School of Education
Course Unit Syllabus

Level of qualification:
Professional Degree (EQF level 5)
Study cycle:
Infance Support

Course Unit: **223008 – Real life math**

Year 2	**Semester 2**	**ISCED Code: 461**	**ECTS: 6**

Tipe of Course Unit: Compulsory **Delivery Mode:** Face-to-face **Language of Instruction:** Portuguese

COURSE COORDINATOR: Nuno Sidónio Andrade Pereira

HOURS OF WORK

TOTAL HOURS	**Contact Hours**								**Hours in autonomous work**
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
125		**50**						**75**	

Prerequisites (if applicable): Not applicable

LEARNING OUTCOMES (knowledge, skills and competence)

1. Understand the importance of mathematics as an instrument for analysis and interpretation of everyday situations;

2. Promote the acquisition of information, knowledge and experience in mathematics in various fields of this area, in diverse contexts and using the most varied examples.

3. Recognize everyday situations in which mathematics plays a prominent role in the development of the citizen, with a view to their formation as a critical and participative.

4. Understand the examples provided by the History of Mathematics in solving numerous practical problems of daily life

CONTENTS

1. The function of Numbers. The Numbers of Our Life

1.1 Counting

1.2 Sort

1.3 Encode

1.4 The numbers of our life

2. Geometry. Forms of our life

2.1 The different geometric shapes around us

2.2 Art and Mathematics

3. Chance and Data Processing

3.1 Uncertainty in our daily lives

3.2 The games

3.3 Data representation and analysisy

DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

The inclusion of this course at Ctesp-AI level aims to identify the potentialities of the use of manipulative play materials, games and everyday situations in the analysis of different concepts of mathematics

TEACHING METHODOLOGIES

Create collaborative work dynamics to develop work habits where students can cooperate, research and communicate and learn how to solve problems.

Exposition (using the most diverse means: oral, written and multimedia projection) of the ideas essential to the process of teaching / learning of the most theoretical knowledge and which will serve as a platform for practical work procedures directly associated and where the degree of abstraction should appear where possible linked to concrete applications

DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES

Practical work aims to respond to learning objectives, so that students mobilize skills, develop concrete problem solving skills, develop technical, creative and conceptual skills, with a reflective attitude and permanent self-formation

EVALUATION METHODS

Classroom assignments that integrate a student portfolio.

MAIN BIBLIOGRAPHY

Alsina, A. (2004). Desenvolvimento de competências matemáticas com recursos lúdico-manipulativos. Porto Editora: Portugal.

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A.Corbalán, F. (2007). Matemáticas de la vida misma. Editorial GRAÓ: Barcelona.

Crato, N. (2008). A Matemática das coisas. Lisboa: Gradiva Publicações.

Clegg, F. (1995). Estatística para todos. Editora Gradiva: Lisboa.

Palhares, P. (org.) (2004). Elementos de Matemática para professores do Ensino Básico. Lisboa: LIDEL – Edições Técnicas, Lda.

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