

LUDOVIKA UNIVERSITY OF PUBLIC SERVICE
TRAINING PROGRAMME
OF THE
DOCTORAL SCHOOL OF MILITARY ENGINEERING



Decision of the Senate	Decision of the Maintainer
Adopted by Senate Resolution No. 61/2025. (V. 28.).	Approved by Resolution No. 61/2025. (V. 28.) of the Maintainer.

CREDIT ALLOCATION, TRAINING REQUIREMENTS

General training requirements

1. §

(1) In both the organized and the individual training programmes, obtaining the absolutorium requires the completion of a minimum of 240 credits by the ends of the 8th semester, as detailed below:

- a) study requirements: minimum 50 credits,
- b) dissertation activity: 20 credits,
- c) scientific research work: minimum 170 credits, including a maximum of 20 credits for holding lectures (teaching).

(2) Prior to the application for the comprehensive examination, doctoral students are required to submit their "Research Report" to the doctoral school by May 31 in the format prescribed by the doctoral school. The report must include the result of researches achieved during the training and research phase (semesters 1–4) and the plan for the subsequent research and dissertation phase (semesters 5–8).

(3) In order to clarify the arrangements for attending classes and the course requirements, the doctoral student must contact the instructor of the course by the end of the first month of each semester.

(4) The special rules applicable to students enrolled in individual training and in individual preparation programme are set out in the University Doctoral and Habilitation Regulations (UDHR).

REQUIREMENTS FOR THE FULFILMENT OF STUDY OBLIGATIONS

2. §

(1) In the first semester of the training and research phase of the doctoral programme, students of DSME (except for students taking part in individual preparation) are required to register for the following courses:

- a) "Basics of military engineering" (10 credits), which conclude with an examination (colloquium);
- b) "Theory and methodology of scientific research" (2 credits), which concludes with a practical grade.

(2) Completion of the course "Theory and methodology of scientific research" including the preparation of a literature review, also constitutes a criterion requirement for the continuation of further studies.

(3) In one of semesters 2–4, with the exception of students taking part in individual preparation, the following courses must be completed by all doctoral students:

Title of course	Credit	Number of hours (F/P)	Type of examination
Fundamentals of Military Operations	2	20/6	Practical grade

Research management	2	20/6	Signature
Efficient mathematical methods in military technical sciences	3	30/10	Colloquium
Processing and publication of research data	2	20/6	Practical grade
Application of tools of mathematical statistics for data processing	3	30/10	Colloquium

(4) With the exception of students taking part in individual preparation, every doctoral student must, in one of the semesters 2–4, register for and complete the 6-credit major course of their own research area (60/20 contact hours), which concludes with a colloquium. In addition, during these semesters they must complete elective courses from DSME course list with a total value of at least 20 credits.

(5) With the exception of students taking part in individual preparation, every doctoral student of DSME must complete in the 8th semester the criterion course entitled "Basics of the process of the PhD procedure", worth 0 credits and concluded with a signature. Participation in at least two-thirds of the lectures is required in order to obtain the signature.

(6) With the exception of students taking part in individual preparation, every doctoral student must, in each semester, register for the course "Orientation I–VIII.",¹ corresponding to the given semester, from among the subjects outside the research areas. This course carries 0 credits and is concluded with a signature. The condition for obtaining the signature is participation in the orientation session announced by the doctoral school at the beginning of the semester for the purpose of familiarizing students with procedural rules and current developments in the discipline.

(7) During the training period, the doctoral student may exceed the 240 credits prescribed under the study requirements by a maximum of ten percent without paying additional tuition fees.

REQUIREMENTS FOR THE COMPLETION OF SCIENTIFIC RESEARCH WORK

3. §

(1) Paragraphs (2)–(8), (12)–(16) and (17) of this Section do not apply to students taking part in individual preparation.

(2) In order to fulfil the scientific research requirement, students must register each semester – among the subjects outside the research areas – for the course "Scientific research I–VIII.",² corresponding to the given semester.

(3) Through scientific research work, students must obtain at least 12 credits per semester during the first phase of the programme (semesters 1–4) and at least 16 credits per semester during the second phase of the programme (semesters 5–8) such that by the end of the programme they have accumulated at least 170 scientific research credits. In addition, during the second phase of the programme, 5 credits per semester must be obtained through "Dissertation activity V–VIII.". Credits may be obtained through the scientific and dissertation activities specified in Annex 2.

¹ The Roman numeral next to the course title indicates the semester when the course can be taken.

² The Roman numeral next to the course title indicates the semester when the course can be taken.

(4) If the doctoral student's scientific work in a given semester cannot be matched to the minimum credit value specified in paragraph (3) on the basis of Annex 2, then – at most once per training phase – the supervisor may provide a written justification recorded in the "Credit report" on the basis of which 12 credits may be awarded for "Scientific research I–IV." and 16 credits for "Scientific research V–VIII."

(5) In the first semester, the doctoral student may request the recognition of publications related to their research topic that were published in the three years preceding the start of the doctoral programme, up to a maximum of 20 credits, while no limitation applies in terms of publication points.

(6) In the first semester the literature review submitted and accepted within the course "Theory and methodology of scientific research" may be credited as scientific activity.

(7) During the second phase of the programme (semesters 5–8), the student must obtain 5 credits per semester for dissertation activity. For this purpose, the doctoral student must register each semester – among the subjects outside the research areas – for the course "Dissertation activity V–VIII." corresponding to the given semester. In order to obtain the credits, the doctoral student must present, in the form of an oral presentation, their research work conducted during the given semester – consistent with their research plan – as well as the progress of the preparation of their doctoral dissertation. The presentation is to be held in front of a three-member committee, with the participation of doctoral students of other research areas. The workshop shall be documented. The chair of the committee is the leader of the research area, while the members include the supervisor and another expert.

(8) Scientific activity in each semester must be certified by the supervisor in the semester "Credit report" through the recognition of the corresponding credit. The supervisor's evaluation certifying the scientific activity must be accompanied by the MTMT (Hungarian Science Bibliography) links to the published publications.

(9) The same publication or scientific activity may be counted only once during the entire period of the doctoral programme.

(10) A professional publication may be recognized if its length is at least 0.5 printed sheets. An exception is a conference commentary (discussion paper) published in a scientific conference proceeding, which may be shorter.

(11) The rules for accounting publications in a given semester are as follows:

- a) A submitted publication that has not yet been reviewed, or a manuscript for which the editor has requested substantial revisions that have not yet been completed, shall be considered a non-peer-reviewed article.
- b) For a submitted but not yet published publication, an official statement issued by the editorial office confirming that the publication has been accepted for publication must be attached.
- c) In the case of a publication written with co-authors, a co-author declaration must be attached, specifying the percentage of contribution. The credits shall be calculated on the basis of this participation ratio, with fractional values rounded to whole numbers according to the general rules of rounding. An exception is 0.5 which must be rounded up to the next whole number.
- d) In the case of a conference presentation, the source details of the publication or a certificate confirming the presentation at the conference, together with the presentation material must be attached for accounting.

- e) A separate reprint (offprint) of the published publication must be attached to the accounting documentation; in the case of a publication not yet published, a copy of the manuscript must be attached.

(12) It is required that by the end of the first year, the doctoral student possesses at least 3 publication points according to the Publication Score Table of the UDHR, based on scientific publication(s) that have either been published or accepted for publication following peer review.

(13) By the end of the first phase of the programme (end of semester 4), the doctoral student must obtain at least 8 publication points according to the Publication Score Table of the UDHR. Within this requirement, the candidate must be the author of at least one article presenting their own research results, published in a peer-reviewed journal classified as category A, B, C or D by the Committee on Military Science, Section IX. of the Hungarian Academy of Sciences (MTA HTB). At least one of these publications must be single-authored.

(14) During the second phase of the programme, the doctoral student must prepare additional publications so that – together with the publications completed during the first phase – by the end of the programme, in order to obtain the absolutorium, the doctoral student possesses at least 20 publication points required for the doctoral degree procedure. Within this requirement, the candidate must have at least three articles presenting their own research results published in peer-reviewed journals classified as category A, B, C or D by the MTA HTB, of which at least two must be single-authored, and at least one must be a professional publication in a foreign language.

(15) During both phases of the programme, one publication that has not yet been published but has been accepted for publication by the editorial office may be counted.

(16) For the purposes of meeting the requirements regarding the number of articles published in journals categorized by the MTA HTB, articles published in Q1-Q4 journals shall be regarded as articles published in MTA HTB category A journals.

(17) An additional criterion for the recognition of scientific research work is that:

- a) at the end of semester 2, as a requirement of the course "Scientific Research II.", the doctoral student must present their four-year research plan and annual progress;
- b) in semester 7, as a requirement of the course "Scientific Research VII.", the doctoral student must present the results of their research work to date.

These presentations are delivered at conferences organized by the DSME.

REQUIREMENTS OF TEACHING (INSTRUCTIONAL) ACTIVITIES

4. §

(1) Teaching is an optional, not mandatory, credit-earning activity.

(2) Doctoral students who hold a teaching position may not earn credits through classes taught at their own university.

(3) Credits for teaching activities – except for students taking part in individual training – may be obtained only in semester 3–8.

(4) Teaching activities may be conducted only with the permission of the head of the department responsible for the field and must relate to the doctoral student's research topic of a closely related subject area.

(5) A maximum of 5 credits per semester may be obtained through teaching, 10 credits in each phase of the training, and 20 credits in total during the entire programme.

(6) 1 credit may be awarded for every 4 classes taught; that is no credit may be awarded for teaching 1, 2 or 3 classes, 1 credit may be awarded for teaching 4, 5, 6 and 7 classes, etc. The completion of teaching activities must be verified by the head of the relevant department.

SYSTEM OF KNOWLEDGE ASSESSMENT

Assessment of knowledge

5. §

(1) The forms of assessment of verifying the acquisition of the knowledge associated with individual courses are specified in the Curriculum, while the Curricula defines the detailed requirements.

(2) In the case of end-of-term examination, mid-term evaluation, and practical grades, knowledge assessment is carried out using a 5-grade scale. In the case of reports, the assessment may follow a 3-grade scale.

(3) The end-of-term examination the grade is determined by the examining instructor in the case of colloquium, mid-term evaluation and practical course, in the case of courses "Scientific Research I–VIII.", by the supervisor, in the case of courses "Dissertation Activity V–VIII.", by the committee. The instructor must record the assessment in NEPTUN.

(4) The repetition of unsuccessful examinations and the improvement of successful examinations are governed by the Study and Examination Regulations of LUPS.

(5) At the end of each semester, the doctoral student must submit a "Credit Report", thereby fulfilling their personal reporting obligation. In the report the doctoral student must present their academic, scientific, and teaching activities (in semester 3–8, in case the doctoral student chose to teach), the credits obtained, and the grades received. The report must also include the written evaluation of the supervisor.

The comprehensive examination

6. §

(1) During the doctoral programme, at the end of the fourth semester, a comprehensive examination must be completed as the conclusion of the training and research phase and as a condition for the commencement of the research and dissertation phase. The examination measures and evaluates the doctoral student's academic and research progress.

(2) Doctoral students must apply for the comprehensive examination using the application form attached to the UDHR, in accordance with the procedures and deadlines determined by the doctoral school.

(3) Admission to the comprehensive examination is decided by the Doctoral Council of the Discipline (DCD) of DSME. A condition for admission to the comprehensive examination is the completion of at least 90 credits during the training and research phase of the doctoral programme, including all credits specified in 1. § (1) a). In addition, the doctoral student must possess at least 8 publications points.

(4) At the time of application, the doctoral student taking part in individual preparation must possess documented teaching and/or scientific research achievements corresponding to at

least 150 credits, as well as 20 publication points required for obtaining the doctoral degree. The requirement for obtaining the credits specified in 1. § (1) a) does not apply to doctoral students taking part in individual preparation.

(5) The comprehensive examination consists of two main parts:

- a) a theoretical part, assessing the doctoral student's theoretical knowledge;
- b) a dissertation part, in which the candidate reports on their scientific progress.

(6) In the theoretical part of the comprehensive examination, the candidate is examined in two subject areas. The topics of the theoretical examination differ by research area. One topic assesses the doctoral student's comprehensive knowledge of the research field, within the framework of the major subjects of the research area, while the other assesses the knowledge related to the doctoral student's specific research topic. The specific examination topics (subjects) are approved by the DCD upon the recommendation of the head of the research area.

(7) In the dissertation part of the comprehensive examination, the doctoral student presents – based on the previously submitted "Research report" – their research results to date and their research results to date and their future research plans in the form of a free oral presentation.

- a) The "Research report" must be at least 1.5 printed sheets in lengths and must contain a summary of the professional literature related to the conducted research and the research results achieved so far, as well as the research plan for the second phase of the doctoral programme, including the schedule for completing the dissertation and publishing the results.
- b) The "Research report" must be submitted prior to the comprehensive examination to the Head of DSME, accompanied by the detailed written evaluation of the supervisor. The report must include the list of publications (printed from the Hungarian Science Bibliography (MTMT)), the offprints of the publications, and a copy of the doctoral student's profile uploaded to the doktori.hu platform.

(8) The comprehensive examination must be taken publicly before a committee. The composition of the committee, the procedure for its appointment, and the rules for determining the examination subjects and evaluating the comprehensive examination are regulated by the current UDHR.

(9) A doctoral student may repeat an unsuccessful comprehensive examination once within the same examination period.

COMPLETION OF THE PROGRAMME

Requirements for obtaining the absolutorium

7. §

(1) The pre-degree certificate (absolutorium) certifies – without grade or evaluation – that the doctoral student has fulfilled the study requirements, scientific research work, and teaching activities (in case the doctoral student chose to teach) prescribed in the Curriculum, successfully passed the required examinations except for the language examinations, and obtained at least 240 credits, thereby meeting all training requirements.

(2) After the successful completion of the 8th semester, and provided that all conditions for issuing the absolutorium are met, the doctoral school issues the certificate. The doctoral

student will receive it only after submitting the four-year "Closing report" prepared jointly with the supervisor to the Head of the doctoral school.

(3) The conditions for issuing the absolutorium are:

- a) the completion of at least 240 credits;
- b) the fulfilment of additional criterion requirements specified in the training plan;
- c) the achievement of 20 publication points required for obtaining the doctoral degree according to the UDHR Publication Score Table.

Within this requirement, the doctoral student must have at least three articles presenting their own research results published in peer-reviewed journals classified as category A, B, C or D by the MTA HTB, of which:

- ca) at least two must be single-authored and
- cb) at least one must be a professional publication in a foreign language.

(4) The four-year training period may not be shortened, and the absolutorium may not be issued earlier; however, the preliminary defence (workshop defence) may be held during the last semester (semester 8).

Budapest, 2026

Dr. József Padányi Maj. Gen.

Head of the Doctoral School

CURRICULUM

Sem ester	Academic requirements					Scientific research			Teaching activities Credits (optional)
	Subject	Credits	Contact classes		Type	Subject	Min. Credits	Type	
			F	P T					
1.	Basics of military engineering	10	108	36	E	Scientific research I.	min. 12	P	-
	Theory and methodology of scientific research	2	20	6	T				
	Orientation I.	0	6	6	S				
2.	<i>Compulsory major course in the doctoral student's research area</i>	6	60	20	E	Scientific research II.	min. 12	P	
	Efficient mathematical methods in military technical sciences	3	30	10	E				
	Fundamentals of Military Operations	2	20	6	T				
	Processing and publication of research data	2	20	6	T				
	Research management	2	20	6	S				
	Orientation II.	0	2	2	S				
3.	Application of tool of mathematical statistics for data processing	3	30	10	E	Scientific research III.	min. 12	P	
	Orientation III.	0	2	2	S				
4.	Orientation IV.	0	2	2	S	Scientific research IV.	min. 12	P	
2-4.	<i>Elective courses</i>	min. 20							
1-4.	TOTAL	min. 50							
COMPREHENSIVE EXAMINATION									
5.	Dissertation activity V.	5	-	-	R	Scientific research V.	min. 16	P	max. 10
	Orientation V.	0	2	2	S				
6.	Dissertation activity VI.	5	-	-	R	Scientific research VI.	min. 16	P	
	Orientation VI.	0	2	2	S				
7.	Dissertation activity VII.	5	-	-	R	Scientific research VII.	min. 16	P	
	Orientation VII.	0	2	2	S				
8.	Dissertation activity VIII.	5	-	-	R	Scientific research VIII.	min. 16	P	
	Basics of the process of the PhD procedure	0	6	6	S				
	Orientation VIII.	0	2	2	S				
1-8.	TOTAL	min. 70					min. 170		

Abbreviations: F – Full-time training, PT – Part-time training; P – Practice, R – Report; E – Exam; S – Signature

CREDIT VALUES OF SCIENTIFIC RESEARCH ACTIVITIES
(in the case of 100% participation share)

Description of Activity		Credits
Book, lecture notes, textbook	Scientific book	32
	Book chapter	20
	Scientific article in a book	20
	Printed or electronic university lecture notes/textbook in a foreign language	24
	Printed or electronic university lecture notes/textbook in the native language of the PhD student	20
	Teaching material based on scientific research	12
Peer-reviewed journal article	Journal article in a foreign language published abroad	24
	Journal article in a foreign language published in Hungary	20
	Journal article in the native language of the PhD student	16
Non-peer-reviewed journal article	Journal article in a foreign language published abroad	8
	Journal article in a foreign language published in Hungary	6
	Article published in a journal or an electronic site in the native language of the PhD student	5
Participation in international (foreign language) scientific conferences	Publication of the presentation in a peer-reviewed, foreign language proceeding	24
	Publication of the presentation in a non-peer-reviewed, foreign language proceeding	16
	Presentation held in a foreign language ¹	6
	Poster in a foreign language	6
	Abstract submitted in writing and published in a conference proceeding in a foreign language	4
Participation in domestic scientific conferences	Publication of a foreign language presentation in a foreign language conference proceeding	12
	Publication of a presentation in the native language of the PhD student	10
	Presentation held in a foreign language ¹	4
	Poster in a foreign language	4
	Presentation held in the native language of the PhD student ¹	2
	Poster in the native language of the PhD student	2
	Abstract submitted in writing and published in a conference proceeding in the native language of the PhD student	2
Scientific grant applications won	Participation in international scientific conference (in foreign language)	12
	Participation in national scientific conference	10
	Participation in university-level scientific conference	6
Patent	Foreign patent	30
	Creation, patent-based industrial production	24
	Patent granted in Hungary	20
Other scientific activities	Professional literature summary related to the research topic ²	9
	Doctoral draft dissertation prepared for preliminary defence during the training programme	30

As a co-author, the value of the credit point must be determined in accordance with Section 4 (10) c).

¹ Only counted if the presentation does not appear in a publication.

² Can be counted only in the first semester.