreviations refer to those generally accepted in professional literature for often used and lengthy concepts. For example, the concept Integrated Services Digital Network is abbreviated to ISDN.

When the concept is first mentioned in the text, it is written out in full followed by the abbreviation in brackets, for example, Uninterruptible Power System (UPS). After this, the concept can be referred to by the abbreviation without brackets, e.g., UPS.

7 REFERENCES

All sources used in the report must be mentioned in the text and in the list of references. The name-year system is used only. Using this system, the author's surname and year of publication, followed by a comma and the page(s) referred to, are given in the text. This in-text reference is written in parenthesis in the following way:

(Hall 2005, 34–35.)

When the entire work is referred to, page numbers need not be given. This way of referencing is used, for example, when the source is cited in general terms. However, the work referred to usually has a specific point where the information can be accessed.

(Hall 2005.)

If the reference has two authors, both names when giving their source. The symbol “&” joins the names.

(Hall & Creswell 2005, 5.)

If a reference has three or more authors, all names are given the first time it is referred to.

(Reeves, Stevens & Young 2000, 21–22.)

Subsequent source references give the first author and the abbreviation et al.

(Reeves et al. 2000, 21–22.)

If the information comes from several sources, all source references are placed inside the one set of brackets and separated by a semicolon.

(Pearson & Robins 2007; Vogt 1997.)

Publications by the one author are differentiated by the year of publication and are indicated in order of publication. If two works have been published in the same year these are differentiated with letters of the alphabet.

(Black 1999, 2003.)

(Black 2001a, 2001b.)

When the name of an author is unknown, the publication's name and year of publication are cited, and in some cases the name of the publishing organisation. This method is also used with journal articles when the author's name is unknown. Moreover, laws and acts, committee reports and so on are cited in this way.

(Committee for corporate analysis 2005.)

Source references for electronic sources, for example websites and electronic books are given as above. The reference includes the author's name and year of publication/issue. The address is included in the list of references only. Pages are not given.

Internet site:

(Greene 2010.)

Electronic book:

(Lee, Simmons & Singer 2009.)

If no other author except the site address or organisation responsible for site maintenance is found for an Internet site, then these are given in the citation.

(Finnish Library Association 2010.)

(YLE 2009.)

The source reference should indicate what section of the text is based on the cited reference. If an entire paragraph is based on the source, the source reference is given in brackets at the end of the paragraph after the final full stop, as if it was a sentence in itself. A full stop comes inside the brackets also:

... text text text. (Hawkins 2006, 120–121.)

If the source reference concerns one sentence only, it is placed within the same sentence. The full stop is placed outside the parenthesis in this case:

... text text text (Hawkins 2006, 120–121).

A source reference of several sentences is separated from the text by an indentation of 2.3 cm with single line-spacing (line-spacing 1.0). Quotation marks are not required; please see the example below:

Sources can be presented when setting the question, but it would be better if they were included as a separate sub-section. Source material should be examined source critically. Sources must relate to the study, and a source that is not really used in the study should not be emphasised. (Yang 2005, 119.)

Quotations of interviews that were conducted in the thesis project are always indented and written with single spacing, even if the quotation is not longer than one line.

8 COMPILING THE LIST OF REFERENCES

After the actual text has been written, the student draws up the list of references, which is headed REFERENCES and capitalised. All sources mentioned in the final project are included in the list of references without any sub-headings, and they are written in alphabetical order.

Bibliographical data that are necessary for locating the source must be given in the list of references. These include the surname and initial of the author; year of publication; the title of the work or article; the series, journal or magazine; the volume number and page numbers; the edition used – if there are several – and the place of publication and the name of the publisher. In what follows, examples are given about listing entries in various category types.

8.1 A book

Author's name. Year of publication. Name of work. Edition (if more than one). Place of publication: publisher.

Giddens, A. 1991. *Modernity and Self-Identity. Self and Society in the Late Modern Age.* Cambridge: Polity Press.

Trzeciak, J. 2003. *Study skills for academic writing: Student's book.* Essex: Longman.

Zemach, D. & Rumisek, L. 2005. *Academic writing from paragraph to essay.* Oxford: Macmillan.

8.2 A series publication; a journal, magazine, or newspaper article; an article in an edited work

Buchman, D. 2006. A Special Education. *Good Housekeeping.* March 2006, 143–48.

Döös, M. 2007. Organizational learning. Competence-bearing relations and breakdowns of workplace relations. In L. Farrell & T. Fenwick (eds.) *World Year Book of Education 2007. Educating the global workforce. Knowledge, knowledge work and knowledge work-*

ers. London: Routledge, 141–153.

Koyer-Golkowska, A., Musialik-Piotrowska, A. & Rutkowski, J. 2004. Oxidation of chlorinated hydrocarbons over Pt-Pd-based catalyst: Part 1. Chlorinated methanes. *Catalysis Today* 90, 133–138.

Takase, M, Maude, P. and Manias, E. 2004. Explaining nurses' work behaviour from their perception of the environment and work values. *International Journal of Nursing Studies* 44, 171–174.

Toivonen, J. 1996. *Practical exercises in biochemistry*. Helsinki University of Technology publication 45. Helsinki University of Technology. Otaniemi.

8.3 An electronic publication

Electronic sources are included in the list of references in the same way as in traditional sources. The thesis writer must carefully consider the reliability of information, the permanency of the source, as well as issues of accessibility and copyright when selecting and using electronic sources.

Because internet documents can be modified, the date the document was accessed and any possible dates of modification are given in the form day.month.year. Electronic document types include pdf files, blogs maintained by experts, and chat group articles.

Krigsman, M. 2009. Social CRM: Shifting power and rapid burn. Available: <http://www.zdnet.com/blog/projectfailures/social-crm-shifting-power-and-rapid-burn/5367>. Accessed 12 October 2010.

Summit, S. 1995. C Programming Notes. A Short Introduction to Programming. Available: <http://www.eskimo.com/~scs/cclass/progintro/top.html>. Modified 1996. Accessed 19 December 2010.

8.4 Works with no author given such as laws, acts, committee reports, standards and patents

Example of a work that has no author. Note how one or two words only are used instead of the author's name, which does not exist.

High-strength 2010. High-strength stainless steel motorcycle frame developed. Available: <http://www.outokumpu.com/pages/>. Accessed 19 December 2010.

Law:

University of Applied Sciences decree 9.5.2003/351.

Report:

Harrison, D. 2007. At Europe's Highest Level: A More Effective European Council. Finnish Business and Policy Forum EVA. Helsinki.

Standard:

SFS 5342. Bibliographical references (Kirjallisuusviitteiden laatiminen). 1992. Helsinki: Finnish Standards Association SFS.

Patent:

Author names are those taking out the patent. Year patented. Organisation who owns the patent. Name of patent. Country where patented and patent number (under which patent can be found in the patents register)

Melcer, S. 2006. SOFUN. Physical Exercise machine. USA. US2006252612.

8.5 Thesis, workshop, conference; interview, personal communication, email message; lecture notes and instructions; artistic work

Kemppainen, J. 2006. Rypsi, rapsi ja sinappi biodieselin valmistuksessa (Turnip rape, rape and mustard in the production of biodiesel). Final project. Central Ostrobothnia University of Applied Sciences. Degree Programme for Chemical Engineering.

Lehmann-Brauns, A. 2010. Chambers of Illumination. Photograph. Available at: <http://www.goethe.de/kue/bku/kpa/en3405951.htm>. Accessed 28 December 2010.

Pajunen, L. 2001. Activating lead anodes with metal oxides. Master's thesis. Helsinki University of Technology. Department of Materials Science and Rock Engineering. Otaniemi.

Viljanen, M. 2004. Interview of Communications Manager. 1 April 2004. Digital Equipment Corporation Ltd. Helsinki.

Vlaescu, G. 2010. Scandinavian technology partner. Email georgevlaescu@emmerce.net 15.2.2010. Printed 23.2.2010.

8.6 Radio and television programs, videos and records

Drama, theatre and learning. 2001. Educational television Katarsis series programme 1/6. Scriptwriter M. Kilpeläinen. Editor and producer M. Kilpeläinen. YLE Open University. TV 1. Broadcast 30.9.2001.

The Corporation. Talk, learn, act. 2004. A film by Achbar, M, Abbott, J. and Bakan, J. Production: Big Picture Media Corporation. New York: Zeitgeist Films Ltd.

9 BINDING AND PUBLISHING

After receiving permission from the supervisor, the student will make arrangements to have one copy of the thesis bound for his/her own department and another copy for the COU library.

The student sends the bound copies of thesis to the student office and to the COU library. In addition, he/she saves the thesis in a digital version in PDF format in the Theseus Electronic Library. The COU Library has issued instructions about Converting the thesis to PDF format. (Link: [Converting the thesis to PDF format](#); link: [Publishing the thesis in the Electronic Library Theseus](#))

A final project for a university of applied sciences degree is bound in black covers and a final project for a higher university of applied sciences degree in wine red covers. The text on the cover is in gold. Texts on the cover read: FINAL PROJECT NAME (text centred, 10 cm margin from upper edge, font size 16 pt). The cover page gives the author's name or authors' names (6 cm margin from lower edge and 3.5cm margin from the right side, font size 14 pt). The author's name is written on the spine of the publication (6 cm from upper edge, font size 14) and the year (6cm from the lower edge, font size 14 pt).

A final project is always a public document. If it contains a confidential section, the nature of this section's content should be indicated in the abstract. The fact that the project contains such a section is stated in the abstract. The confidential section that remains with the contractor is attached as a separate appendix.

The publicity restriction of a thesis can only be given on material that is determined as confidential by law. Any decision by the university of applied sciences concerning the confidentiality of a thesis is based on the Act governing the public behaviour of authorities (L 621/1999). This act defines confidential documents as those containing information considered to be business secrets (if the party the document concerns does not give permission for making the information public). In cases of patenting of inventions the patenting legislation concerning inventions in institutions of higher education and general patenting legislation are followed. Issues of copyright are decided by general copyright legislation.

FURTHER READING

Note: Some of the items below and other related books are available in Ebrary, an electronic library which offers access to a wide range of titles from academic subject areas such as business, technology, public health and nursing, and music. Ebrary is accessible to COU students via the university computer network. (See <http://kirjasto.cou.fi/> for more.)

Alasuutari, P. 1998. *An Invitation to Social Research*. London: SAGE.

Bell, J. 2005. *Doing Your Research Project: A Guide for First-Time Researchers in Education, Health and Social Science* (4th ed.). Maidenhead: Open University Press.

Blaxter, L., Hughes, C. & Tight, M. 2010. *How to Research* (4th ed.). Maidenhead: Open University.

Boje, D. 2001. *Narrative methods for organizational and communication research*. London: SAGE.

Burns, N. & Grove, S. 2007. *Understanding nursing research: building an evidence-based practice*. St. Louis: Saunders Elsevier.

Churchill, G. & Iacobucci, D. 2002. *Marketing research: methodological foundations* (8th ed.). Mason, OH: South-Western.

Coolican, H. 1999. *Research methods and statistics in psychology*. London: Hodder & Stoughton.

Denzin, N. & Lincoln, Y. (Eds.) 2000. *Handbook of qualitative research*. Thousand Oaks, CA: SAGE.

Dow, S. 2002. *Economic methodology: an inquiry*. Oxford: Oxford University Press.

Englefield, M. 1987. *Mathematical methods for engineering and science students*. London: Edward Arnold.

Gerrish, K & Lacey, A. (Eds.) 2006. *The research process in nursing*. Oxford: Blackwell.

Gummesson, E. 2000. *Qualitative methods in management research* (2nd ed.). Thousand Oaks, CA: SAGE.

Hakala, J.T. 2000. *Creative thesis writing: a guide to development and research work*. Helsinki: Gaudeamus.

Heaton, J. 2004. *Reworking Qualitative Data*. London: SAGE.

Hollway, W. & Jefferson, T. 2000. *Doing qualitative research differently: free association, narrative and the interview method*. London: SAGE.

Kvale, S. 1996. *InterViews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: SAGE.

- Loney, N. 2001. Applied mathematical methods for chemical engineers. Boca Raton, FL: CRC Press.
- McNiff, J. & Whitehead, J. 2000. Action Research in Organisations. New York, N.Y.: Routledge.
- Melville, S. & Goddard, W. 1996. Research Methodology: An Introduction for Science and Engineering Students. Cape Town: Juta & Co Ltd.
- Miller, I., Freund, J. & Johnson, R. 2000. Probability and statistics for engineers. New Jersey: Prentice Hall.
- Murray, R. 2002 How to Write a Thesis (2nd ed.). Maidenhead: Open University.
- Oliver, P. 2004. Writing your thesis. London: SAGE.
- Patton, M. 2002. Qualitative research & evaluation methods. Thousand Oaks, CA: SAGE.
- Saarnivaara, M., Vainikkala, E. & van Delft, M. (Eds.) 2004. Writing and research: personal views. Jyväskylä: University of Jyväskylä.
- Saunders, M., Lewis, P. & Thornhill, A. 2007. Research methods for business students (4th ed.). Harlow: Prentice Hall/FT.
- Silverman, David. 2005. Doing qualitative research: a practical handbook. London: SAGE.
- Smith, M. 2003. Research Methods in Accounting. London: SAGE.
- Stephenson, G. & Radmore, P. 1990. Advanced mathematical methods for engineering and science students. Cambridge: Cambridge University Press.
- Trzeciak, J. 2003. Study skills for academic writing: Student's book. Essex: Longman.
- Zemach, D. & Rumisek, L. 2005. Academic writing from paragraph to essay. Oxford: Macmillan.

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