

Degree	Type	Year	Semester
2500797 Early Childhood Education	OB	3	1

Contact

Name: Kaouthar Boukafri Itahriouan
Email: Kaouthar.Boukafri@uab.cat

Use of languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Other comments on languages

AQUESTA GUIA ESTÀ PENDENT DE REVISIÓ LINGÜÍSTICA

Prerequisites

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

- Personality development

Objectives and Contextualisation

This course is meant to be done once all the basic training has been passed.

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

Skills

- 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
- 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. Be able to communicate in writing by making a personal draft, having documented and referenced the texts consulted.
2. 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.
3. Be able to locate and select mathematical content and learning objectives in the curriculum.
4. 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.
5. Be able to select appropriate materials and situations for the nursery to promote learning and autonomy while respecting the uniqueness of each child.
6. Have the capacity to organize both personal and group work to perform the tasks required of the subject.
7. Know about professional support, physical and web-based resources.
8. Know of the structure, content, organization and utility of curricula of reference.
9. Understand the diversity of materials and situations suitable for the development of mathematical thinking in kindergartens.
10. Understand the mathematical and didactic foundations of the curriculum for this stage regarding geometry and measurement.
11. Understand the mathematical and didactic foundations of the curriculum for this stage regarding logic and numbers.
12. Understand theories on the development of mathematical thinking in early childhood.

Content

This subject has in 4 main content blocks:

1.- Curriculum i mathematical contents in early age education

- 1.1. Official regulations (DECRET 181/2008, de 9 de setembre, Decret 142/2007 DOGC núm. 4915, Decret 101/2010 DOGC núm. 5686).
- 1.2. Curriculum and the role of mathematics in it.
- 1.3. Psychological theoretical framework of teaching and learning mathematics. Constructivist approach.

2.- The development of mathematical Logic reasoning in early

- 2.1. How is mathematical logic reasoning developed in early ages, 0-3 i 3-6.
- 2.2. Materials for the development of logic thinking in early ages 0-3: Specific and unspecific materials.
- 2.3. Situations - transition from the first to the second year: treasure basket and heuristic game.

2.4. Situations - from the second to the third year: experimentation tray, daily life situations, eating time, etc.

3.- The development of mathematical thinking from 3-6 years old and its

3.1. Organization of the mathematical contents in four fundamental parts.

3.2. Logics: attributes and collectables. Relationships and change. Pattern searching.

4.- Numbers and operations

4.1. Numbers and operations. Quantifiers. Construction of the number. To read and write numbers down. Actions on the quantity: to add, to subtract, to group, to split, to repeat, etc.

4.2. The decimal numeric system. Mental calculus.

Methodology

Activity	Time needed	Methodology
Classroom activity Whole group	10	Lectures of the basic themes of the subject. It is meant to be done participate. Each session will usually finish with a brief explanation seminar.
Seminars Reduced groups	20	Workspaces in reduced groups (50% of the whole group) with the deepen in the concepts and themes they have dealt with in the whole seminar.
Monitoring seminars Reduced groups	20	Workspaces in smaller groups where students present their work.
Personal work	50	Students on their own have to look for references to deepen in the themes. Moreover, they have to finish all the activities proposed by the lecturers.

Activities

Title	Hours	ECTS	Learning outcomes
Type: Directed			
Classroom activity, whole group and seminars	30	1.2	2, 4, 1, 5, 6, 3, 9, 12, 8, 7, 10, 11
Type: Supervised			
Individual or small group work	20	0.8	
Type: Autonomous			
Personal work	50	2	1, 12, 8, 7

Evaluation

The evaluation of the progress of each student will be done along the whole semester via the activities in the next table.

It is mandatory to attend to all the classes to be evaluated. But at most 20% of the total can be missed due to justified incidents. In any other case, the final mark will be 'not presented'. This will also be the case if any of the mandatory activities are not delivered on time. **One can only be graded if at least a mark of 5 has been obtained in each of the activities listed below.**

In case the student has not obtained this minimal mark in each of the activities but has attended to all the sessions and delivered all the activities on time, there is the option to do a single individual exam to eventually get this minimum mark.

Activities	% mark	Time	
Written test	50%	2 classroom activity + personal work	It will consist in reflect on the c
Group work	20%	4 classroom activity + personal work	The main topic Each group will seminars.
Work in seminars , both individually and in groups	30% (20% individual + 10% in group)	personal work	The work in seminars contents of the Each group will the seminars w An individual fir

Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
Final Exam (individual)	50%	0	0	1, 8, 10, 11
Group work	20%	0	0	2, 4, 1, 5, 6, 3, 9, 12, 7
Work in seminars (20% individually and 10% groups)	30%	0	0	2, 4, 1, 6, 12

Bibliography

Alsina, A. (2004). Com desenvolupar el pensament matemàtic dels 0 als 6 anys. Vic: Eumo.

Canals, M. A. (2009). Primers nombres i primeres operacions. Associació de Mestres Rosa Sensat. (Els dossiers de la Maria Antònia Canals, 104)

Canals, M. A. (2009). Lògica a totes les edats. Associació de Mestres Rosa Sensat. (Els dossiers de la Maria Antònia Canals, 104)

Carbó, L., Gràcia, V. (Eds). (2005). Els continguts matemàtics en el currículum d'infantil. Dins: Mirant el món a través dels números. (pp. 55-68). Lleida: Pagès Editors.

Decret 181/2008, de 9 de setembre, pel qual s'estableix l'ordenació dels ensenyaments del segon cicle d'educació infantil. Diari oficial de la Generalitat de Catalunya, Departament d'Educació, 16 de setembre de 2008, número 5216, pp. 68256 - 68273

Edo, M. (1991). El càcul mental a Parvulari, Guix. Elements d'acció educativa, 169, 11-16.

Edo, M. (2012). Ahí empieza todo. Las matemáticas de cero a tres años. Números. Revista de Didáctica de las Matemáticas, 80, 71-84

Escola Bressol Nenes i Nens (2001). La lògica matemàtica en el periodo 0-6 años. Dins: Educación Infantil. Orientaciones y Recursos (0-6 años). (pp. 1-58). Barcelona: Praxis.

Kamii, C. (1982). Introducción. Dins: El número en la educación preescolar (pp. 9-27). Madrid: Visor.