



## Faculty of Dentistry

### Study Program: Dentistry

### Name of the Final Examination: Dissertation Examination

### Title of the Final Academic Paper: Thesis

## Requirements for the Preparation, Writing, and Defense of the Thesis

The dissertation assesses the student's ability to design and conduct independent research, as well as to write and present the research results according to the standards of the scientific community. The activities aimed at acquiring the necessary competencies for preparing the dissertation, as well as the actual development of the dissertation, are carried out during the final two years of study, on a topic specific to the study program. The topic of the dissertation must be chosen no later than the beginning of the first semester of the final year of study and may be changed up to two times, with the approval of the scientific supervisor. The title of the dissertation and/or the scientific supervisor cannot be changed starting from the second semester of the final year of study.

The dissertation is a scientific paper that the graduate prepares and defends before an examination committee in order to obtain the dissertation degree. It must contain the results of the student's own research and investigations related to the chosen topic, which should represent the main component of the paper. It must demonstrate familiarity with the relevant literature, scientific and methodological rigor, a logical structure, coherent scientific writing, and graphic formatting that respects the academic standards of the field. (According to ARACIS Standards for the Dentistry Study Program)

The dissertation is written and defended in Romanian.

## I. Structure of the Thesis

The dissertation is written and defended in the language of the study program followed by the graduate student. It is structured into chapters and must include the following mandatory elements:

- Cover Page – the required information for the cover page is provided in *Annex 1*.



- Title Page – the required information for the title page can be found in the *Template\_Dissertation* document and *Annex 1*.
- Table of Contents – must include at least the titles of all chapters accompanied by the page number where each chapter begins (a model is provided in the *Template\_Dissertation* document).

The dissertation must be prepared as either:

- a primary study (original observational, experimental, or interventional research), or
- a secondary study (a synthesis of primary studies in the form of a systematic review),

and must include at least one personal clinical case relevant to the topic of the study.

## **A. Development of the Thesis in the Form of a Primary Study**

A dissertation developed as a primary study must follow the structure of an original scientific study. This research may be: Observational, Experimental or Interventional

### **1. Introduction**

- **The topic and its relevance:** These elements should be briefly presented, supported by a few recent bibliographic references.
- **The rationale of the study:** Explain why it is important to investigate the chosen aspect.
- **The objectives of the study:** Clearly state the research question or the tested hypothesis. **Do not** include any results from the present work, and the content **must not** overlap with the “Discussion” chapter.

### **2. Material and Methods**

This section must contain, in detail, the materials and methods used in the present study, clearly explaining how they are applied to support and achieve the main aim of the research. All methods, protocols, and existing standards must be presented appropriately. The purpose of this chapter is to describe **how the results were obtained**. Only a limited number of references should be used in this section (mainly if the study replicates the methodology of an established research article). This chapter must include the following:





- **The type of study performed** to achieve the stated objectives (study design): retrospective, prospective, cohort study, controlled, randomized, etc.;
- **The setting of the study;**
- **Study participants:**
  - the method and location of participant selection (patients or laboratory animals): inclusion criteria, exclusion criteria, and the justification for these criteria;
  - identification of age, sex, and other relevant characteristics of the subjects;
  - how data were collected (e.g., from medical records, clinical charts, etc.);
  - how informed consent for study enrolment was obtained;
  - optionally, approval from the ethics committee for conducting the study;
- **Methods:**
  - specify only the methods for which results are presented;
  - include only the methods directly related to the findings;
  - methods must be organized **logically**, not chronologically.
  - **Well-established methods** should only be mentioned briefly (with bibliographic references);
  - **Less commonly used methods** should be described concisely;
  - **Original methods** (new equipment, completely new laboratory procedure, or significantly improved techniques) must be described in detail;
  - The **equipment** used must be specified (device name and manufacturer);
  - **Dental materials, medications, and other chemical substances** used in the study must be precisely identified (international non-proprietary name, commercial name, manufacturer);





- Provide a clear description of the **intervention** or the studied factor (therapeutic procedure, etc.);
- Describe the **parameters monitored** in the study;
- **Statistical Analysis**
- Explain how the **required sample size** was determined;
- Indicate the **statistical tests** used (Student's t-test, ANOVA, chi-square, etc.) and justify the choice of each test (e.g., based on data distribution);
- If a statistical software program was used, specify the **name and version** of the software, but the statistical test itself must still be mentioned explicitly;
- Specify the **significance threshold** (e.g., "differences were considered statistically significant if  $p < 0.05$ "; other thresholds may be used, such as  $p < 0.01$ ).

### 3. Results

- This chapter presents the results obtained using the methods described in the **Materials and Methods** section, focusing strictly on the results that address the study objectives;
- Baseline data of the study groups and the recruitment period;
- Primary and/or secondary outcomes;
- **Failures of the applied methods** or **adverse reactions** to the studied procedure, dental materials, or administered medications (even if these were not part of the initial study objectives);
- Clinical results (minimum three clinical cases) must be presented using pre-operative images, intra-operative images, and/or post-operative images, accompanied when appropriate by corresponding radiographic images;
- Statistical results should be presented in the text *in the form of figures or tables* (the numerical data shown in figures/tables must **not** be repeated in the text);





- The text should highlight only the **important findings**, while the detailed data remain in the tables and figures (see the “Typesetting Requirements – Tables and Figures”).
- In this chapter, results must **not** be discussed, interpreted, compared with literature, or accompanied by personal opinions or impressions. **Bibliographic references do not belong in the Results chapter.**

#### 4. Discussions

The “**Discussion**” chapter must include the following elements, presented **in this order**:

- **The main result of the study** (directly addressing the primary objective);
- **Comparison of the current findings with those of similar studies**; explanation of differences between the results of the present study and those reported in the literature; justification of your own findings when they differ from other studies (e.g., “different methods were used”);
- **Strengths of the study** (highlighting the new and important aspects of the research);
- **Limitations of the study** (limitations related to study design, methodology, or statistical analysis) and how these limitations may have influenced the results;
- **Interpretation and critical evaluation of the results**; explanation of the observed findings;
- **Practical (clinical) implications** of the obtained results;
- **Suggestions for future studies** (future research directions); note that addressing all these points is not strictly mandatory.

#### 5. Conclusions

The conclusions must be written **concisely, in bullet points**, and must include **only conclusions derived from the results of the present study**.

**Do not** formulate conclusions based on the consulted literature.





## **B. Development of the Dissertation as a Systematic Review**

### **Definition – Systematic Review**

A **systematic review** is an analysis of the scientific literature focused on a specific research topic, aiming to identify, evaluate, select, and summarize all relevant studies related to that topic.

### **Definition – Meta-analysis**

A **meta-analysis** uses statistical methods to summarize the results of a systematic review. Not all systematic reviews include a meta-analysis. By combining information from all relevant studies, meta-analyses can provide more precise estimates of the effect of an intervention compared to estimates derived from individual studies included in the meta-analysis.

### **General Comments**

A systematic review **is not a general narrative report**. Its objective is to provide a **complete summary of the relevant literature** on the research topic. High-quality systematic reviews of randomized controlled trials are crucial for **evidence-based medicine**. Systematic reviews can address issues related to therapy, diagnosis, epidemiology, etiology, and more. Like any study, a high-quality systematic review requires a **precisely defined protocol** before starting the review.

## **Chapters and Steps in Preparing a Systematic Review**

### **1. Introduction**

The **Introduction** chapter should include the following paragraphs:

- Description of the disease/problem;
- Description of the intervention;
  - Examples: antibiotic therapy in symptomatic apical periodontitis, early childhood caries prevention, application of intraoral biomaterials in laboratory animals;
- Current knowledge about the disease/intervention;
- How the intervention could be effective;





- Why conducting this systematic review is important.

Statements about epidemiology, morbidity, prevalence, mechanisms of action, etc., must be supported by **scientific evidence with references**.

## 2. Objectives

### Defining the research topic

Formulating a well-defined research question is the most important step in a systematic review. A special framework called **PICO** (Patient, Intervention, Comparison, Outcome) can be used to facilitate literature searching.

- PICO can be extended to **PICOTT**, adding information about the **Type of Research Question** (therapy, diagnosis, prognosis, adverse effects, etc.) and **Type of Studies** (randomized controlled trials, etc.).

The systematic review objective should, whenever possible, be stated in **a single concise sentence**, following the model:

“To evaluate the effects of [procedure or comparison] in [disease] in [population].”

### Example:

“The aim of this study is to provide a systematic review of current evidence regarding the efficacy of systemic antibiotics in symptomatic apical periodontitis.”

## 3. Methods

### Defining Inclusion and Exclusion Criteria

The protocol of a systematic review must first specify the **inclusion and exclusion criteria** for studies. These criteria should be logically justified and usually refer to:

- Evaluated population;
- Disease or condition under study;
- Intervention under investigation;







- Comparison (control group vs. study group);
- Outcomes measured;
- Study type, etc.

### Searching for Studies

Systematic reviews rely on a **complete and unbiased search** of the literature. The search must follow a **predefined strategy** before the results of individual studies are known.

- The process of identifying studies for inclusion, and the sources used to locate such studies, must be explicitly described.
- Ideally, searches should cover multiple **electronic databases** (e.g., PubMed, Web of Science) and **manual searches** in the references of relevant articles.
- The search strategy must be detailed (databases used, keywords, limits, date of last search, etc.).

### Example:

“We performed searches in Medline and Web of Science up to October 2024, using the terms ‘symptomatic apical periodontitis,’ ‘systemic antibiotics,’ ‘randomized,’ ‘randomized study group.’ No language restrictions were applied.”

### Selecting Studies

Once the inclusion/exclusion criteria are established, each potentially eligible study must be reviewed for inclusion.

- Each identified article is assessed based on **predefined eligibility criteria**.
- The systematic review must list the studies considered for inclusion and provide the **specific reason for excluding any study**.
- For example, if 25 studies are initially eligible, all 25 must be cited, and reasons for excluding any must be explicitly stated.







## Data Extraction from Studies

Data should be extracted from each study **uniformly and impartially**. Typically, a **predefined data collection form** is used, which generally includes:

- Eligibility criteria;
- Study design;
- Population included;
- Number of patients in each group;
- Intervention applied;
- Primary outcome measured.
- Other outcomes studied

The data extraction form must include **all information that will later appear in the text, tables, or figures** describing the studies included in the systematic review or in the tables/figures presenting the results of the review. This process of summarizing study data must be **clearly described in the dissertation**.

## Data Analysis

When planning a systematic review, it is recommended to specify **how the effect(s) will be expressed**. The method of reporting results may differ from that used in the primary studies. For **binary data**, the effect is most commonly expressed as **relative risk, odds ratio, or risk difference**. For **continuous data**, the effect is expressed as the **mean difference**.

### Examples:

“Relative risk of mortality reduction was the primary measure of treatment effect.”

“The primary outcome measure was the mean difference of means.”





## 4. Results

### 4.1. Study Selection

Report the **number of studies identified** through database searches, the number of studies assessed for eligibility, and the number of studies included in the systematic review. Reasons for exclusion at each stage of selection should be provided, ideally in a **flow diagram**.

### 4.2. Excluded Studies

Key excluded studies should be mentioned along with the reasons for their exclusion. The table “**Characteristics of Excluded Studies**” should include only studies that readers would expect to find in the review but were excluded.

### 4.3. Characteristics of Included Studies

Important characteristics of each study included in the systematic review should be clearly presented in a table titled “**Characteristics of Included Studies.**” This table usually includes:

**Methods:** study design (parallel-group randomized controlled trial, case-control study, etc.), even if the review is limited to a single study design (e.g., “Multicenter, randomized, double-blind”).

**Participants:** characteristics of the studied population and sample size (e.g., “103 adults aged 25–75 years with symptomatic apical periodontitis were included”).

**Intervention and control:**

Example: “Augmentin 1 g every 12 hours for 7 days compared with the control group receiving Amoxicillin 500 mg every 8 hours for 7 days.”

**Follow-up duration**

**Outcomes measured**

### 4.4. Effects of the Intervention

Results of individual studies (risk estimates, confidence intervals, or p-values) should be presented in **tables or figures**. All effect size estimates must be associated with an evaluation





of **statistical uncertainty** (e.g., confidence intervals with a given level of confidence, usually 95%). If p-values are reported, provide **exact values** (e.g.,  $p = 0.08$  rather than  $p > 0.05$ ).

For clinical disciplines of the Faculty of Dentistry, at least **one personal clinical case relevant to the chosen topic** should be included.

## 5. Discussion

The **Discussion** chapter should include five standard paragraphs:

**Summary of main results**

**Applicability of evidence**

**Quality of evidence** (limitations of included studies)

**Limitations of the study search process** (e.g., missing databases, inaccessible studies, etc.)

**Consistencies and inconsistencies** with other studies or systematic reviews

## 6. Conclusions

Present a **general interpretation of the results**

Mention the **implications for practice**

Offer **suggestions for future research**, including what studies should be conducted in the future (patients, procedure, comparison, and type of study)

## Bibliography

The **Bibliography** must contain the complete list of all information sources used by the graduate in writing the dissertation. In the Bibliography section, references must be listed **in the order in which they appear in the text**, using symbols such as [1], [2], [3], etc.

- **For books:** authors, title of the book, publishing house, place of publication, year of publication.





- **For journal articles:** authors, title of article, name of the journal, volume, issue, page numbers, year of publication.
- **For Internet sources:** the web address.  
(According to the **Vancouver referencing system**)

Cited references must be indicated in the text at the end of the paragraph using the bibliographic number of the source (e.g., [1]) or by writing the last name and initials of the first author followed by “**et al.**” and the year of publication (e.g., [Popescu I et al., 2016]).

The Bibliography **must not be numbered as a chapter** of the dissertation.

### Examples of bibliographic formatting:

1. Dias MC, Martins JN, Chen A, Quaresma SA, Luis H, Carames J. Prognosis of indirect composite resin cuspal coverage on endodontically treated premolars and molars: an in vivo prospective study. *Journal of Prosthodontics*. 2016; 27: 598–604.
2. American Association of Endodontists. Glossary of Endodontic Terms. Chicago: American Association of Endodontists; 2018. Available from: <https://www.aae.org/specialty/clinical-resources/glossary-endodontic-terms/>
3. Mannocci F, Cowie J. Restoration of endodontically treated teeth. *British Dental Journal*. 2014; 216: 341–346.

The recommended length of the dissertation is **15 to 30 pages**, and **pages must be numbered**.

## II. Formatting Requirements

- **Format:** A4 (Page Setup → Paper).
- **Page margins:** left 2.5 cm; right 2.5 cm; top 2.5 cm; bottom 2.5 cm (Page Setup → Margins).
- **Line spacing:** 1.5 lines (Format → Paragraph → Line spacing → 1.5 lines).
- **Paragraph alignment:** justified (aligned to both left and right margins).
- **Font:** Times New Roman, size 12 pt.





- **Page numbering:** numbering begins with the *title page* and continues throughout the document, but the page number is **visible only starting from the Introduction**. The page number appears centered at the bottom of the page.
- **Header:** starting from the Introduction, the header must include the **student's name (left)** and the **title of the dissertation (right)**.

## Tables

- Tables are numbered using three characters: the first two identify the chapter (e.g., I.3), and the third is the table number (e.g., I.3-1).
- Each table must have a number and title, written **above the table**, aligned to the right margin.

## Figures

- Figures (images, graphs, screenshots) follow the same numbering system as tables (e.g., I.3-1).
- Each figure must have a number and caption, written **under the figure**, centered.

Each chapter must begin on a **new page**.

The final printed dissertation must be **bound and covered**.

## III. Originality Verification

During the writing of the dissertation, the student must ensure that all academic writing standards are respected, including academic ethics and integrity, especially correct citation and referencing.

Dissertations must follow strict rules of language, grammar, and formatting.

Registration for the dissertation defense is **conditional upon receiving the “admitted” (approved)** qualification from the scientific coordinator, based on the similarity report. Students who do not receive the “admitted” qualification **cannot register** for the defense exam.

Originality is checked at UMF Craiova using the program: [www.sistemantiplagiat.ro](http://www.sistemantiplagiat.ro).

- **Similarity Coefficient 1** evaluates the overall linguistic independence of the author.





- Accepted limit: **maximum 30%**.
- **Similarity Coefficient 2** shows the percentage of 25-word (or longer) sequences found in databases.
  - Accepted limit: **maximum 5%**.

#### Procedure for similarity analysis:

1. The final version of the dissertation must be submitted for anti-plagiarism verification, respecting the deadline set by the Dean's Office.
2. The file must be in **DOC, DOCX, or editable PDF**, and must **not include the Bibliography**, only the main chapters.
3. Files must be sent from an email address containing the student's full name and must include: student's name, dissertation title, scientific coordinator, and academic advisor.

#### Dedicated system emails:

- disertatiestomatologie1@umfcv.ro
- disertatiestomatologie2@umfcv.ro
- disertatiestomatologie3@umfcv.ro

The dissertation can be checked **no more than twice** in its final form.

The similarity report, sent to the student by email, must be printed, signed by the scientific coordinator, and attached to the final dissertation. If similarity coefficients exceed accepted limits, the work must be revised and resubmitted for verification.

#### IV. Rules for Submitting the Dissertation

The electronic version of the dissertation (PDF), together with a short summary of the work (editable Word or PDF, maximum **1 page or 500 words**), must be submitted to the faculty secretariat within the official deadline, along with the following **original documents**:

1. The evaluation report of the dissertation, signed by the scientific coordinator;





2. The coordinator's formal approval for dissertation defense (Annex 3);
3. The complete similarity report (received from the verification committee);
4. A signed **anti-plagiarism declaration** stating that the work is original and has never been previously submitted (Annex 2).

A **scanned electronic version** of these four documents, along with the PDF of the dissertation and the editable summary, must be saved on an electronic device and submitted in an envelope labeled with:

- student's full name,
- specialization,
- title of the dissertation,
- name of the scientific coordinator.

On the day of the defense, each graduate must bring **one printed copy** of the dissertation, which will be handed to the Dissertation Committee at the beginning of the examination.

## V. Defense of the Dissertation

This stage involves a concise presentation of the dissertation content in **PowerPoint** or a similar format (Prezi, etc.), with emphasis on highlighting the **relevant contributions**.

**Allocated presentation time: 10 minutes**

**Recommendations for creating the multimedia presentation:**

- It is **mandatory** to include a slide containing at least:  
**the title of the dissertation, the graduate's name, and the name of the scientific supervisor.**
- The dissertation presentation must refer to:
  - the topic of the scientific research;
  - the objectives of the scientific research;
  - relevant elements of the research (materials and methods);







- the main results of the documentation and scientific research;
- the general conclusions of the scientific research.
- The slides may contain text (main ideas), images, tables, formulas, and figures, which should be used to present the aspects of the dissertation that the student intends to communicate to the committee.

During the oral defense, the student must respect both the required presentation format and the **allotted time**.

It is recommended that the student **does not read** the presentation from the slides or from other materials.

## VI. Grading of the Dissertation

When grading the dissertation, the following aspects will be considered:

- the presentation style (clarity of exposition, analytical and synthesis skills — see Annex 4);
- the highlighting of the student's own results and original contributions.

Each member of the committee will complete an evaluation sheet for the dissertation.

The final grade of the dissertation is calculated as the **arithmetic mean** of the grades awarded by the committee members, rounded to the nearest grade.

The grade awarded after the defense **cannot be appealed**.

## VII. Organizational Aspects

The anti-plagiarism verification of the dissertations will be carried out according to the official dissertation examination schedule, taking into account the method of submission, recipient, and conditions outlined in Section III.

The **four original documents**, together with the electronic device containing the required digital files listed in Section IV, must be submitted to the Secretariat of the Faculty of Dentistry according to the official dissertation exam schedule.





On the day of the defense, each graduate must bring **one printed copy** of the dissertation, which will be handed to the Dissertation Committee at the beginning of the examination.

The files used for the oral presentation (**PowerPoint**) must be sent to the email addresses designated for each defense committee (these will be posted in advance on the faculty website) **on the day before the defense**.

On the day of the defense, graduates must arrive in the examination room **at least 30 minutes before** their scheduled time.

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## Final Recommendations

- Start early and plan your research timeline.
  - Discuss frequently with your scientific coordinator.
  - Use peer-reviewed international literature (preferably ISI indexed).
  - Check grammar and formatting before submission.
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**Annex No. 1 – COVER TEMPLATE**

**UNIVERSITY OF MEDICINE AND PHARMACY OF CRAIOVA  
FACULTY OF DENTISTRY**

**STUDY PROGRAM – DENTISTRY**

**DISSERTATION**

**Scientific Supervisor**

Academic Title, First Name, Last Name

**Research Advisor**

Academic Title, First Name, Last Name

**Graduate**

First Name, Last Name

[Year]





## TITLE PAGE TEMPLATE

### UNIVERSITY OF MEDICINE AND PHARMACY OF CRAIOVA FACULTY OF DENTISTRY

#### DISSERTATION

For the completion of the **Bachelor's and Master's integrated program in  
Dentistry**

“...TITLE OF THE DISSERTATION...”

#### Scientific Supervisor

Academic Title, First Name, Last Name

#### Research Advisor

Academic Title, First Name, Last Name

#### Graduate

First Name, Last Name

[Year]





**Annex No. 2**

**DECLARATION  
regarding the originality of the dissertation**

I, the undersigned, ....., residing at  
....., born on ....., identified by Personal Numeric Code  
(CNP) ....., graduate of the University of Medicine and Pharmacy of  
Craiova, Faculty of Dentistry, Study Program ....., class of \_\_\_\_\_, hereby  
declare under my own responsibility, fully aware of the legal provisions regarding false statements and the  
provisions of the National Education Law no. 1/2011, Article 143, paragraphs 4 and 5 regarding plagiarism,  
that the dissertation entitled:

.....  
.....  
.....

prepared under the guidance of Mr./Mrs. ...., which I am to defend  
before the examination committee, is **original**, belongs to me, and I fully assume its content.

I also declare that I agree for my dissertation to be **legally verified** for originality, including the consent for  
its content to be entered into a database for this purpose.

I acknowledge that the commercial sale of scientific works, aimed at enabling someone else to falsely claim  
authorship of a Bachelor's, Diploma, or Dissertation thesis, is strictly prohibited. I declare under my own  
responsibility that this work **has not been copied** and represents the result of my own research.

**Date:** .....

**Student's Signature:** .....

*This declaration must be completed by the graduate using a pen with blue ink.*





**Annex No. 3**

**Scientific Supervisor's Approval  
regarding the admission of the dissertation for defense**

I hereby declare that I have reviewed the **Complete Similarity Report** generated by the **Anti plagiarism System** for the dissertation: (Bachelor's, Master's, or Integrated Program)

**Author:** .....

**Title:** .....

After analyzing the report, I have found the following:

**1. The work contains no unauthorized borrowings.**

Borrowings detected in the dissertation are justified (cited) and do not show signs of plagiarism.  
Therefore, I consider that the dissertation was written individually and **approve its defense**.

**2. The detected borrowings do not show signs of plagiarism,** but their very high number raises concerns regarding the originality of the work.

Therefore, I consider that the dissertation **must be revised**, limiting the number of borrowings.

**3. The detected borrowings are not justified** and show signs of plagiarism.

Therefore, I **do not approve the dissertation for defense** and will notify the University Rector for review according to the University's internal procedures.

**4. Intentional distortions of the text are present,** indicating an attempt to simulate unauthorized borrowings.

Therefore, I **do not approve the dissertation for defense** and will notify the University Rector for review according to the University's internal procedures.

**Reasoning / Comments:**

.....  
.....

**Date:** \_\_\_\_\_

**Scientific Supervisor's Signature:** \_\_\_\_\_





**Annex No. 4**

**DISSERTATION EVALUATION FORM**  
**by the Members of the Evaluation Committee**

**Evaluation of the dissertation titled:**

.....  
.....

**Prepared by the student:** .....

**1. Compliance with dissertation formatting and writing guidelines:**

☐ Excellent ☐ Good ☐ Satisfactory ☐ Unsatisfactory

**2. Analytical and synthesis skills:**

☐ Excellent ☐ Good ☐ Satisfactory ☐ Unsatisfactory

**3. Quality of the bibliography:**

☐ Excellent ☐ Good ☐ Satisfactory ☐ Unsatisfactory

**4. Quality of oral presentation and presentation materials:**

☐ Excellent ☐ Good ☐ Satisfactory ☐ Unsatisfactory

**5. Adherence to the allocated presentation time:**

☐ Excellent ☐ Good ☐ Satisfactory ☐ Unsatisfactory

**Grade awarded:** .....

**Date:** .....

**Chairperson / Committee Member:** .....

**Full Name:** .....

**Signature:** .....

