## **University of West Attica**

Educational Sciences through Innovative Technologies and Biomedical Approaches

School of Health and Care Sciences Department of Biomedical Sciences

School of Administrative, Economic and Social Sciences Department of Early Childhood Education and Care

## **Regulations for the Elaboration of Master's Thesis (M.Th.)**

Interdepartmental Postgraduate Studies Program "Educational Sciences through Innovative Technologies & Biomedical Approaches"

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## Table of amendments

10/8/2018 Initial version.

11/9/2018 Addition of the possibility for students to choose Supervisor A and for collaboration between two students on the same M.Th. (Master's Thesis).

5/3/2019 Consolidation of research fields, courses concerning the thesis, addition of a final text submission stage (third progress), removal of all paragraphs concerning the M.Th. writing and their addition to the "standard initial pages" text.

8/6/2019 Clarification of the grading scale for theses. Correction of the Steering Committee.

20/1/2020 Change of research fields declared by students and instructors. Clarification of the conditions for undertaking an M.Th. by two students.

15/10/2020 Addition of Turnitin check and check for adherence to the M.Th. template between the second and third progress.

8/6/2021 "Special Needs Education" added to research fields, some of the remaining research fields were consolidated. Change in the stages of thesis assignment.

4/3/2022 Change of the IPSP title, correction of the method for assigning theses to students. Change in the method of conducting theses.

10/12/2023 Correction of the thesis evaluation method (correction of individual units).

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# Article 1. The purpose and educational objectives of the Master's Thesis

The completion of studies in the IPSP (Interdepartmental Postgraduate Studies Program) is achieved with the elaboration of the Master's Thesis (M.Th.), which constitutes the culmination of the educational process. The M.Th., according to the Operational Regulations of the IPSP, awards the student thirty (30) ECTS and is a work in a field related to the cognitive subject of the IPSP. During its elaboration, the student is trained, under the guidance of the Supervising Professor, in the comprehensive handling, as far as possible, of a specific scientific topic, making combined use of the knowledge he/she has acquired. The M.Th. can be purely theoretical, include field research, or aim at the production of a complete product. In any case, the choice of topic and methodology must ensure the significance of the research, i.e., its contribution to the theoretical literature and/or to the resolution of methodological issues and/or at the level of practical applications.

## 1.1 Purpose of the M.Th.

The purpose of the thesis is to demonstrate the postgraduate student's ability to expand his/her knowledge, assimilate new knowledge, and express it correctly. The purpose of student research is the re-examination and review of acquired knowledge, the delimitation and study of a problem, the interpretation of phenomena or situations, and the combination of the above depending on the topic and the postgraduate student's ability in analysis, synthesis, and logical processing of data. The most common approaches are the researchbased literature review, the experiment, the study of various cases, and surveys.

## 1.2 Educational objectives of the M.Th.

The intended educational objectives, with the elaboration of the M.Th., are the following:

- The development of initiatives and the enhancement of the student's ability to address a problem.
- The enhancement of learning, through the study and processing of a significant problem, and the acquisition of new knowledge<sup>1</sup> through the research process.
- The enhancement of the student's proficiency in providing a complete and correct solution to problems that may possibly arise.
- The student's practice in searching, investigating, selecting, using, and recording information from bibliographic sources.
- The student's practice in writing and presenting a text with information also from bibliographic sources, without altering the meaning of the information from the original.
- The student's training in the ability to write not only a thesis but any kind of text that needs to incorporate scientific thought, presentation of positions and proposals,

submission of new ideas and directions, and in general, any kind of text that serves the author's scientific rigor and the promotion of his/her ideas and proposals.

## Article 2. Undertaking and elaboration of M.Th.

The M.Th. (Master's Thesis) is elaborated in the fourth (4th) semester of studies. Postgraduate students who have completed the first two (2) semesters of studies and have successfully completed at least seven (7) of the nine (9) common courses of the Study Program are entitled to undertake a thesis. The theses of the IPSP (Interdepartmental Postgraduate Studies Program) are organized, coordinated, and monitored through the website: <u>http://e-du.edutech.uniwa.gr</u>

### 2.1 Supervising Professors

The Supervising Professor of the M.Th. can belong to all categories of instructors who have undertaken teaching work in the IPSP (according to Article 36 of Law 4485/2017) or be a TRS member of UNIWA. The other members of the Three-member Examination Committee can belong to all categories of instructors who are eligible to undertake teaching work in a PSP (Postgraduate Studies Program), according to Article 36 of Law 4485/17.

The number of M.Th. theses per Supervisor during an academic year should preferably not exceed five (5), so that there is, as far as possible, a balanced distribution of the teaching workload among the professors.

## 2.2 Declaration of fields of scientific interest

At the end of the third (3rd) semester of studies:

- postgraduate students electronically declare one (1) field of scientific interest.
- prospective supervising professors declare one (1) to three (3) fields of scientific interest. The fields of scientific interest, with their corresponding content, are included in Table 1. For prospective supervisors, the electronic declaration corresponds to an application to the secretariat stating their wish to undertake the guidance of new theses in the next semester, i.e., to be appointed as Supervisor A. For students, this declaration corresponds to an application to the secretariant of an application to the secretariat stating their wish to be elaboration of an M.Th. in the next semester. Students can make only one (1) choice, but they can modify it as many times as they wish until the deadline for declaring a field of scientific interest.

Table 1: Fields of scientific interest

Field Number	Scientific Field	Content
1	Early childhood education	Primarily concerns kindergarten teachers and infant/toddler care specialists or individuals wishing to conduct research on these age groups.
2	Primary & Secondary education	Primarily concerns primary school teachers or individuals wishing to conduct research on students of childhood, pre-adolescent, and adolescent ages.
3	Technical education, non- formal adult education, and tertiary education	Concerns technical education through Vocational Lyceums (EPAL) as well as all forms of technical, vocational education, e.g., technical schools, OAED apprenticeship schools. Includes non-formal education through apprenticeships, seminars, professional engagement, etc., and tertiary education.
4	Distance education and application of technologies in education	Concerns education using distance methods at any educational level as well as education through modern technologies at any level of education.
5		Concerns the education of minority educators (e.g., Roma children, refugees, Muslim minority, foreigners permanently residing in Greece) at any educational level and education for the third age.
6	Applications of biomedical sciences in education, Neurobiology, Genetics of learning difficulties	Concerns the biomedical approach to education regarding its neurobiological phase, education for chronically ill individuals, and the genetic origin of learning difficulties.
7	Special needs education	Concerns primary and secondary education teachers who wish to engage in special needs education and obtain the relevant certification.

The Course Coordinator and the Program Steering Committee (PSC) of the IPSP reserve the right to revise the list of fields of scientific interest, depending on demand and the educational/research needs of the IPSP.

## 2.3 Undertaking an M.Th.

After the completion of declarations of fields of scientific interest by prospective supervisors and students, students can search for Supervisor A for their thesis, in the same research field as their declaration. Students themselves declare the topic of their thesis and the name of Supervisor A (but not Supervisor B), on the course website. The topic of the M.Th. can be purely theoretical, include field research, or aim at the production of a complete product. In any case, the choice of topic and methodology must ensure the significance of the research.

In the event that students do not decide on an M.Th. title and Supervisor A, the Course Coordinator assigns the student to an instructor of a corresponding research field, taking into account the research field declared by the student.

The M.Th. is elaborated, submitted, and presented individually by each student. The possibility of elaborating research-based M.Th. theses by two (2) postgraduate students is provided, if requested by the students, with the consent of Supervisor A and approval from the PSC. These theses must have a purely research orientation, which justifies sharing the relevant workload between two students. Also, it should be taken into account that the extent of the scientific subject must be such that, with the foreseen workload, the completion of the thesis within one academic semester is possible.

### 2.4 Stages of M.Th. elaboration

At the beginning of the fourth (4th) semester, the Course Coordinator assigns each of the instructors the role of Supervisor B for theses, based on the scientific fields declared by the instructor. The thesis is executed under the responsibility of the student and with the continuous monitoring, guidance, and evaluation of the M.Th. by Supervisors A and B. In the event of reasons such as educational leave, retirement, or other reasons that necessitate the Supervisor's absence during the thesis examination period, the M.Th. Coordinator appoints another supervisor with the same research interests. The topics of the M.Th. theses, the Three-member Examination Committee, and the submission dates for intermediate and final progress are announced on the IPSP website, after approval by the PSC.

#### 2.4.1 Training in thesis writing

Before starting the M.Th. elaboration, students are trained electronically or in person on matters concerning thesis writing and the search and citation of bibliographic sources, according to international standards. The IPSP has established a series of rules so that the appearance of the theses is uniform and there is relative consistency, which allows for the comparison and evaluation of the thesis.

#### 2.4.1.1 Structure of the M.Th.

Theses are written on A4 size paper. The sections "Abstract," "Summary," "Table of Contents," "List of Symbols" are numbered using Roman numerals.

Chapters and subchapters of the main part of the thesis are numbered according to the decimal system (e.g., chapter 2, subchapter 2.1, subchapter 2.1.1., etc., up to four digits).

The first part of an M.Th., titled "Introduction," deals with all the information needed to understand and justify the experiments carried out. The reader is introduced to the problem posed and the research or questions that led to it.

The second part, titled "Methodology," contains the research method, the study sample, the research material and/or tools, and the research procedure.

The third part, titled "Results," describes the results obtained from the research. Particular care is given to the clear and understandable presentation of the results. If there is statistical analysis of data, a section titled "Statistical analysis" is inserted, describing the statistical techniques applied.

The fourth part, titled "Discussion," describes similar works carried out by others, and the results are compared and commented upon. Finally, the "Conclusions" regarding the results and possible prospects are presented.

Before the "Introduction" and after the Table of Contents, it is advisable to insert a List of Abbreviations used in the M.Th., with the international term and its rendition in Greek. Throughout the rest of the text, either the Greek rendition or the abbreviation is written.

Generally, Tables and Figures included in the M.Th. should have an explanatory caption and be numbered per chapter (e.g., Table 2.1, Figure 3.2, etc.), regardless of whether there is a reference to their content within the text, and all used hyperlinks should be active.

#### 2.4.1.2 Finding, studying, and citing bibliographic sources

Bibliographic sources of information are classified into the following categories:

- Primary bibliographic sources are books, articles in scientific journals, conference proceedings, reports and publications of official and scientific bodies, government publications, etc. Only primary sources shape the research bibliography and the strict scientific background of the scientist.
- Secondary bibliographic sources are monographs, textbooks, review articles, scientific abstracts of various topics, publication indexes for finding specific publications, etc.
- Tertiary bibliographic sources are various guides, general content bibliographies, encyclopedias, etc., which mainly contribute to simple information on a topic.
- Multimedia: Sources for the thesis can be audiovisual material (video, television/radio broadcasts). Such sources add value to a thesis on a related topic, and students should also resort to them. The citation of bibliographic references in the text can be done according to various internationally accepted standards. The most popular way is the one according to which bibliographic references are listed numerically in square brackets, according to the order in which they appear in the text. The abstract does not contain references.

#### 2.4.2 First progress - drafting initial pages

Two months from the start of the fourth (4th) semester, the student uploads the text of the first progress to the Moodle platform, which is visible to supervisor A (proposer) and supervisor B (grader). This text contains specific pages and content, according to the posted instructions.

The two supervisors evaluate the 1st progress on a scale: Accepted, Accepted with reservations, Rejected due to late declaration, Rejected. In case of rejection, comments and remarks are sent to the student. The student has time to make the necessary corrections until the second progress. Theses that have not been submitted for the first progress or have not been approved by at least one of the two supervisors cannot be submitted for the second progress.

#### 2.4.3 Second progress - final draft of the text

Two months before the presentation of the theses, the student sends the text of the second progress to supervisor A (proposer) and supervisor B (grader). This text follows the formatting requested in the first progress and contains the development of the entire thesis, without necessarily being the final text. E.g., the final conclusions may be missing, it may still contain omissions, spelling, and syntactical errors. In any case, this text must be in a form that allows its completion in less than a month. In case of rejection, comments and remarks are sent to the student. The student has time to make the necessary corrections until the third progress. Theses that have not been submitted for the second progress or have not been approved separately by the two supervisors cannot be submitted for the third progress.

#### 2.4.4 Third progress - submission of the final text

At the latest two weeks before the presentation of the theses, students submit the final text of the M.Th. This text is graded by supervisors A and B according to the provisions of Article 3 "Evaluation criteria of the thesis."

#### 2.4.5 Plagiarism check

Each student is responsible for checking the similarity percentage of their text against international document databases (plagiarism check) and for uploading the generated similarity report to the course platform. The plagiarism document is checked by Supervisor A, who accordingly rejects or accepts the validity of the M.Th.

#### 2.4.6 Check for adherence to the M.Th. template

Theses are written according to a specific template so that all of them follow the same structure and syntax. At this stage, students upload the final text of the M.Th. to a special location on Moodle, where the M.Th. Coordinator checks for adherence to the template and accordingly accepts or rejects the M.Th. Acceptance of the final text is followed by posting to

the Institutional Repository "Polynoe." In case of rejection, the student must correct the M.Th. according to the specifications.

#### 2.4.7 Fourth progress - M.Th. presentation

Theses that have successfully passed the first three progress stages are presented before Supervisor A and Supervisor B. If one of the two Supervisors is absent, they are replaced by Supervisor C. The dates and times of presentations are published on the IPSP website at the beginning of the academic year.

#### 2.4.8 Duration of elaboration and workload of the M.Th.

The duration of the master's thesis elaboration cannot be less than one semester. If the student is unable to complete the M.Th. within the foreseen time, they may request an extension for one more academic semester, according to the provisions of Article 9.3 of the IPSP Operational Regulations. The workload required by each postgraduate student during the elaboration of their thesis is estimated between seven hundred and fifty (750) and nine hundred (900) working hours, which correspond to thirty (30) credit units. Therefore, the average hourly engagement per week is estimated at approximately thirty-two (32) to thirty-six (36) hours. Its examination takes place at the end of the 4th semester, provided the student has settled all their financial obligations to the IPSP.

#### 2.4.9 Change of M.Th. title and Supervisor

The title and Supervisor of the M.Th. can be changed at all stages of its submission (first progress, second progress, final text). A change of research field is permitted, following approval by the Steering Committee of the IPSP.

#### 2.4.10 Language of M.Th. writing

The language of writing and examination of the M.Th. theses is Greek. An exception is the title, abstract, and the names of the student and Supervisor A, which must also be translated into English.

#### 2.5 M.Th. Deliverables

#### 2.5.1 Thesis text

For the M.Th. text, its content and composition are the main focus of the evaluation. The size of the main text should be at least 8,000 words, but its length depends on the subject of the thesis. The table of contents, abstracts, bibliography, tables, and captions are excluded from the total of 8,000 words.

#### 2.5.2 Multimedia

In the case where the subject of the thesis is the development of new educational activities, the student submits audiovisual material from them, such as videos, photographs, graphics.

#### 2.5.3 Software/websites/Apps

In the case where the subject of the thesis is the development of original software or a website, this material is submitted in some appropriate form at least for the judgment of the supervisor and the other members of the examination committee.

#### 2.5.4 Constructions

In the case where the subject of the thesis is the development of new educational activities using constructions (games, robotic constructions), these constructions must be available at least for the presentation of the thesis.

# Article 3. Evaluation criteria, presentation, and grading of the M.Th.

## 3.1 Validity of the content (30%)

Grading is based on the quality of the references used. The use of a large number of primary sources receives the maximum grade. Conversely, the use of secondary sources limits the grade. Secondary sources are considered to be websites, newspapers, laws, circulars, etc. The grade will be judged by the number of references, the ratio of primary/secondary sources, and the distribution of citations within the text. Analytically:

- 0 points: There are fewer than 10 references, several of which are secondary. There are no in-text citations.
- 5 points: There are fewer than 25 references, and at least half of them are secondary. There are not many in-text citations.
- 10 points: There are more than 20 references, but most of them are secondary.
- 15 points: There are more than 25 references, but there are not many in-text citations, or a very large number of references but the majority of them are secondary.
- 20 points: There are more than 25 references, the majority of which are primary, but there are no extensive or correctly placed in-text citations.
- 30 points: There are more than 25 references, the majority of which are primary, with extensive in-text citations.

#### 3.2 Structure of the thesis (10%)

This criterion checks if the M.Th. follows the given instructions or applies, by common consensus, good practices in its writing. Analytically:

- 0 points: The given instructions were not followed at all.
- 5 points: The given instructions were only partially followed.
- 10 points: The given instructions were followed to the letter.

## 3.3 Scientific adequacy of the review (10%)

Whether the M.Th. is research-based, a review, or even an application of an original teaching method, there will be some review of bibliographic references. The review must scientifically cover the thesis topic without straying from it. Analytically:

- 0 points: There is no literature review, or it is very short.
- 5 points: The literature review does not fully cover the topic or is off-topic.
- 10 points: The literature review fully covers the topic.

#### 3.4 Correct use of bibliographic standards (5%)

Students must faithfully follow one of the established bibliographic standards (e.g., APA, Harvard, Numeric, etc.). Depending on the bibliographic standard they follow, they must also compile the in-text citations accordingly. Analytically:

- 0 points: The bibliographic standard was not applied correctly or was not used at all.
- 3 points: A specific bibliographic standard was chosen but not applied correctly.
- 5 points: The chosen bibliographic standard was applied adequately.

#### 3.5 Correct use of the Greek Language (5%)

This concerns spelling and syntactical errors found within the text. Analytically:

- 0 points: There are more than 5 spelling or syntactical errors per page (typing errors are also included).
- 5 points: There are fewer than 4 spelling or syntactical errors per page (typing errors are also included).

#### 3.6 Innovative elements and research prospects (20%)

An M.Th. whose topic is innovative, such as research on new teaching methods or their application to special educational groups, is graded positively. Such an M.Th. can receive the maximum grade if it is judged that it can be presented at a conference. M.Th. theses related to innovative actions in the community that receive relevant publicity are also graded with distinction. Analytically:

• 0 points: The thesis deals with a very common topic that is well-developed in educational textbooks.

- 10 points: The thesis does not promote innovative elements in education or lacks research prospects.
- 15 points: The thesis promotes innovative elements in education and/or has research prospects.
- 20 points: The thesis promotes innovative elements and is suitable for presentation at a conference.

#### 3.7 Presentation (20%)

The presentation stage allows students to develop their rhetorical skills and communication abilities. Depending on the topic, they may show slides, constructions, IT applications, etc. If no presentation is made, the corresponding grade is deducted. Analytically:

- 0 points: The thesis has not yet been presented, or no presentation is planned.
- 5 points: The allotted time was not observed, the presentation had many errors, students read their presentation from a document, they did not answer questions correctly.
- 10 points: The presentation was at a professional level, but the allotted time was not observed, or students did not answer questions correctly.
- 15 points: The allotted time was observed, the presentation was at a professional level, students knew their topic excellently, but they did not choose the appropriate method for their presentation.
- 20 points: The allotted time was observed, the presentation was at a professional level, students knew their topic excellently, and they chose the appropriate method for their presentation. The presentation of the thesis can be done with: A short lecture of 10 15 minutes with slides. The presentation should include 20-25 slides, numbered and with a clear title. The appearance and style of the slides are the student's choice. The first slide will have the logos of the university, departments, postgraduate program, the title of the thesis, and the names of the contributors. The last page will contain acknowledgments to the audience or a specific person.
- With the demonstration of constructions, e.g., robotics, early childhood education games.
- With the presentation of software, websites, or an application (App) created for this purpose. The grading of the written text precedes the presentation. The presentation of the thesis takes place if the text of the thesis has received at least 40 points.

# Article 4. Digital signatures and posting of the M.Th. in the Institutional Repository "Polynoe"

In the main body of the M.Th. (Master's Thesis), after the title page, the members of the Examination Committee must be listed, followed by the relevant "Author's Declaration".

## 4.1 Digital signatures

Each M.Th. bears, on the "Author's Declaration" page, three digital signatures: that of Supervisor A, Supervisor B, and the postgraduate student. TRS (Teaching and Research Staff) members acquire a type A digital signature, while external collaborators acquire a type B digital signature.

Type A digital signature (TRS members): certificates stored only on a Secure Signature Creation Device (SSCD), which is a cryptographic device with specific specifications (e.g., USB token) and are used for accessing systems such as the electronic secretariat of UNIWA or for digitally signing documents according to the requirements imposed by PD 25/Government Gazette 44/25-02-2014 regarding the use of electronic signatures in the Greek Public Sector. Certificates of this category cannot be copied to another medium.

Type B digital signature (external collaborators): certificates stored on any medium such as locally on a computer or on a USB stick, and are used for services such as digitally signing documents (where type A signature is not mandatory) and email messages. Certificates of this category can be copied to another medium.

In the "Author's Declaration," the student may, with the consent of the Supervising Professor, explicitly declare a prohibition on access to the full text of the M.Th. for a specific period. With his/her digital signature, the Supervising Professor declares that the thesis has been evaluated and graded and that he/she agrees with the time restriction on access to the full text of the thesis. A choice can be made between 6 or 12 months. The restriction applies exclusively to research theses that are intended for publication in a scientific journal.

## 4.2 Posting of the M.Th. in the Institutional Repository "Polynoe"

M.Th. theses are posted in the institutional repository "Polynoe" under the responsibility of the postgraduate students. Self-archiving is a prerequisite for receiving the Diploma.

The Institutional Repository (I.R.) "Polynoe" of the University of West Attica is an organized digital content infrastructure, created with the aim of collecting, documenting, and promoting the scientific output of the Institution. Documents from the entirety of the Institution's educational, research, and administrative activities, as well as special types of collections when deemed appropriate, are systematically registered in it, following international practice and standards. The entirety of the registered material is made available to the Academic

Community and the general public via the Internet, in accordance with the rules governing Open Access, relevant user licenses, and Open Data.