

**Πρόγραμμα Μεταπτυχιακών Σπουδών Εξειδίκευσης**  
**Του Τμήματος Ελληνικής Φιλολογίας του Δημοκριτείου Πανεπιστημίου Θράκης**  
σε συνεργασία με το  
**ΕΚΕΦΕ Δημόκριτος – Ινστιτούτο Πληροφορικής και Επικοινωνιών**  
με τίτλο: «Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της ένταξης»

## **ΔΙΑΓΝΩΣΗ ΤΗΣ ΔΥΣΑΡΙΘΜΗΣΙΑΣ ΜΕΣΩ Τ.Π.Ε.**

## **DIAGNOSIS OF DYSCALCULIA THROUGH ICT**

της

Κοκκάλη Τατιάνας

Μεταπτυχιακή διατριβή που υποβάλλεται  
στην τριμελή επιτροπή για την απόκτηση του μεταπτυχιακού τίτλου του  
Προγράμματος Μεταπτυχιακών Σπουδών Εξειδίκευσης  
του Τ.Ε.Φ – Δ.Π.Θ. σε συνεργασία με το Ε.Κ.Ε.Φ.Ε. Δημόκριτος – Ινστιτούτο  
Πληροφορικής και Επικοινωνιών  
με τίτλο: «Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της  
ένταξης»

### **Η τριμελής επιτροπή:**

1. ΚΟΡΡΕ ΕΙΡΗΝΗ

ΕΠΙΚΟΥΡΗ ΚΑΘΗΓΗΤΡΙΑ Τ.Ε.Φ. – Δ.Π.Θ.

2. ΛΟΥΚΕΡΗΣ ΔΙΟΝΥΣΙΟΣ

ΣΥΝΕΡΓΑΖΟΜΕΝΟΣ ΕΡΕΥΝΗΤΗΣ Ι.Π.Τ. Ε.Κ.Ε.Φ.Ε. «ΔΗΜΟΚΡΙΤΟΣ»

3. ΣΤΑΘΟΠΟΥΛΟΥ ΑΓΑΘΗ

ΣΥΝΕΡΓΑΤΙΔΑ ΕΡΕΥΝΗΤΡΙΑ Ι.Π.Τ. Ε.Κ.Ε.Φ.Ε. «ΔΗΜΟΚΡΙΤΟΣ»

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# Περίληψη

Η παρούσα πτυχιακή έχει ως θέμα της την ειδική μαθησιακή δυσκολία στα μαθηματικά, τη δυσαριθμησία. Αρχικά, περιγράφεται η προσπάθεια πολλών επιστημόνων ανά τα χρόνια να προσδιορίσουν όσο το δυνατόν πιο εύστοχα τη δυσκολία αυτή. Στη συνέχεια παρουσιάζεται η συμβολή της γνωστικής ψυχολογίας καθώς και των νευροεπιστημών στην προσπάθεια εξήγησης του υποβάθρου της δυσαριθμησίας με στόχο τη σωστή αξιολόγηση και παρέμβαση. Έπειτα, αναφέρεται η ραγδαία ανάπτυξη των Τεχνολογιών Πληροφορίας και Επικοινωνίας η οποία έχει οδηγήσει σε μια νέα πραγματικότητα όλους τους τομείς της σύγχρονης ζωής κι έτσι θα μπορούσαν να ενταχθούν και στον τομέα της Εκπαίδευσης και να αποτελέσουν ένα πολύτιμο εκπαιδευτικό εργαλείο στήριξης των μαθητών με δυσαριθμησία. Τέλος, περιγράφονται λογισμικά τα οποία θα μπορούσαν να χρησιμοποιηθούν και στην Ελλάδα προκειμένου να επιτευχθεί η διάγνωση της δυσαριθμησίας καθώς και η εκπαιδευτική παρέμβαση.

Λέξεις – κλειδιά: δυσαριθμησία, αναπτυξιακή δυσαριθμησία, ΤΠΕ, μαθησιακές δυσκολίες στα μαθηματικά

# Abstract

The subject of this thesis deals with the specific learning difficulty in mathematics, dyscalculia. Initially, it describes the efforts of many scientists over the years to identify this difficulty as accurately as possible. After, the contribution of cognitive psychology as well as neuroscience is described in order to explain the background of dyscalculia and to lead to proper evaluation and intervention. Then, the rapid development of Information and Communication Technologies is presented, which has led to a new reality in all areas of modern life and thus could also be integrated into the field of education and become a valuable educational tool to support students with disabilities. Finally, types of software are described that they could be used in Greece to help diagnose dyscalculia as well as educational intervention.

Key – words: dyscalculia, developmental dyscalculia, ICT, learning disabilities in mathematics.

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