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DOCUMENT Course Description
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COURSE DESCRIPTION

Mathematical Resilience: Helping Students With Math Anxiety

Around 40% of students across OECD countries say they feel nervous, helpless or anxious while doing mathematics (PISA 2022). This 5-day course gives teachers of any subject and level the techniques to recognise math anxiety early and help students work through it — with a particular focus for primary and mathematics teachers.

DURATION **5 days · 25 hours**	LANGUAGE **English (B1+)**	GROUP SIZE **Max 12 participants**
DAILY SCHEDULE **09:30–15:00** Monday to Friday, with a break for lunch	AUDIENCE **All school levels** No specific prerequisites — open to teachers of any subject, with particular relevance for primary and mathematics teachers.	CERTIFICATE **Attendance + Europass Mobility**
COURSE CENTRES **İzmir** Dates and cities of the scheduled sessions are listed on the course page.		

01 Overview

A pop quiz, a raised hand nobody uses, a child who says “I’m just not a maths person” before the lesson has even started — math anxiety rarely looks dramatic in the classroom, which is exactly why it goes unaddressed. OECD’s 2022 PISA survey found that around 40% of students report feeling nervous, helpless or anxious while solving maths problems or doing maths homework, and that this anxiety has risen sharply across most participating countries since 2012.

This course is led by Dr. Vahap Yorgun, a psychological counsellor who has focused his research and clinical practice on math anxiety since 2020, and who runs an intervention programme he developed for middle and high school students. Across five days, participants learn to recognise the affective, behavioural and physiological signs of math anxiety, understand where it comes from, and apply a set of classroom-ready techniques to help students move out of it — then leave with a personal action plan for their own school.

02 Course description

Math anxiety is not simply “not liking maths” — it is a measurable disruption to how the brain processes mathematical tasks. Ashcraft and Kirk’s widely cited study found that students with high math anxiety have a smaller usable working-memory capacity when doing maths under pressure, which is part of why anxious students often make more errors and work more slowly, independent of their actual mathematical ability. Understanding that distinction — a performance problem caused by anxiety, not a lack of skill — is the starting point the course builds from on Day 1.

The course draws on the idea of mathematical resilience, developed by Sue Johnston-Wilder and Clare Lee, which frames the goal not as eliminating discomfort with maths altogether but as helping students recognise when they have moved from a comfortable "safety zone" into a "danger zone" where they shut down — and giving them tools to work instead in a manageable "growth zone" where challenge is present but does not trigger avoidance. That distinction sits behind the growth-mindset and self-regulation techniques introduced later in the week.

Days 1 and 2 build the diagnostic foundation: what math anxiety looks like in a classroom, and the environmental and pedagogical factors — timed testing, public correction, inherited teacher anxiety about the subject — that tend to trigger or worsen it. From Day 3 onward, the course moves into intervention: concrete-representational-abstract (CRA) teaching sequences, structured "math talk", low-stakes error analysis, and — on Day 4 — growth-mindset and mindfulness-based techniques that give students a way to regulate their own response in the moment. Day 5 turns all of it into a plan: participants leave with a personalised, multi-technique implementation plan for their own classroom and school.

03 Learning outcomes

01 Explain the neurological and psychological basis of math anxiety, including its documented effect on working memory during mathematical tasks.

02 Recognise the affective, behavioural and physiological signs of math anxiety in students at an early stage.

03 Assess the environmental, pedagogical and individual factors that most commonly trigger math anxiety in a classroom.

04 Apply a set of classroom-ready techniques — including CRA sequences, structured math talk and low-stakes error analysis — to reduce math anxiety in daily teaching.

05 Design a mathematics lesson and classroom climate that reduces fear of mistakes and builds student confidence.

06 Guide individual students experiencing high math anxiety using personalised coping and self-regulation strategies.

07 Draft a school-specific action plan for embedding math-anxiety-aware practice beyond the course itself.

04 Methodology

Diagnose Before You Intervene	the week opens with two full days on recognising and understanding math anxiety before any intervention technique is introduced, so participants apply each later technique to a specific, correctly identified case rather than as a generic fix.
Case-Based, Hands-On Practice	real classroom case studies run through the whole week — used to identify anxiety on Day 1-2, to design lessons around on Day 3, and to build a full intervention plan around on Day 4-5.
Peer Feedback as a Working Method	participants regularly pair up to review each other's diagnostic observations, lesson designs and intervention plans against a shared checklist, rather than only receiving feedback from the trainer.

05 Daily programme

Day 1

Understanding and Identifying Math Anxiety

- **Warm-up:** welcome and trust-building activity, and introductions
- **Interactive lecture:** defining math anxiety, its neurological and psychological basis, and its documented effect on working memory

- **Case study analysis:** real student profiles across grade levels, tracing how math anxiety typically develops
- **Diagnostic workshop:** recognising affective, behavioural and physiological anxiety symptoms
- **Peer feedback:** participants review each other's case diagnoses against a shared identification checklist

Day 2

Root Causes and Triggers

- **Warm-up:** short energiser activity
- **Interactive discussion:** environmental factors, pedagogical triggers, timed testing and implicit teacher bias
- **Case study session:** classroom scenarios where ordinary instruction unintentionally escalated student anxiety
- **Root-cause mapping workshop:** participants map the triggers identified that morning onto their own classroom context
- **Peer feedback:** exchanging root-cause maps and discussing which triggers are most addressable at classroom level

Day 3

Pedagogical Interventions in Practice

- **Techniques in focus:** concrete-representational-abstract (CRA) sequences, structured math talk, and low-stakes error analysis
- **Lesson design workshop:** building an anxiety-friendly maths activity using concrete manipulatives and visual tools
- **Micro-teaching:** participants deliver a short segment of the lesson they designed to the group
- **Peer feedback:** structured observation and feedback on the micro-teaching, using the Day 1 identification checklist

Day 4

Growth Mindset, Self-Regulation and Complex Cases

- **Techniques in focus:** growth-mindset interventions, mindfulness-based regulation, and personal coping plans
- **Case study resolution:** matching complex, high-anxiety student cases to a combined set of intervention techniques
- **Intervention plan drafting:** participants draft a multi-technique plan for their assigned case
- **Peer feedback:** reviewing each other's case plans and suggesting refinements

Day 5

Action Planning, Integration and Certification

- **School-wide strategy workshop:** building a supportive school climate and involving parents in managing math anxiety
- **Action plan workshop:** drafting a personal, school-specific implementation plan
- **Final micro-presentations:** participants present their action plan and receive feedback from peers and the trainer
- Course evaluation survey
- Certificate ceremony (Certificate of Attendance + Europass Mobility)

PLEASE NOTE

Sessions run from 09:30 to 15:00, Monday to Friday, with a break for lunch. Timings can shift a little to suit the venue and the group.

Course activities and content may vary depending on participants' needs and the trainer leading the session; any changes are at the trainer's discretion. If there is a specific topic you would like included, please let us know — content-related requests must reach us at least 3 weeks before the course start date so we can confirm them in time.

06 Materials

- A personalised, multi-technique action plan for managing math anxiety in your own classroom, drafted during the week and finalised on Day 5
- Student/parent observation forms for identifying math anxiety
- A classroom application manual covering the intervention techniques used during the course
- Ready-to-use presentation templates for sharing the course content with school colleagues and management
- Parent information materials on supporting children with math anxiety at home

07 After the course

- Participants will receive their Certificate of Attendance and the co-signed Europass Mobility document.
- Participants will complete a general course evaluation and event survey.
- Participants will receive course materials, videos, photos, and PDF documents in both digital and print formats.
- Follow-up support: self-evaluation materials are provided. Depending on the group, an email group may be set up so that participants can keep exchanging ideas.

08 Why this is Erasmus+ eligible

This mobility supports the Erasmus+ Key Action 1 objective of "supporting professional development of teachers, school leaders and other school staff" (Erasmus+ Programme Guide 2026, Part B – Key Action 1, Mobility for pupils and staff in school education, Objectives of the action, p. 103) and the horizontal priority on inclusion and diversity, under which "the Programme seeks to promote equal opportunities and access, inclusion, diversity and fairness across all its actions" (Part A – Priorities of the Erasmus+ Programme, p. 7). Math anxiety is a well-documented barrier to STEM achievement — OECD's PISA 2022 survey found that around 40% of students report feeling anxious while doing maths — and this course gives teachers a concrete, classroom-ready way to address it.

09 What the course fee covers

INCLUDED IN THE COURSE FEE

- 25 hours of training and course materials
- Certificate of Attendance + Europass support
- On-site local support throughout the week

ARRANGED SEPARATELY BY THE PARTICIPANT

- Travel to the host city — invitation letter on request
- Accommodation — we share recommended options
- Travel & health insurance

ISSUED BY

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COURSE PAGE

erasmusmobilityacademy.com/courses/mathematical-resilience-helping-students-with-math-anxiety

ABOUT ERASMUS MOBILITY ACADEMY

Erasmus Mobility Academy (OID: E10304561) is an Erasmus+ training provider offering professional development courses for educators, school staff and youth workers across Europe. Our courses are designed for international mobility — open to participants travelling from a country other than the host country — and support schools in building lasting institutional capacity. We provide structured learning, logistical guidance and certification with Europass.