

Degree	Type	Year
2500797 Early Childhood Education	OB	3

Contact

Name: Edelmira Rosa Badillo Jimenez

Email: edelmira.badillo@uab.cat

Teachers

Maria Begoña Visus Vinue

Teaching groups languages

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Prerequisites

Despite not being any official prerequisites to enrol this course, it is strongly recommendable that students had already passed the annual subject of first course:

- Personality development

Objectives and Contextualisation

This course is for students that had been passed all the basic training.

This course is about specific didactics in mathematics, and is done simultaneously with other specific didactics courses. The main themes of the course are the knowledge of the mathematics curriculum in early childhood education, the main specific mathematical contents: logics and numbers, with special emphasis on the zero to three year old period.

The 4th year subject "Mathematical Practice in the Early Childhood Education Classrooms" has to be understood as the natural continuation of this course. Once all compulsory subjects of didactics in mathematics are passed, one has the possibility to enrol, in the very last semester of the degree, the subject entitled "Mathematical Games and Activities in Early Childhood Education".

Objectives of the course:

1.- To be familiar with the main topics of the curriculum in early age education in the period from zero to six years old, with special emphasis in mathematics.

2.- To be familiar with the mathematical contents of the curriculum in the periods from zero to three and from three to six years old: logics and numbers.

3.- To be familiar with the ways to engage mathematical activities from zero to six year old.

4.- To design situations of mathematical learning in the period from zero to three year old.

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
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- 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.
- Properly express oneself orally and in writing and master the use of different expression techniques.
- 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.

Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Be able to communicate in writing by making a personal draft, having documented and referenced the texts consulted.
3. Be able to find and evaluate the relevance and adequacy of technologies for learning and knowledge for teaching and learning mathematics in kindergarten and nursery school.
4. Be able to locate and select mathematical content and learning objectives in the curriculum.
5. Be able to orally communicate synthesis of the most relevant aspects of a job using various technologies for learning and knowledge and in the required time.
6. Be able to select appropriate materials and situations for the nursery to promote learning and autonomy while respecting the uniqueness of each child.
7. Have the capacity to organize both personal and group work to perform the tasks required of the subject.
8. Know about professional support, physical and web-based resources.
9. Know of the structure, content, organization and utility of curricula of reference.
10. Propose new methods or well-founded alternative solutions.
11. Understand the diversity of materials and situations suitable for the development of mathematical thinking in kindergartens.
12. Understand the mathematical and didactic foundations of the curriculum for this stage regarding geometry and measurement.
13. Understand the mathematical and didactic foundations of the curriculum for this stage regarding logic and numbers.
14. Understand theories on the development of mathematical thinking in early childhood.

Content

This course is composed of three teaching units:

1.- Curriculum and mathematical contents in Early Childhood Education.

1.1. Official regulations (Real Decret 95/2022, of February 1, which establishes the organization and minimum teachings of Early Childhood Education and DECREEE 21/2023, of February 7, on the organization of Early Childhood Education teachings).

1.2. Elements of the Curriculum and location of mathematics.

1.3. Theoretical-psychological framework of the teaching and learning of mathematics. Constructivist conception.

1.4. Development of mathematical thinking in kindergarten and its continuity.

1.5. Organization of the mathematical contents in the four fundamental blocks.

1.6. Logic: Attributes and collections. Relationships and change. Search for patterns.

2.- Development of mathematical logical reasoning in the first ages.

2.1. How mathematical logical reasoning is developed in the first ages, 0-3 and 3-6.

2.2. Materials for the logical development in kindergarten: unspecific material and other materials.

2.3. Situations from the first to the second year: the treasure chest and the heuristic game.

2.4. Situations of the second in the third year: trays of experimentation, situations of the daily life, the time of the food, corners, etc.

3.- Numbers and operations

3.1. Numbers and operations. Quantifiers.

3.2. Number construction. Reading and writing numbers. Actions on quantity -adding, taking out, grouping, dividing, repeating...

3.3. The decimal number system. Mental calculation. Automation of results.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
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Type: Directed

Classroom activity, whole group and seminars	30	1.2	2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14
Type: Supervised			
Individual or small group work	20	0.8	
Type: Autonomous			
Personal work	50	2	2, 8, 9, 14

Activity	Time needed	Methodology
Our teaching approach and assessment procedures may be altered due to public gatherings for COVID-19.		
Classroom activity Whole group	10	Lectures of the basic themes of the subject. It is done with the whole group. The session will usually finish with a brief explanation of the tasks to be done.
Seminars Reduced groups	20	Workspaces in reduced groups (50% of the whole group) with the aim to deepen in the concepts and themes they have dealt with.
Monitoring seminars Reduced groups	20	Workspaces in smaller groups where students present their work and receive feedback from the professor.
Personal work	50	Students have to look for references on their own to deepen the concepts. Moreover, they have to finish all the activities proposed by the professor.

Assessment

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Final Exams (individual)	50%	0	0	1, 2, 9, 10, 12, 13
Group works	25%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 14
Work in seminars (10% individually and 15% groups)	25%	0	0	1, 2, 3, 5, 7, 10, 14

The CONTINUOUS evaluation will be carried out throughout the entire subject through the activities shown below. Attendance in face-to-face classes of the subject is mandatory.

CONTINUOUS Evaluation Activities:

1) Individual written test. (Contents of the Teaching Units from 1 to 3. Readings. Contents of the workshops developed in the seminars. Contents of the group work). The control will be carried out the last week of the subject (50% of the final grade).

2) Delivery and oral defense of the group work. about an intervention in the classroom from 0 to 3 years. Delivery will be made two weeks before the closing of the subject (25% final grade)

3) Delivery of the learning folder. A single delivery will be made the penultimate week (25%: 15% group work and 10% individual)

Evaluation activities	% grade	Hours	What and when?
Individual written test	50%	2 on-site + autonomous	Written test with questions related to the competency achievement of the subject (10% of the final grade). Individual writtentest at the end of all the teaching units of the course: 21-12-2023 (10% of the final grade). This activity is recoverable. The day of the recovery of the individual written test: 18-12-2023 (10% of the final grade).
Group work	25%	4 on-site + autonomous	The work will refer to children from zero to three years old (25% of the final grade). Each group will present a single written work (15% of the final grade). The oral defense of the group work will be made (10% of the final grade). This activity is not recoverable.
Weekly work (Individual and group)	25% (10% individual + 15% group)	20 on-site + autonomous	The seminar practices will refer to the different topics of the subject. At the end of each seminar, the students will deliver a written work (10% of the final grade). The continuous assessment students will be carried out through the delivery of the learning folder (15% of the final grade). This activity is not recoverable.

The grade obtained in this group evaluation represents 15% of the final grade for the subject. This group work CANNOT be recovered.

II. Individual Evaluation.

In this part, the scientific and technical knowledge of the subject acquired by the students is individually evaluated.

a) A part of the individual evaluation is the individual resolution test a week after closing the Logic Pad and the Numbering Pad, as well as the delivery of the activities. Teachers will publish the dates of the test and the follow-up deliveries of the blocks when publishing the program, since the dates depend on the temporal organization of the blocks (10%).

b) Another partof the individual written test will be carried out through a written test in an individual evaluation session (50% of the final grade). It will be done in the last week of the subject: 12/19/2024 (G61); 12/17/2024 (G62).

The content of the individual written test includes everything done during the subject: teaching units, group work, seminars and readings.

SINGLE EVALUATION. Evaluation activities

Students who take the single evaluation must follow the development of the subject, attending class regularly. Despite this, THE FOLLOW-UP EVALUATION ACTIVITIES WILL NOT BE PRESENTED UNTIL THE SAME DAY OF THE FINAL EVALUATION. That is why THEY WILL NOT HAVE individualized RETURN from the follow-up evaluation activities during the development of the subject. In any case, they will be able to access the general feedback, whether it is done during the feedback sessions for the entire class group or those that can be published on the virtual campus that are done by the group.

1. Individual written test. (Contents of the Teaching Units from 1 to 3. Readings. Contents of the workshops developed in the seminars. Contents of the group work). The individual written test will be taken on the day of the single evaluation: 12/19/2024 (G61) and 12/17/2024 (G62) (50% of the final grade). It is a recoverable activity. The recovery dates will be: 01/30/2025 (G61); 02/04/2025 (G62)
1. Delivery and oral defense of individual work on an intervention in the classroom from 0 to 3 years old. The delivery will be made on the day of the single evaluation: 12/19/2024 (G61) and 12/17/2024 (G62) (25% of the final grade). It is not a recoverable activity due to its theoretical-practical nature.
1. Delivery of the learning folder that includes the development of the seminar practices. A single delivery will have to be made on the day of the final test of the subject. Delivery will be made on the day of the single evaluation: 12/19/2024 (G61) and 12/17/2024 (G62) (15% of the final grade). This evaluation activity is not recoverable.
1. Delivery of the synthesis of the proposed readings and the development of the key ideas of the Logic and Numbering Blocks. Delivery will be made on the day of the single evaluation: 12/19/2024 (G61) and 12/17/2024 (G62) (10% of the final grade). This evaluation activity is not recoverable.

OTHER CONSIDERATIONS ABOUT THE EVALUATION:

The student will have to take into account the following normative considerations regarding the evaluation:

- In individual written tests, it is not allowed to use the calculator, unless indicated by the teacher.
- The use of Artificial Intelligence tools in evaluation activities is not permitted.
- All evaluation activities are mandatory, for all students.
- The grade for a group project is not necessarily the individual grade of each of the students in this group.
- Students who do not attend the seminar sessions during the development of the evaluation activities of the follow-up of a block will have a maximum grade of 5 on those activities.

To pass this subject, it is necessary for the student to show good general, oral and written communicative competence, and a good command of the vehicular language that appears in the teaching guide. In all activities (individual and group), linguistic correction, writing and formal aspects of presentation will therefore be taken into account.

Students must be able to express themselves fluently and correctly and show a high degree of understanding of academic texts. The student will have to show a competence equivalent to level 2 (equivalent to C2). Before issuing evidence of learning, it is necessary to check that the sources, notes, textual citations and bibliographic references have been written correctly following APA regulations.

Total or partial plagiarism of one of the evaluation activities and/or copying in an evaluation test is a direct reason for failing the subject. Copying or plagiarism of any type of evaluation activity constitutes a crime, being penalized with a 0 as a grade for the subject, losing the possibility of recovering it, whether it is an individual or group work (in this case, all members of the group will have a 0).

Class attendance is mandatory: the student must attend all classes to be evaluated (a maximum of 20% incidents are contemplated in classes, both in large group classes and in seminars).

The return and qualification of the evaluation activities will be carried out a maximum of 20 business days after they have been completed.

ATTENTION REPEATERS:

THERE WILL BE NO SYNTHESIS EVALUATION for this subject. Therefore, those people who enroll for the second time will be able to choose between taking a continuous evaluation or a single evaluation. In both cases, the conditions regarding in-person attendance that will apply are the same as for the rest of the students enrolled in the subject. Therefore, we recommend that students who repeat the subject ensure temporary availability to follow it regularly, if necessary, avoiding enrolling in other subjects or courses that are taught on the same day in the same time slot.

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Software

No specific software is used.

Language list

Name	Group	Language	Semester	Turn
(SEM) Seminars	611	Catalan	first semester	morning-mixed
(SEM) Seminars	612	Catalan	first semester	morning-mixed
(SEM) Seminars	621	Catalan	first semester	afternoon
(SEM) Seminars	622	Catalan	first semester	afternoon
(TE) Theory	61	Catalan	first semester	morning-mixed
(TE) Theory	62	Catalan	first semester	afternoon