UAB
Universitat Autònoma de Barcelona

Current Mathematical trends

Code: 100127
ECTS Credits: 6

2024/2025

Degree	Type	Year
2500149 Mathematics	OT	4

Contact

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Teachers

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Teaching groups languages

You can view this information at the end of this document.

Prerequisites

It is recommendable to have completed the third year of the Bachelor degree in Mathematics

Objectives and Contextualisation

The objectives of this subject are:

- To introduce the future graduates with important results of Mathemat
- As a complement to the standard teaching, the students will get use
- To give an updated view of mathematics.
- To learn to write mathematical works, both for its content and presen

Competences

- Actively demonstrate high concern for quality when defending or presenting the conclusions of one's work.
- Assimilate the definition of new mathematical objects, relate them with other contents and deduce their properties.
- Distinguish, when faced with a problem or situation, what is substantial from what is purely chance or circumstantial.
- Effectively use bibliographies and electronic resources to obtain information.
- Generate innovative and competitive proposals for research and professional activities.
- Identify the essential ideas of the demonstrations of certain basic theorems and know how to adapt them to obtain other results.
- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.

Learning Outcomes

1. Actively demonstrate high concern for quality when defending or presenting the conclusions of one's work.
2. Critically follow the arguments exposed by others.
3. Devise mathematical strategies and objectives when faced with new problems or challenges from different fields of mathematics or from science and society in general.
4. Differentiate the different stages of formation of the main areas of mathematics (algebra, arithmetic, analysis, geometry, etc.) and know how to discuss the relevance of this grouping.
5. Effectively use bibliographies and electronic resources to obtain information.
6. Explain and analyze the deontological code of the profession.
7. Read advanced mathematics textbooks in English.
8. Recognize the relationships between mathematics, philosophy and culture throughout history.
9. Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
10. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
11. Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
12. To place chronologically and thematically the main concepts and practices that led to the crisis of the foundations at the beginning of the 20th century.
13. Understand the essence of an informative but specialised conference on mathematics.
14. Visibility of the contributions of women in mathematics through the study of historical or current cases.

Content

The content will vary annually depending on the teachers involved. The different areas of mathematics will be rep

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Attending to the talks	60	2.4	
Type: Autonomous			
Personal Work	90	3.6	

The two hours per week will be devoted to mini-courses taught by the teaching team of the subject.
Each student will present an essay on one of the mini courses that will be

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Oral Exam	0,10	0	0	
Short talk	0,40	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Written work	0,50	0	0	

The evaluation of the subject is structured in the following way:
Class attendance is mandatory and in any case must be greater than 80'
Each lecturer will evaluate the work of the students that he/she has supe

c) Quality of the writing and d) presentation of the work.
At the end of the course, the coordinator of the subject will assign a topic

Bibliography

It does not appply

Software

None

Language list

Name	Group	Language	Semester	Turn
(TE) Theory	1	Catalan	annual	morning-mixed