Mathematical Games and Activities in Early Childhood Education

Code: 101985
ECTS Credits: 6

2024/2025

Degree	Type	Year
2500797 Early Childhood Education	OT	4

Contact

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Teaching groups languages

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

Prerequisites

It is highly recommended that the student have studied and use the knowledge of these subjects

- The mathematics curriculum in kindergarten.

- Practice math classroom Childhood Education

Objectives and Contextualisation

It is an optional subject in the fourth year is focused on a specific teaching. Taught when students have already done all the basic training and then race "Mathematics curriculum the child" and "The mathematical practice in the classroom Childhood Education." That is why the subject: Games and activities in math education child wants to deepen the knowledge of teaching mathematics in kindergarten and primary school.

This course focuses on practical knowledge of math curriculum nursery and primary school, but also will review different mathematical content of older ages. The dynamic classroom will be in workshop format where you live in first person which is the 'mathematical challenge', learning from open questions, cooperative work and aprenenttage from selected materials handling.

Competences

- Consider classroom practical work to innovate and improve teaching.
- Demonstrate knowledge and understanding of the aims, curricular contents and criteria of evaluation of Infant Education
- Design and regulate learning spaces in diverse contexts which attend to the particular issues of pupils regarding gender equality, equity and respect for human rights.
- Promote and facilitate early infant learning, from a global and integrative perspective of different cognitive, emotional, psychomotor and developmental dimensions.
- Promoting experiences of initiation into information and communication technologies.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.

- Understand mathematics as sociocultural knowledge.
- Understand teaching strategies to develop numerical representations and spatial geometric and logical development notions,.
- Understand the scientific, mathematical and technological bases of the curriculum at this stage as well as theories on the acquisition and development of the corresponding learning.
- Work in teams and with teams (in the same field or interdisciplinary).

Learning Outcomes

1. Apply key elements of the mathematics curriculum to a personal design.
2. Be able to analyse a learning situation, assess its relevance and make innovative alternative proposals.
3. Be able to design personal teaching situations based on the curriculum and theoretical guidelines and examples shown in the subject for the teaching and learning of mathematics in infant education.
4. Be able to draw on best mathematical practices to create new and personal ones.
5. Be able to identify mathematical aspects in everyday life and be able to potentiate them and share them with children to facilitate their learning.
6. Be able to include attention to diversity, gender equality, equity and respect for human rights in one's own design.
7. Be able to organize both personal and group work to design and implement a joint project.
8. Know about didactic situations and experiences that are created with a global and inclusive perspective of different cognitive, emotional, psychomotor and volitional dimensions.
9. Propose viable projects and actions to boost social, economic and environmental benefits.
10. Understand learning and teaching theory as governed by the mathematics curriculum.
11. Understand the diversity of educational situations designed around the mathematics curriculum.
12. Understand the diversity of interdisciplinary teaching situations for teaching and learning of mathematics in kindergarten.
13. Using technologies in the design of didactic proposals for teaching and learning mathematics in nursery school or the initial cycle of primary school.

Content

1. what is game and what is recreational activity?
2. Mathematical look at the evolution of play in early childhood.
3. Mathematical learning through different types of games and fun activities.
4. Design, creation, implementation and evaluation of game-based math workshops.
5. Review of mathematical notions of different blocks and of different ages.
6. Creativity and rigor in the design and application of a workshop for children.
7. The mathematical graphic representation and its interpretation.
8. Documentation as a communication and evaluation tool

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Large group	45	1.8	11
Type: Supervised			
Analysis of materials and classroom experiences	30	1.2	
Type: Autonomous			

Autonomous activity	75	3	11

The methodology of this subject is based on its applicability. You will learn 'by doing', you will be the mathematical godmothers and godfathers of kindergarten children. You will have a couple of children under your care (the godchildren) and you will accompany them for five months. You will design games and maths workshops, share them with your colleagues and carry them out with two whole classes of children. You will document the implementation of the workshops. You will collect and analyze the graphic representations made by the children. We will create observation rubrics. You will write an evaluation report for your godchildren, among others. Throughout this process there will be the two teachers tutoring these children who will also participate with us from time to time.

Due to the fact that it is an applied subject, attendance and total involvement is required. You will act with the utmost responsibility and dedication, since every two weeks there will be fifty children waiting for what you will have designed and prepared.

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
Design and implementation of a workshop session	30	0	0	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13
Individual work. Journal sessions	50	0	0	3, 5, 6, 8, 10, 11, 12, 13
Self evaluation	20	0	0	2, 7, 8, 9, 10, 11, 12, 13

The evaluation of this subject is CONTINUOUS

There will be an individual evaluation part and a group evaluation.

The individual evaluation (50% final grade) consists of:

- Write a diary of each workshop carried out with the boys and girls, plus the extensions that the student considers. Diary that it is necessary to keep up to date. This diary will be read by the teacher twice throughout the course and she will make a return to improve it.
- Write an evaluation report for each godchild.
- Prepare a dossier for the families of your godchildren, following the guidelines of the teachers.

The group evaluation (50% final grade) consists of:

a) Prepare and carry out a game workshop session and mathematical playful activity, with boys and girls from Early Childhood Education.

- Design and send to supervise, with the group's colleagues, a workshop proposal well in advance.
- Share with colleagues everything that can help them apply it.
- Prepare spaces and materials for your workshop.

- Document each workshop well to have evidence of the children's learning and help make good final videos.
- Scan, transcribe and interpret the representations of your godchildren.
- Make two videos of two workshops

b) Understand and apply the workshops designed by the classmates.

Students will receive a return or qualification (max. 20 working days according to calendar).

The final grade will be proposed by each student and negotiated with the teacher.

The evaluation, therefore, is continuous. The final individual document must be delivered on June 20, 2025. The re-evaluation will take place on Friday, June 27.

Whoever does not present the document within the term and/or does not participate in the collective work will be considered Not Presented.

Class attendance is mandatory: the student must attend all classes to be evaluated (a maximum of 20% of incidents is contemplated).

In order topass this subject, it is necessary for the student to show, in the activities that are proposed, a good general communicative competence, both orally and in writing, and a good command of the vehicular language that appears in the teaching guide. Therefore, in all activities (individual and in groups) linguistic correctness, writing and formal aspects of presentation will be taken into account. Students must be able to express themselves fluently and correctly and show a high degree of comprehension of academic texts. An activity can be returned (not evaluated) or suspended if the teacher considers that it does not meet these requirements. In case of plagiarism, the subject is suspended.

Being an applied subject, full attendance and involvement is required, as well as maximum responsibility and dedication, since every two weeks there will be fifty boys and girls waiting for what you have designed and prepared.

This course does not contemplate the single assessment system given its applied nature.

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Software

There is no need

Language list

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