

## COURSE MODULE OUTLINE PLSDE

### (1) GENERAL INFORMATION

SCHOOL	SCHOOL OF SCIENCES AND TECHNOLOGY		
PROGRAM COURSE	MASTER IN MATHEMATICS (MSM)		
LEVEL OF STUDY	POSTGRADUATE		
MODULE UNIT CODE	MSMDE	YEAR	2 <sup>nd</sup>
MODULE TITLE	POSTGRADUATE THESIS		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHNG HOURS	CREDIT S
		560	20
COURSE TYPE	MANDATORY		
PREREQUISITE MODULE:	NONE		
LANGUAGE	GREEK		
THE MODULE IS OFFERED TO ERASMUS STUDENTS	NO		
MODULE WEBSITE (URL)	<a href="https://www.eap.gr/en/postgraduate-studies-in-mathematics/topics/#m86">https://www.eap.gr/en/postgraduate-studies-in-mathematics/topics/#m86</a>		

### (2) LEARNING OUTCOMES

Upon completion of the Module MSMDE, students will be able to:

- Implement a literature review on a scientific topic in the area of Mathematics, using bibliographic sources and relevant search tools
- search, collect, verify, process critically-synthetically and effectively present information
- analyze a complex problem by identifying the basic knowledge and tools required to solve it.
- plan the activities that lead to solving the problem, by synthesizing knowledge and skills from different subjects.
- realize, evaluate and improve the solution to the problem.
- cooperate smoothly in the context of scientific / research work, demonstrating responsibility and developing communication skills.
- effectively and creatively utilize the online / digital tools / media for the writing / editing / publication of their texts.
- write a comprehensive scientific dissertation, in which the problem, methodology and results of their work will be analyzed
- Present and publicly support their work.

#### **GENERAL COMPETENCES**

- Ability to focus on specific objects
- Ability to synthesize, prioritize and evaluate research data
- Ability to use technology tools
- Adaptation to novel situations
- Ability to respond immediately to urgent and emergency situations and to take decisions
- Ability to work autonomous or in a team, when needed
- Exercise of critical thinking and self-criticism comparatively
- Exercise of free, creative and inductive thinking

#### **(3) COURSE CONTENT**

The purpose of the Module MSMDE is to synthesize knowledge acquired during the student's studies, through the elaboration of the Postgraduate Diploma Thesis.

The topics of the Diploma Theses concern Mathematical Science and its Applications. They are related to the specialized cognitive areas of the five Modules of the postgraduate program MSM. Also, topics can be proposed by both the Coordinators and the Instructors of the Program and they are subject to the approval of the Academic Committee of the Program. The approved topics are posted on the University's website, before the beginning of the period of submission of the relevant statement by the students.

The M.D.E. can be theoretical-synthetic, applied-experimental or a combination of the two.

A) In theoretical-synthetic theses, students should understand a scientific topic or problem, applying for its study scientific knowledge and experience gained from the Study Program, in combination with a review of proposed literature. They should also be able to write their results and present them in public. .

B) In the applied - experimental projects, students should understand an applied scientific problem, present the tools and methodology for dealing with it and elaborate the process of solving it. They should also be able to write their findings and present them with scientific competence in public.

Therefore, the Module MSMDE, through the elaboration of the Diploma Thesis, provides the opportunity for synthesis and utilization of the knowledge acquired during the studies.

The scientific responsibility for preparing the D.E. is assigned to a three-member Evaluation Committee (EC), one member of which is responsible for the supervision and support of the student (Supervisor), in accordance with the prevailing ethics and scientific practice and respecting the principles of Open and Distance Education and Adult Education.

#### (4) TEACHING METHODS-ASSESSMENT

<p>MODES OF DELIVERY</p>	<ul style="list-style-type: none"> <li>• Regular distance counseling meetings on the research and righting of the thesis, as well as the provision of bibliography.</li> </ul>
<p>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY</p>	<ul style="list-style-type: none"> <li>• Remote meetings tools (webex).</li> <li>• Presentation software (e.g. PowerPoint).</li> <li>• Specialized software in the subjects under study. Additionally, the students use office automation tools, web browsers and e-reader for digital books.</li> </ul>
<p>COURSE DESIGN</p>	<ul style="list-style-type: none"> <li>• In order to complete the postgraduate thesis, the students must have attended and been successfully examined in the four Thematic Units of the 1st and 2nd year of the program.</li> <li>• Students choose a topic for the preparation of their MDE, taking into account the specially prepared list of thematic areas (see above) and topics drawn up by the Coordinators of the Instructors in collaboration with the Director. This list is formed based on the broader academic subject of the master's program of study in PLS, as well as the specialized academic thematic areas of the five thematic modules.</li> <li>• The final wording and description of the subject of the M.D.E. is done in collaboration with the supervising professor.</li> <li>• The formal start of preparation of the M.D.E. is October 1st for all students preparing the MDE in the Program.</li> <li>• Candidates begin the preparation of the M.D.E., while submitting the final subject statement electronically through a special educational platform.</li> <li>• The duration of the preparation and examination of the MDE is 8 months (minimum) or one year (maximum).</li> <li>• Students are required to submit a written report on the progress of the project twice during the preparation of their thesis. The 1st written report is followed by a mandatory short presentation of the progress of the thesis during an extended meeting with the Academic Committee of the Study Program, in February.</li> </ul>

	<ul style="list-style-type: none"> <li>• The Assessment Committees consist of the 1st and 2nd SEP Supervisors, as well as the Director (or the Coordinator in cases of authorization) who, however, only participates during the oral examination in the assessment process and therefore also in the formation of the final grade, if and where it deems necessary.</li> <li>• The students must - after the successful presentation/examination of their master's thesis - and having incorporated any corrections or additions, even appendices - which may be indicated to them by the judging committee - post it in the repository of the EAP (apothesis .eap.gr).</li> </ul>
<p>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</p>	<ul style="list-style-type: none"> <li>• In order to ensure uniform evaluation of DTs, the final grade of the Examination Committee is based on the evaluation of both the written thesis and the oral presentation.</li> </ul>

#### (5) SUGGESTED BIBLIOGRAPHY

**HOU guides on researching and writing a postgraduate thesis**

<https://eeyem.eap.gr/services/guides/>

**General Regulations for Postgraduate Diploma Dissertations in a MSc with an annual duration of one year:**

<https://www.eap.gr/education/diploma-regulations-works/annual-programs/>

**Special Regulations for Postgraduate Diploma Dissertations in MSM ΜΣΜΔΕ: Ειδικός Κανονισμός Εκπόνησης Διπλωματικών Εργασιών ΜΣΜ (eap.gr)**