

Course description

Course abbreviation:	KMA/AMA	Page:	1 / 2
Course name:	Applications of Mathematics - State Exam		
Academic Year:	2023/2024	Printed:	11.07.2025 12:54

Department/Unit /	KMA / AMA			Academic Year	2023/2024
Title	Applications of Mathematics - State Exam			Type of completion	State Final Exam
Long Title	Applied Mathematics				
Accredited/Credits	Yes, 0 Cred.			Type of completion	
Number of hours					
Occ/max	Status A	Status B	Status C	Course credit prior to	No
Summer semester	0 / -	0 / -	0 / -	Counted into average	YES
Winter semester	0 / -	0 / -	0 / -	Min. (B+C) students	1
Timetable	Yes			Repeated registration	NO
Language of instruction	Czech			Semester taught	Winter, Summer
Optional course	Yes			Internship duration	0
Evaluation scale	1 2 3 4				
No. of hours of on-premise					
Auto acc. of credit	No				
Periodicity	every year				
Specification periodicity					
Substituted course	None				
Preclusive courses	KMA/MMA				
Prerequisite courses	N/A				
Informally recommended courses	N/A				
Courses depending on this Course	N/A				

Course objectives:

The aim of the final state examination Applied Mathematics is to verify that a student successfully passed one part of his/her degree course, that he/she can actively use and apply basic mathematical methods and knowledge of functional analysis (to the extent of the course KMA/UFA), theory of ordinary and partial differential equations (to the extent of the courses KMA/ODR and KMA/PDR) and optimization theory (to the extent of the courses KMA/MDO or KMA/MNO), that he/she gained the necessary expert skills and knowledge to move into professional practice, or to further PhD studies. In addition, presentation and argumentation skills are also aimed.

Requirements on student

All assessment tasks will assess the learning outcomes, especially, the ability to present well-known theoretical results, to provide logical and coherent proofs, to apply the theoretical knowledge to analyze and solve specific problems.

Content

Final state examination is the oral examination in front of the jury and the usual duration is approximately 30-45 minutes. The rules are given by the Department of Mathematics according to the Study and Examination statuses of the University of West Bohemia. Main topics of this examination are announced by the Department of Mathematics annually.

Fields of study

Guarantors and lecturers

- **Guarantors:** doc. Ing. Gabriela Holubová, Ph.D. (100%)

Literature

- **Recommended:** *Literatura je dána literaturou podmiňujících předmětů a doporučením garanta oboru./ Literature as given by the conditional courses and recommended by the course guarantor..*

assessment methods

Knowledge - knowledge achieved by taking this course are verified by the following means:

Oral exam

prerequisite

Knowledge - students are expected to possess the following knowledge before the course commences to finish it successfully:

Student must meet all prerequisites of the course guaranteed by the Department of Mathematics and all conditions set by the Study and Examination Regulations of the University of West Bohemia in Pilsen.

learning outcomes

Knowledge - knowledge resulting from the course:

Passing the final state examination Applied Mathematics will ensure that the student obtained knowledge, skills and competences in functional analysis, theory of ordinary and partial differential equations and optimization theory.

Course is included in study programmes: