

Subject code	ECTS credits
MAT4008	6

Course title in Lithuanian

PRAKTIKA

Course title in English

INTERNSHIP

Short course annotation in Lithuanian (up to 500 characters)

Dalyko tikslas – pagilinti ir praplėsti bendrųjų ir specialiųjų disciplinų žinias, supažindinti studentus su priimančiojoje institucijoje vykdomais tyrinėjimo, modeliavimo ir realizavimo darbais, mokyti studentus panaudojant matematinis metodus savarankiškai spręsti praktikoje kylančius uždavinius, sudaryti jiems sąlygas įgyti praktinių darbo įgūdžių ir mokytis konstruktyviai bendrauti su kolegomis bei klientais.

Short course annotation in English (up to 500 characters)

Aim of Internship is to extend and expand knowledge acquired in basic and specialization courses, to introduce students to the research, modelling and/or realization tasks in a company or organization, to train students to solve real practical tasks using mathematical methods, to help in acquiring communication and collaboration skills. During the Internship, student must execute functions, requiring the qualification of a mathematics specialist, at an accepting company or organization. Report must be prepared covering the main types of Internship activities – analysis of company activities, processes, description of Internship task and its implementation, results and conclusions.

Prerequisites for entering the course

To be completed in 90% of the undergraduate programme in Mathematics and its Application education.

Course aim

Aim of Internship is to extend and expand knowledge acquired in basic and specialization courses, to introduce students to the production, research or support tasks in a company or organization.

Links between course outcomes, criteria of learning achievement evaluation, study methods and methods of learning achievement assessment

No	Course outcomes	Criteria of learning achievement evaluation	Study methods	Methods of learning achievement assessment
1.	Ability to carry out certain tasks in industrial or scientific institution	Student demonstrates the knowledge of particular mathematical problem, demonstrates the ability to formulate task, present solution process, justify received results	Individual work, consulting	Internship report and presentation, assessed by a qualification commission, formed by the Dean of the Faculty.
2.	Ability to apply theoretical knowledge in practical work			
3.	Ability to identify and follow industry trends and choose relevant problems and proper solutions			
4.	Ability to make conclusions on theoretical or practical mathematical problem.			

Links between study programme outcomes and course outcomes

Study programme outcomes	Running number of course outcome			
	1	2	3	4
Know and comprehend concepts and propositions of fundamental mathematical subjects, recognize and apply them solving practical/theoretical tasks	+	+	+	+

Comprehend and be able to apply classical analytical and numerical methods as well as the main algorithms for solving differential equations	+	+	+	+
Comprehend and be able to apply probabilistic and statistical methods for data analysis	+	+	+	+
Know and understand the main theories of mathematical didactics, consolidate and integrate the main principles in education	+	+	+	+
Know and comprehend the needs and importance of information technologies in study process, also be able to apply programming knowledge and skills, data structures and modelling	+	+	+	
Summarize and evaluate critically scientific and professional literature, as well as use various tools for collecting of information for the study process and for solving fixed practical/theoretical problems	+	+	+	
Identify the problem, collect and analyze real/theoretical data using various mathematical methods, tools and IT technologies	+	+	+	
Develop and apply appropriate mathematical models and tools, forecast and realize them for use in case analysis	+	+	+	+
Having good foundations of mathematics, logically and critically recognize and describe relations between quantities of real life and mathematical concepts	+	+	+	+
Operating with formal mathematical symbols and terms, determine mathematical connections between various mathematical quantities; conceive mathematical propositions and logical proofs, construct and prove new statements		+		+
Think logically and analytically, evaluate alternative ways of task solving and implement optimal solutions	+	+	+	
Critically analyze and evaluate obtained results, take responsibility from the mathematical point of view				+
Work individually and/or in groups by developing and adopting appropriate mathematical models and tools for use in case analysis	+	+	+	
Clearly and convincingly present problems and solutions, related to economics, energetics, biomedicine and didactics, to experts and non-experts using ground knowledge, reasoning, relevant presentation tools and methods				+
Plan self-learning based on personal needs and the ongoing professional development	+	+	+	+
Demonstrate awareness of economic, legal, social, ethical and environmental context in mathematical projects	+	+	+	+
Adapt to fast changing cultural, economic and technological environment	+	+	+	

Distribution of workload for students (contact and independent work hours)

Internship in company environment	300
Consultations	15
Individual students work	55
Report preparation and defence	30
Total:	400 hours

Structure of cumulative score and value of its constituent parts

Term work evaluation by tutor 20%, mentor evaluation – 20%, defence - 60%

Recommended reference materials

Depends on the content of the project.

Course programme designed by

Prof. dr. Ričardas Krikštolaitis