



Universitat de Lleida

DEGREE CURRICULUM  
**NUMBERING, CALCULATION  
AND MEASUREMENT**

Coordination: ZANUY RUFAS, RAQUEL

Academic year 2021-22

## Subject's general information

<b>Subject name</b>	NUMBERING, CALCULATION AND MEASUREMENT			
<b>Code</b>	100877			
<b>Semester</b>	1st Q(SEMESTER) CONTINUED EVALUATION			
<b>Typology</b>	<b>Degree</b>	<b>Course</b>	<b>Character</b>	<b>Modality</b>
	Bachelor's Degree in Primary Training	1	COMPULSORY	Attendance-based
	Double bachelor's degree: Degree in Pre-school Education and Degree in Primary Training	1	COMPULSORY	Attendance-based
	Double bachelor's degree: Degree in Primary Training and Degree in Physical Activity and Sports Sciences	2	COMPULSORY	Attendance-based
<b>Course number of credits (ECTS)</b>	6			
<b>Type of activity, credits, and groups</b>	<b>Activity type</b>	PRAULA		TEORIA
	<b>Number of credits</b>	1.8		4.2
	<b>Number of groups</b>	6		5
<b>Coordination</b>	ZANUY RUFAS, RAQUEL			
<b>Department</b>	MATHEMATICS			
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.			
<b>Language</b>	Catalan for Dual and CAFE groups Spanish for Afternoon and DIP groups Catalan and English for the Bilingual group			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
ESTRADA ROCA, MA ASSUMPTA	assumpta.estrada@udl.cat	1,8	
SALAT TORRES, JÚLIA	julia.salat@udl.cat	18	
ZANUY RUFAS, RAQUEL	raquel.zanuy@udl.cat	12	

## Learning objectives

### Learning objectives

- Understand the school mathematics curriculum.
- Understand and apply mathematical and didactic aspects of numeration and calculation.
- Understand and apply mathematical and didactic aspects of estimation and measurement.
- Analyze, reason and communicate mathematical proposals of numbering, calculation and measurement.
- Introduce and solve calculation and measurement problems related to everyday life.
- Acquire and appreciate the didactic knowledge related to mathematics in the scientific and social world.
- Address effectively reading and critical texts commentary related numeration, calculation and measurement teaching and learning.
- Incorporate with critical sense educational technological innovations in the classroom of primary education.
- Cooperatively solve school content and learning work tasks

## Subject contents

Unit 1. Construction and evaluation of mathematical knowledge in primary education. The school curriculum for numeration, calculation and measurement in education

primary. Basic competences in the mathematical field.

Unit 2. Natural numbers. Numeracy systems

Unit 3. Natural numbers operations: addition, subtraction, multiplication and division

Unit 4. Fractions, proportions and decimal numbers.

Unit 5. Magnitudes and measure

Problem solving is a transversal axis of the subject.

## Methodology

### Face-to-face lessons (45 hours)

- Problem solving, workshops related to theoretical contents and discussion with students.
- Problem solving and analysis of didactic proposals.

**Virtual lessons (15 hours)**

- Exposition the subject contents.
- Workshops with manipulative, computer and audiovisual resources.

**Non-contact hours (90 hours)**

- Study of theoretical and practical contents
- Reading of the recommended texts and elaboration of the related tasks
- Autonomous learning
- Management of information using ICTs

## Development plan

**Schedule of contents**

WEEK	CONTENT
1	Subject presentation
2	Construction and evaluation of the mathematical knowledge
3 and 4	Numeracy systems and their didactics
4, 5 and 6	Addition and subtraction and their didactics
7 and 8	Multiplication and division and their didactics
9, 10 and 11	Fractional numbers and their didactics
12, 13 and 14	Measure and its didactics

**Practical seminars compulsory for all groups**

Seminar	Week	Place
Manipulative materials for numeracy systems	3	Regular classroom
Manipulative materials for basic operations learning	6	Regular classroom
Manipulative materials for fractional numbers learning	9	Regular classroom
Manipulative materials for measure learning	12	Regular classroom

**Schedule of presentations of the evaluation evidences**

Evidence	Calendar	Place
Partial exams	Weeks 4, 8 and 12	Regular classroom
Final exam	According to the official exams calendar	According to the official exams calendar
Seminars	Weeks 3, 6, 9 and 12	Regular classroom
Group assignment	See the calendar of assessment evidence specific to each modality.	Regular classroom

## Evaluation

Evaluation activity	%	Minimum qualification		
Final exam	50%	4	Face-to-face	Individual
Assignment	30%	4	Face-to-face	In groups
Midterm exams (3 during the semester)	20%	-	Face-to-face	Individual
Seminars (4 during the semester)	Compulsory attendance			

An assignment will be carried out, which will have different characteristics depending on the modality of the degree that is being studied. This will have a weight of 30% in the final grade. It is necessary to obtain a score equal to or greater than 4.

The 3 partial exams in face-to-face mode will be multiple choice and will also include a question about the seminars. They will account for 20% of the final grade.

There will also be 4 seminars during the course. Attendance at the seminars is essential to pass the subject. To know the exact date of each seminar, you can consult the detailed information in the resources space of the virtual campus corresponding to each modality of the Degree in Primary Education.

To pass the course, the overall mark, calculated according to the specified weightings, must be equal to or greater than 5.

At the end of January there will be a second-chance exam for those who want to improve their qualification. Taking the second-chance exam implies giving up the qualification obtained in the previous exam. The final mark of those people who obtain a mark higher than 5 in the second-chance exam will not exceed 8 in any case, except in those cases that had previously passed the subject.

For those people who have been granted the alternative evaluation, the evaluation process is as follows:

Evaluation activity	%	Minimum qualification		
Final exam	50%	4	Face-to-face	Individual
Assignment	30%	4	Face-to-face	In groups (with the option of doing it individually)

Midterm exams (1 the same day of the final exam)	20%	-	Face-to-face	Individual
Seminars (4 during the semester)	Compulsory attendance			

## Bibliography

### Bibliography

- CALLEJO, M. L. Un club matemático para la diversidad. Madrid: Narcea, 1990.
- CENTENO, J. Números decimales. Madrid: Síntesis, 1988.
- CASTRO, E. (editor) Didáctica de la matemática en la Educación Primaria. Madrid: Síntesis, 2001.
- CHAMORRO, C.; BELMONTE, J. El problema de la medida. Madrid: Síntesis, 1988.
- CHAMORRO, M. C. (coord.) Didáctica de las matemáticas para Primaria, Madrid: Pearson Educación, 2003.
- CODINA, R. i altres. Fer matemàtiques. Vic: Eumo, 1992.
- CORBALÁN, F. La matemática en la vida cotidiana. Madrid: Addison–Wesley / Universidad Autónoma de Madrid, 1999.
- FISHER, R.; VINCE, A. Investigando las matemáticas. Madrid: Akal, 1990.
- GIMÉNEZ, J.; GIRONDO, L. Càlcul a l'escola. Barcelona: Graó, 1990.
- IFRAH, G. Historia de una gran invención. Madrid: Alianza, 1987.
- LLINARES, S; SÁNCHEZ, M. V. Fracciones. Madrid: Síntesis, 1988.
- MASON, J. i altres. Pensar matemáticamente. Barcelona: Labor/MEC, 1989.
- POLYA, G. Cómo plantear y resolver problemas, México: Trillas, 1976.
- SKEMP, R. Psicología del aprendizaje de las matemáticas. Madrid: Morata, 1980.
- TORRA, M.; BATLLE, I.; SERRA, T. Matemáticas. Educación Primaria. Libros Primer Ciclo, Segundo Ciclo, y Tercer Ciclo. Madrid: MEC / Mare Nostrum, 1994.
- UDINA, F. Aritmética y calculadoras. Madrid: Síntesis, 1989.