LEBANESE UNIVERSITY PHARMACY FACULTY

THESIS GUIDE

5th Year

Format & Presentation



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I. GENERALITIES

I.1. Definitions and purpose

A thesis is a work of academic research. It is produced in written form, presented orally to a jury by a student to obtain a university degree in exercise doctorate in pharmacy. The thesis must be an original contribution expressing a methodical scientific work. A good thesis includes exhaustive and rigorously analyzed research.

The general aim is to carry out a study on a subject related to the content of the university program and under the supervision of a university instructor-researcher and/or a health professional with the necessary skills. It should be noted that all work is strictly personal; plagiarism being formally prohibited and punishable. This work will serve as an educational tool that is integrated into the scientific documentation of the faculty and can be used by the instructor, student, pharmacist, or anyone else who is willing to seek scientific knowledge.

I.2. Choice of the thesis topic

For the 5th year thesis, it is recommended that the student thinks about the topic choice from the 4th year. The final choice of the topic will be made from the list proposed by faculty members in the 5th year. The choice should be approved by the faculty member who suggested the topic.

I.3. Role of the thesis supervisor and student

I.3.1 Role of the thesis supervisor

Whatever the terms of the choice, the acceptance of a topic corresponds to a real moral contract between the student and the thesis supervisor in which:

- The supervisor is committed to help the student by:

- explaining the working method;
- providing him with all the information on the working method, the monitoring of the
 protocol, the bibliographical references that will seem necessary;
- following up with him on the exploitation of the results, in case of original work (experimental or clinical);
- correcting the writing of the text; the student may have recourse to a language specialist to correct the errors or language style in the manuscript.

I.3.2 Student role

- The student commits:

- to carry out the work given to him by the supervisor and for the time necessary to achieve the final product which is the thesis;
- to carry out the experimental/clinical work conscientiously and according to the recommendations provided by the supervisor, particularly if it is a survey or work that involve a statistical analysis;
- to agree to exploit all the documents given to him by his supervisor;
- to search and find by himself the additional documents and necessary for the realization and accomplishment of his work.
- to submit, if applicable, the raw and analyzed data on CD-ROM to the thesis director
 when submitting the final and corrected version of the thesis.

II. MANUSCRIPT STRUCTURE

II.1. Original work: experimental or clinical

The reference structure of this type of work is that of an original scientific article, i.e. 'Introduction, Method, Results, Discussion, Conclusion'.

- <u>Introduction</u>. It presents the subject (bibliographic data's) and the reasons for the choice of work, and very clearly, the purpose of the work, the question that is asked (i.e. problematic), or the initial hypothesis.
- Method(s). This section describes the different steps or conditions to follow to ensure the
 proper completion of the work, which is essential for the reader to estimate the quality of the
 approach. In an experimental work, this part will be named "Materials and Methods" and
 "Methodology" for an investigation.
- Results. They are displayed as clearly as possible by text, diagrams, graphs and tables. The purpose of the text here is to present and explain the results, but not to comment on them. It is up to the reader to conduct his critical reflection on these results.
- <u>Discussion</u>. In this section, we comment on the used methodology (including the encountered difficulties, ...) and the results observed by referring to previous similar work in the literature. We describe in this section, for example, biases that may question certain results, ...

• <u>Conclusion</u>. It indicates the answer to the question raised in the beginning (or the impossibility of answering). Also, this part should include perspectives or innovative ideas for future work.

II.2. Literature review or bibliographical work

This type of work will consist of 3 parts: General introduction, Literature review, General conclusion.

- <u>General introduction</u>. This 1-2-page section must justify the choice of the subject (problem situation) and end with the introduction of the various subparagraphs (or chapters) of the next part.
- <u>Literature review</u>. This part will consist of at least 3-4 chapters (Chapter I, II, etc.), each of which must justify a specific introduction of a few lines introducing the chapter. It is a work of synthesis of the data of the literature. However, a positive or negative critical review of the previously published data (discussion) would be desirable. A small conclusion will be given at the end of each chapter linking a chapter to the next.
- <u>General conclusion</u>. This part is spread over 1-2 pages; it must be strictly personal, allowing the evaluation of the student's deductive and innovative skills. At the end of the conclusion, the student could set out the prospects of the work.

II.3. Complementary parts

Thesis work must be completed by:

- Cover page. It must include the name of the University and Faculty with their necessary logos, placed on the two upper ends of the page, the year of completion, the student's file number, the name of the diploma obtained, the title of the thesis followed by the name of the student and the defense date and finally, the names of the jury members (supervisor and examiners) (see examples in appendix).
- <u>Protection white page</u>. They are white sheets. One page is placed at the beginning of the work; the other is placed at the end just before the back cover.
- Title page. An accurate representation of the front page.
- Dedications and/or acknowledgments. Both parts are optional.

- <u>Abstract (*Résumé*)</u>. Placed at the beginning of the thesis in two languages (English and French), it gives in a few lines the essential of the work. It must consist of 200-300 words and followed by a list of 5 keywords (*mots-clés*).
- <u>Table of contents</u>. It is the presentation of the titles of the different parts of the thesis, the sections, and paragraphs as well as the numbers of the pages on which they appear.
- <u>List of abbreviations</u>. Regardless the number, abbreviations and acronyms are presented as an exhaustive list. They are cited in alphabetical order with their associated definitions.
- <u>List of illustrations</u>. It is classified by type (list of figures, list of tables, ...) and each title (concise and precise) must be followed by the page number on which it appears.

 !!! All the above-mentioned parts must appear in the thesis before the "General introduction" section.
- References. It is the list of articles, books, reports, theses, and dissertations read to perform the work. This structure has some slight variations depending on the type of references. It must be placed in the thesis after the "General Conclusion".
- <u>Appendix(ces)</u>. This section may include important full text (law, guidelines, etc.), questionnaires, details about methodology or equipment, detailed tables of statistical results (if necessary), or any other document deemed useful.

II.4. General structure: order of presentation

The general structure of the thesis is presented in the following diagram. The body of the thesis (from introduction to conclusion) varies depending on whether it is an original work or a review of the literature.

Original work	Literature review	
Protection white page		
Title page		
Dedication(s)		
Acknowledgments		
Abstract & Keywords		
Résumé & Mots-clés		
Table of contents		
List of abbreviations		
List of tables		
List of figures		
Introduction	General introduction	
Method		
Results	Literature review	
Discussion		
Conclusion	General conclusion	
References		
Appendix(ces)		
Protection white page		

III. COVER

- The format must meet the requirements of the Faculty (see example).
- The cover is made of rigid paper in burgundy (Bordeaux) color.
- The characters are golden on the flat and the side (student name, work title, academic year).
- !!! The cover page is reproduced after the protection white page.

IV. FORMAT

- The page format is ISO A4 or 210 x 297mm.
- The number of pages must be ranged between 50-70 pages, from the introduction till the end of the references.
- The paper (80g/m²) will be printed on a single front, with the back remaining white. So all pages are on the right.

V. PAGING

- The actual paging in Arabic numerals (1, 2, 3, etc.) starts with the introduction and ends at the end of references.
- Concerning the pages following the references (appendices), they may or may not be numbered. If numbering occurs, continue Arabic numbering after the references until the last page of the thesis.
- Concerning the pages of the parts preceding the introduction, they must be numbered in Roman numerals (i, ii, iii, etc.)
- *N.B. Page numbers are omitted on those that are white or have a large-caliber title* (e.g. separation page between the different parts of the manuscript).

VI. LAYOUT

Use the word processor WINWORD or LATEX. The thesis can be written using the standard known software WORD or the LATEX software that is taught to students during the second semester of their 5th year. The latter is an advanced software specialized in the writing of scientific documents. LATEX allows organizing the students' written thesis in such a way to comply exactly with the instructions requested in this thesis guide concerning the general format of the thesis.

- The lines are justified on 16cm; which leaves a left margin of 3cm and a right margin of 2cm. The upper margin is 2cm and the bottom one 2cm.
- The normal text is composed in the font Times New Roman 12 points with a 1.5 line spacing. The space between paragraphs is 1.5 line spacing as well.
- Leave a blank line between the end of a paragraph and the title of a subsequent section.
- The first lines of the paragraphs always start with an indent of 1 to 2cm.
- Widow or orphan lines are removed by balancing the whites of the page.
- The "legal" numbering is used to subdivide the titles of the sections into the same part. Thus, the number III.2.4 for example refers to the 4th paragraph of the second section belonging to the 3rd part.
- The titles of the parts and sections are written with a Times New Roman font in the following order:
 - o Title of part I. (Times New Roman 16 bold, capital letters) centered;
 - o Title of section I.1. (Times New Roman 14 bold, capital letters) justified on the left;

- o Title of paragraph I.1.1. (Times New Roman 12 bold, lowercase letters) on the left.
- o Title of subparagraph I.1.1.1. (Times New Roman 12 bold, lowercase letters).
- Bold characters will only be used for titles. If you want to highlight a word or phrase from the text, it's better to use *italics* rather than bold.
- The title of each part can appear in the header of the page and written in the Times New Roman font 10 italic in a centered position; the number of the page in the same font but justified right at the bottom of the page (footer) (same format as the present document).

VII. ILLUSTRATIONS

- The text of the thesis can be illustrated with tables, figures, or graphs.
- It is important to note that any illustration must be independently understandable. For this, it is strongly advised to provide a caption in which are given all the information necessary for a good understanding.
- Each figure, graph or table, must have an Arabic number of increasing series that corresponds to their appearance in the text, a title, and a caption placed below the figure or graph and above the table. The source, if any, should also be cited.
- They are written in Times New Roman character 10 points with bold titles.

VIII. BIBLIOGRAPHICAL STANDARDS

The student can adopt one of the two following bibliographical standards:

- ❖ Strictly use the instructions for writing the list in alphabetical order of the list (the American Psychological Association style, APA style). In the text, the references are quoted by the author (the first author, followed by "et al" if there are several authors), then the year of publication; the whole is placed in two parentheses (...). In the list, references are quoted in alphabetical order of the first author of each publication.
- ❖ Strictly use the instructions for writing the list in order of appearance in the text (*Vancouver* convention). In the text, references should be numbered in square brackets [...] with an Arabic number, an ascending number that corresponds to their occurrence in the text. If a reference is quoted several times, it must keep the same number in all parts of the thesis. In the list, references should be listed in the order of their quote number in the text.

Regarding references updating, the following rules should be considered:

- Their minimum number is 30 references; if a lower number, the thesis supervisor must provide a written justification of that number.
- For the thesis involving experimental work, at least 30% of the references must be less than 5 years old.
- For a bibliographical thesis: at least 50% of references must be less than 5 years old.
- The citation from web pages should not exceed 10%.

The way of writing a reference varies according to its type (book, articles, congress...) and its material (paper, online, CD...). It is made up of elements (author, title, edition...) necessary for a good reporting. These elements must follow a specific order. To find the elements of a reference, the main sources are the title and cover pages of the documents. Of course, there are other sources (title page back...). It should be presented homogeneously in the style chosen for each element (character size, font, and boldness) (see hereafter).

Examples

- Article in a periodical: Authors. Year. Title. *Journal* Volume: pages.
 Al-Hajje A, Awada S, Rachidi S, Bou-chahine N, Azar R, Zein S, Hneine AM, Dalloul N, Sili G, Salameh P. 2012. Medication prescribing errors: data from seven Lebanese hospitals. *J Med Liban* 60: 37-44.
- Chapter of a book or encyclopedia: Authors of the chapter. Chapter title. <u>In</u>: Authors of the book. Title of the book (Tomaison, Edition). *Publishing House* Year; Place of edition: pages. Sanchez LA. Pharmacoeconomics: Principles, Methods and Applications. <u>In</u>: Dipiro JT, Talbert RI, Yee GC, Matzke GR, Wells BG, Posey IM. Pharmacotherapy: A Pathophysiologic Approach (6th Ed). *McGRAW-HILL*; 2005; United States of America: 1-16.
- Website: Authors. Title [Online]. Available on: (Consultation Date)
 World Health organization: Media center. Sickle cell anemia and other hemoglobinopathies [Online].
 Available on: http://www.who.int/mediacentre/factsheets/fs308/fr (Consulted on 02.02.2012)
- Thesis or dissertation: Authors. Title. Degree Year; University, Location: pages.
 Barrak J. Sarcoidosis: from Physiopathology to Therapeutics. Thesis Doctor in Pharmacy 2012;
 Lebanese University, Lebanon: 57pages.
- Standards: Authors. Title. *Reference* Year; Location: pages. ISO. Acoustics: method of calculating the level of isotonia. *ISO* 532 **1975**; Geneva: 18 pages.

- Patent: Authors. Title. *Reference*. Date.
 Podoan GM. Mould for producting organic lenses by casting. *Patent EP0234567*. 25 February 1987.
- Communication at a congress: Authors. Communication title. <u>In</u>: Convention title. *Publisher or organizer* Date; Location.
 Vopalensky V, Pospisek M. Mystery of cytoplasmatic capping. <u>In</u>: EMBO Conference on Protein Synthesis and Translational Control. *EMBO* 2007 (September 12-16); Heidelberg, Germany.
- Other media (CD, Application...): Authors. Title [SUPPORT]. *Publisher* Year: Location. Audisio SE. The multimedia book of corrosion [CDROM]. *LPCI, INSA* 1999: Lyon, France.

IX. PLANNING FOR THE DEFENSE

The student is required to submit his typed thesis two weeks before the scheduled date for the defense in order to put the exact date on the cover. This version is normally prepared in SPIRAL; as the corrections are still possible at this stage (just after the defense) and according to the recommendations of the jury members.

Submission of the final version of the CORRECTED thesis, presented according to the regulations cited above, must take place maximum one month after the defense.



LEBANESE UNIVERSITY FACULTY OF PHARMACY



Year:	N°	
THESIS		
for obtaining the degree of		
DOCTOR IN PHARMACY PRACTICE		
TITLE		
Propaged by		
Prepared by		
Presented and defended on		
In front of the jury:		
Supervisor:		
Examiner 1:		
Examiner 2:		