



IDENTIFYING DATA

Mathematics for teachers: Childhood education

Subject	Mathematics for teachers: Childhood education			
Code	P02G110V01602			
Study programme	(*)Grao en Educación Infantil			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Mandatory	3rd	2nd
Teaching language	Galician			
Department				
Coordinator	Guevara Junquera, Santiago			
Lecturers	Guevara Junquera, Santiago			
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General description	<p>This matter is oriented to consolidate and *deepen the basic mathematical training necessary that allow to have a solid knowledge of the mathematical contents that configure the Curriculum of the Childish Education. It serves of base, therefore, to comprise the implicit processes in his education. Determine the aims and the contents, choose the resources and design the mathematical activities for the Childish Education. It boosts the critical spirit and researcher and help to develop the capacity to express with clarity, precision and rigour.</p> <p>Contributing to the one better competition **profisional and to his continuous development.</p>			

Competencies

Code	
A5	That the students have developed those skills of necessary learning to undertake back studies with a high degree of autonomy.
B1	Know the aims, contents curriculares and criteria of evaluation of the Childish Education.
B2	Promote and facilitate the learnings in the first infancy, from a perspective globalizadora and integradora of the different cognitive dimensions, emotional, psicomotora and volitiva.
B3	Design and regulate spaces of learning in contexts of diversity that attend to the singular educational needs of the students, to the equality of gender, to the equity and to the respect to the human rights.
B4	Boost the convivencia in the classroom and out of her and tackle the peaceful resolution of conflicts. Know observe systematically contexts of learning and convivencia and know reflexionar on them.
B5	Reflexionar In group on the acceptance of norms and the respect to the other. Promote the autonomy and the singularity of each student like factors of education of the emotions, the feelings and the values in the first infancy.
B6	Know the evolution of the language in the first infancy, know identify possible dysfunctions and look after his correct evolution. Tackle with efficiency situations of learning of tongues in contexts multiculturales and multilingual. Express oralmente and by writing and dominate the use of different technical of expression.
B7	Know the educational implications of the technologies of the information and the communication and, in particular, of the television in the first infancy.
B8	Know foundations of dietary and childish hygiene. Know foundations of early attention and the bases and developments that allow to comprise the psychological processes, of learning and of construction of the personality in the first infancy.
B9	Know the organisation of the schools of childish education and the diversity of actions that comprises his operation. Assume that the exercise of the educational function has to go perfecting and adapting to the scientific changes, pedagogical and social along the life.
B11	Reflexionar On the practices of classroom for innovar and improve the educational work Purchase habits and skills for the autonomous and cooperative learning and promote it in the students.
B12	Comprise the function, the possibilities and the limits of the education in the current society and the fundamental competitions that affect to the schools of childish education and to his professionals. Know models of improvement of the quality with application to the educational centres.

C33	Know the scientific foundations, mathematicians and technological of the curriculum of this stage as well as the theories on the acquisition and development of the corresponding learnings
C34	Know didactic strategies to develop numerical representations and space notions, geometrical and of logical development.
C35	Comprise the mathematics like knowledge sociocultural.
D1	Capacity of analysis and synthesis
D2	Capacity of organisation and planning
D3	oral and written Communication
D5	Knowledge of computer
D6	Capacity of management of the information
D7	Resolution of problems
D8	Takes of decisions
D9	Work in team
D10	Work in an international context
D11	Skills in the interpersonal relations
D12	Recognition of the diversity and multiculturalidad
D13	critical Reasoning
D15	autonomous Learning
D16	Adaptation to new situations
D17	Creativity
D18	Leadership
D19	Knowledge of other cultures and habits
D20	Initiative and spirit emprendedor
D21	Motivation by the quality

Learning outcomes

Expected results from this subject	Training and Learning Results			
2. Comprise the mathematics like a social and cultural knowledge and his utility	A5	B1 B3 B5 B11	C33 C34 C35	D1 D3 D6 D7 D12 D13 D15 D19
3. Develop the critical spirit and researcher and the capacity of expression and communication in mathematics.	A5	B1 B2 B3 B4 B5 B6 B7 B9 B11 B12	C33 C34 C35	D1 D2 D3 D5 D6 D7 D8 D9 D11 D13 D15 D16 D17 D21
4. *Capacitar For queries and documentary work on the curriculum and the general appearances of the Didactic of the Mathematics.	A5	B1 B2 B3 B4 B6 B7 B8 B9 B11 B12	C33 C34 C35	D1 D2 D3 D6 D8 D9 D10 D11 D12 D13 D15 D16 D19 D20 D21

5. Develop the competitions of autonomous training and cooperative work.

A5 B1 C33 D1
 B2 C34 D2
 B3 C35 D3
 B7 D6
 B9 D8
 B11 D9
 B12 D11
 D12
 D13
 D15
 D16
 D17
 D18
 D20
 D21

Contents

Topic	
1. The area of Mathematics in the curriculum of the Childish Education.	(*)
2. Logic. Sets. Relations: Rankings and ordination. Operations	2.1 Elementary Logic. Logical operations. 2.2 intuitive Theory of sets. Operations with sets. Properties. 2.3 Equivalence relations . Order relations 2.4 Correspondences and applications. 2.5 Laws of composition. Algebrics estructuras
3. The number. History of the systems of numbering. The natural numbers: cardinal aspect and ordinal. Operations. Systems of numbering. Numerical groups.	2.1 Introducción and history of the numbers and of the systems of numbering. 2.2 The group of the natural numbers. 2.3 Operations with natural numbers. Properties. 2.4 Ordenación in N. Number ordinal. 2.5 Systems of numbering. Teorema Fundamental. 2.6 Change of system of numbering. Operations in a system of numbering. 2.7 The whole numbers. The rational numbers. Extension of Q. The real number.
4. The space. History of the Geometry. Fundamental concepts of Geometry. Construccions Geometrical in the flat. Flat figures and bodies.	4.1 historical Introduction of the Geometry. 4.2 fundamental Concepts of Geometry. 4.3 Construccions geometrical in the flat. 4.4 geometrical Transformations in the flat. 4.5 Studio of polygons. Triangles. *Cuadriláteros. 4.6 Circunferencia and circle. 4.7 Polyhedrons. Prisms. Pyramids. 4.8 Bodies of revolution.
(*)5. The magnitudes and the measure. *Introducción And history. The metric system decimal. Magnitude and quantity. Measure of magnitudes. Estimate, errors.	(*)5.1 *Introducción and history. The metric system decimal. 5.2 Magnitude and quantity. Measure of magnitudes. Unity of measure. 5.3 *Proporcionalidade direct and reverse. Proportional magnitudes. 5.4 Length. Amplitude. Extension. 5.5 Volume and capacity. 5.6 Other magnitudes. 5.7 Estimate of measure. Errors.
(*)7. The mathematical contents in the curriculum of the Childish Education.	(*)

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Master Session	27	45	72
Classroom work	15	15	30
Tutored works	7.5	7.5	15
Autonomous troubleshooting and / or exercises	0	30	30
Other	2	0	2

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Introductory activities	Diagnostic of previous knowledges. *Introducción And presentation of the subject. I deliver of the documentation base. Bibliographic references recommended Fascicle of work stop the groups. Other activities, exercises and problems stop the work *autémo.

Master Session	Presentation and explanation of the contained of the *temario. Synthesis and reflection envelope the contents. The student will incorporate to the fascicle of work the *desenvolvemeto of the *temario.
Classroom work	Proposal of the professor of examples, problems and singular activities that contribute the a better understanding of the contained of each of the subjects. The students will work in groups with the supervision and direction of the professor and will do exhibition of the resolutions. They Will be able to employ the bibliography and the necessary materials. In the classroom there will be communication and discussion of the different solutions *aportadas. The activities, exercises and problems resolved will incorporate to the fascicle of work.
Tutored works	Presentation of the fascicle of work and correction in the resolutions *aportadas.
Autonomous troubleshooting and / or exercises	A fascicle with activities, exercises and complementary problems, of the subjects 2 to the 5, will serve so that the students work of individual and autonomous form. They Will be able to consult with the professor in the hours of *titoría *individualizada that determine . The resolutions can be *incorporadas to the his fascicle of work.

Personalized attention

Methodologies	Description
Autonomous troubleshooting and / or exercises	The students will be able to consult with the professor, in the hours of *titoría *individualizada that determine , the so much theoretical doubts how practical that present him envelope to subject . Likewise, envelope the activities proposed stop the autonomous work. In the specific hours that determine , will present stop his review the fascicle of work, in the that will owe to be collected the theoretical questions of the subject and the problems resolved of the practical kinds.
Tutored works	The students will be able to consult with the professor, in the hours of *titoría *individualizada that determine , the so much theoretical doubts how practical that present him envelope to subject . Likewise, envelope the activities proposed stop the autonomous work. In the specific hours that determine , will present stop his review the fascicle of work, in the that will owe to be collected the theoretical questions of the subject and the problems resolved of the practical kinds.

Assessment

Description		Qualification	Training and Learning Results				
Classroom work	The criteria of evaluation will be: - Assistance to the kinds. His control will be by means of signature. - Intervention in the classroom, correction in the resolutions that present and clarity in the exhibition. - Presentation of the fascicle of work and back second correction the indications of the professor.	30	A5	B3	C33	D1	
				B4	C34	D2	
				B5	C35	D3	
				B6		D5	
				B11		D6	
						D7	
						D8	
						D9	
						D10	
						D11	
						D12	
Other	Examination (individual proof writing) of the subject, so much of the theoretical part how of exercises and problems. #Each of the questions proposed will have different second weight his degree of difficulty and amplitude. The students will know before realizing the proof to maximum qualification of #each of them. It Will be valued: - The correction in the reasonings, calculation and interpretation of results. - The capacity of expression in *matematáticas and in general in the tongue. - The capacity stop the representation and understanding of figures.	70	A5	B1	C33	D1	
				B2	C34	D2	
				B6	C35	D3	
						D6	
						D7	
						D8	
						D13	
						D15	
						D16	
						D17	
						D20	
		D21					

Other comments on the Evaluation

Sources of information

NORTES CHECA, A., **Matemáticas y su didáctica**, 2007,

DÍAZ GODINO, J. (Director), **Matemáticas para Maestros. En: www.ugr.es/local/jgodino/edumat-maestros**, 2004,

HIDALGO, S., **Las Matemáticas en el Título de Maestro**, 1997,

CHAMORRO, M^a. CARMEN e outros, **Didáctica de las Matemáticas para Primaria**, 2003,

Recommendations

Subjects that continue the syllabus

Teaching of mathematics for childhood education/P02G110V01911

Other comments

For power complete his training how competent professional in Childish Education will owe to study the subject of the fourth course:

Didactic of the Mathematical stop the Childish Education. P02G110V01911

Brief description of the contained:

1. Development *psicoevolutivo of the mathematical concepts.
2. The teaching of the mathematician us first years.
3. Objective and mathematical contents.
3. Resources and material stop the teaching of the mathematical.
4. The mathematical activity in the childish school. Difficulties in the learning.