

1.	<b>Field of study</b>	<b>Mathematics</b>
2.	Faculty	Faculty of Science and Technology
3.	Academic year of entry	2024/2025 (winter term)
4.	Level of qualifications/degree	second-cycle studies
5.	Degree profile	general academic
6.	Mode of study	full-time

<b>7. General information about the module</b>	
<b>Module name</b>	<b>Problem Workshops A</b>
Module code	W4-MT-S2-23-WProA
Number of the ECTS credits	1
Language of instruction	Polish
Purpose and description of the content of education	Celem wiodącym jest zapoznanie studentów na możliwie ogólnym poziomie z tematyką podejmowaną przez (wybrane) grupy badawcze Instytutu Matematyki, w szczególności ze standardowymi narzędziami stosowanymi w danych działach matematyki. Celami pośrednimi są: kształcenie umiejętności analitycznych (właściwe zdefiniowanie problemu), metodycznych (wybór optymalnego narzędzia do rozwiązania danego problemu) i poznawczych (analiza publikacji i innych materiałów, w tym obcojęzycznych, związanych z danym problemem).
List of modules that must be completed before starting this module (if necessary)	not applicable

<b>8. Learning outcomes of the module</b>			
Code	Description	Learning outcomes of the programme	Level of competenc (scale 1-5)
WProA_1	Zna i rozumie najważniejsze twierdzenia i hipotezy z wybranych działów matematyki	K_W03	3
WProA_2	Potrafi właściwie zdefiniować problem związany z danym zagadnieniem poprzez stawianie precyzyjnych i trafnych pytań	K_K02	4
WProA_3	W oparciu o literaturę fachową potrafi przygotować i zaprezentować ustnie dane zagadnienie	K_K04 K_U02 K_U09	4 4 4
WProA_4	Potrafi określić swoje zainteresowania i rozwijać je w toku dalszych studiów	K_K01 K_U06	3 3

<b>9. Methods of conducting classes</b>		
Code	Category	Name (description)
a03	Lecture methods / expository methods	Description <i>a description of objects, phenomena, processes or people; it involves specifying the structure and characteristic features of the object, phenomenon, or process being described; it is usually accompanied by a demonstration of the described object or by its models, drawings, tables, charts, etc.; a description may take the form of an explanation, classification, justification or comparison</i>

b04	Problem-solving methods	Activating method – discussion / debate <i>an exchange of views supported by substantive arguments leading to a clash of different views, a compromise or the identification of common positions; it proceeds according to previously agreed-upon rules regarding the time, manner and turn-taking as well as the principles of civil discourse; a discussion is not a competition but aims at finding the best solutions or presenting different points of view; its varieties include brainstorming, Oxford-style debate, panel discussion, decision tree, conference discussion; a debate is an orderly dispute between supporters and opponents of a viewpoint, usually specialists in the field or pre-selected representatives of a group dealing with a common problem</i>
f02	Methods of self-learning	Individual work with a text <i>searching for and acquiring new information using textbooks and other written sources (including their digital versions); searching for texts, selecting fragments for analysis/interpretation, using other texts to solve a problem related to the studied issue</i>

**10. Forms of teaching**

Code	Name	Number of hours	Assessment of the learning outcomes of the module	Learning outcomes of the module	Methods of conducting classes
WProA_fs_1	workshop	30	course work	WProA_1, WProA_2, WProA_3, WProA_4	a03, b04, f02

**11. The student's work, apart from participation in classes, includes in particular:**

Code	Category	Name (description)	Is it part of the BUNA?
a02	Preparation for classes	Literature reading / analysis of source materials <i>reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source materials to be used in class</i>	Yes
a03	Preparation for classes	Developing practical skills <i>activities involving the repetition, refinement and consolidation of practical skills, including those developed during previous classes or new skills necessary for the implementation of subsequent elements of the curriculum (as preparation for class participation)</i>	Yes
a04	Preparation for classes	Consulting materials complementary to those indicated in the syllabus <i>agreeing on materials complementary to those indicated in the syllabus, supporting the implementation of tasks resulting from or necessary for class participation</i>	Yes
c01	Preparation for verification of learning outcomes	Determining the stages of task implementation contributing to the verification of learning outcomes <i>devising a task implementation strategy embracing the division of content, the range of activities, implementation time and/or the method(s) of obtaining the necessary materials and tools, etc.</i>	Yes
c03	Preparation for verification of learning outcomes	Implementation of an individual or group assignment necessary for course/phase/ examination completion <i>a set of activities aimed at performing an assigned task, to be executed out of class, as an obligatory phase/element of the verification of the learning outcomes assigned to the course</i>	Yes

Information on the details of the module implementation in a given academic year can be found in the syllabus available in the USOS system: <https://usosweb.us.edu.pl>.