

7-Day Course

From STEM to STEAM and STREAM

Adapting the education of today to the world of tomorrow

Madrid (SPAIN)

WHO is this course for?

This course is designed for Teachers, Headteachers, and Principals who are interested in exploring **STEM** and its variations, **STEAM** and **STREAM**, and how this holistic interdisciplinary approach can lead to successful learning adapting to the rapidly changing world of the 21st century.

Language of communication: **English**

Minimum Level of English required: **B2**

COURSE DESCRIPTION

This course aims to provide teachers with the knowledge, resources and confidence to cultivate a **STEM/STEAM/STREAM** approach to teaching and learning by looking at how its implementation can prepare their students of today for the world of the future.

The goal of STEM education (*Science, Technology, Engineering and Maths*) is to prepare students for the challenges and opportunities of the 21st century leading to success in society and in the workplace. Not limited to traditional subjects of Science and Maths, a STEM approach to learning fosters integration of a wide range of subjects and the STEAM approach to learning includes the Arts.

As students progress through their education, many education systems guide them into specialised areas of study and encourage them to focus on their future academic paths. Students may have greater ability and inclination towards Arts and Humanities or Maths and Science areas and can be expected to make important life choices based on their grades, often separated from real-life contextualised situations. As a **holistic interdisciplinary approach to learning**, STEAM allows students to conceptualise and contextualise all areas of knowledge involving both sides of the brain and consider how real-world scientific problems have an impact on humanity.

Problem-solving skills, critical thinking, innovation and creativity, are invaluable skills and when combined with collaboration and teamwork through project-based learning methodologies foster real-world knowledge and contextualised, meaningful, and deep learning.

Our up-to-date course also includes the most recently added R, and this increasingly multi-disciplinary approach of **STREAM** will be appreciated, and participants will explore what the area of reading and literacy can add to the approach and the many relationships and links that can be created throughout and among the subjects involved.



Bringing **ST(R)E(A)M education** into your school requires coordination, training and creating the necessary links between traditional subjects. This “*thinking outside the box*” approach will allow teachers to be inventive as they apply their global knowledge to their curriculum planning, lesson design, and implementation.

Objectives:

The specific objectives of the programme are:

1. Develop an understanding of how STEM and its variations cultivate holistic and interdisciplinary learning by integrating subject areas such as Science, Technology, Engineering, Arts, Maths and Reading.
2. Provide participants with tools and methodologies to promote high order thinking skills, critical thinking, problem-solving skills, collaboration, creativity and innovation in their teaching.
3. Guide participants in adopting innovative and flexible approaches to lesson planning and implementation by creating links and relationships across the curriculum.
4. Motivate participants to develop their communication skills through their participation in the course and as preparation for their involvement in future European experiences.

Methodology:

By means of an effective use of training formats (e.g., workshops, group discussion, field learning projects ‘Contexts4Content’...) participants will explore the development of STEM in education, the introduction of its variations and how it represents the skills needed to adapt to the rapidly changing society and workplace of the 21st century. A practical and communicative approach will allow participants to delve into relevant scientific and educational studies, explore up-to-date predictions of workplace trends and, according to their findings, be inspired to ‘think outside the box’ when approaching their subjects and the importance of seeing individual subjects as part of a greater whole.

This course employs an interactive, hands-on methodology that blends practical application with reflective learning. Participants will actively engage in:

- Workshops: Focused on building knowledge and developing actionable strategies.
- Collaborative Work: Group discussions and team-based activities to explore evidence-based data and develop shared solutions.
- Field Learning projects ‘Contexts4Content’: Task-based learning outside the classroom embedding learning in authentic contexts allowing for deeper understanding of the history, society and culture of Ireland.
- Portfolio building: A cohesive framework for reflection and progress serving as both a process and a product showcasing participants’ understanding and growth in relation to the course objectives.

Throughout the course, participants will reflect on their own practices, share insights, and receive peer feedback, ensuring practical, adaptable outcomes.

LOCATION of the course: Madrid (SPAIN)

Madrid is Spain's vibrant capital, where history, art and literature converge to create a diverse and unforgettable cultural tapestry which along with its grand boulevards and neighbourhoods reflect the evolution of a city that has been the heart of Spain's political and cultural life since the 16th century.

Art lovers are drawn to Madrid's Art Triangle, made up of world-renowned museums such as the Prado, which houses "Las Meninas" and other masterpieces by Velázquez, not to mention Goya and his vision of the 19th century; the Reina Sofía museum, which houses Picasso's famous "Guernica", and Salvador Dalí painting as an exploration of the psychoanalytic concept of unconscious and subconscious desires; and the Thyssen-Bornemisza, which offers a tour of Western art. The city itself is like a living gallery, adorned with street art, stunning architecture and an urban design that has skillfully blended the classic with the modern.

Literature is also very present in the soul of Madrid, from the Barrio de las Letras, where Cervantes, author of Don Quixote, and Lope de Vega, considered the Phoenix of Wit, lived and wrote. You will also feel the presence of great modern Spanish writers such as Federico García Lorca, and filmmakers such as Luis Buñuel or Pedro Almodóvar, whose works have immortalised the spirit of this dynamic city. Madrid is a celebration of creativity and tradition, a destination where the past inspires the present and every corner tells a story.

DURATION OF THE COURSE

7-day course: **40 hours**.

Our **7-day course**, starting on Sunday and finishing on Saturday, is a very efficient way to implement your mobility by integrating your learning while saving time and expenses. The **40 hours** duration of the course is applied on average considering all training days of the course, for the implementation of the objectives and lessons, in connection with the "Quality standards for courses under Erasmus+ KA1"

CERTIFICATION AWARDED

Certification of learning outcomes in connection with the "Quality standards for courses under Erasmus+ KA1": Europass and Certificate of Attendance which include the name of the participant, description of the course and its learning outcomes, dates, venues, the name of the host organisation and course director.

DATES

*Duration (days): **7 training days (from Sunday to Saturday)***

*Language of communication: **English***

Dates in 2025	Dates in 2026
04 - 10 May · 7 training days	18 - 24 January · 7 training days
01 - 07 June · 7 training days	03 - 09 May · 7 training days
09 - 15 November · 7 training days	07 - 13 June · 7 training days
	15 - 21 November · 7 training days

Note: The information included in this document might be subject to amendment. You should check our website www.englishmatters.org for any updated information about our programmes.



REFERENCE programme of the 7-day Course:**From STEM to STEAM and STREAM**
Adapting the education of today to the world of tomorrow**7-day Course** (from Sunday to Saturday)**Sunday**

Registration
Fundamentals: principles, structure, framework
Tools for reflection on learning & Professional Development
Field Learning "Contexts4Content" approach
European Dimension

Monday:

Understanding STEM
21st Century Skills
Field Learning Project "Contexts4Content": *Where in Madrid?*

Tuesday:

STEAM: What Arts bring to the table
Dissecting STEAM: How, what, who and why?

Wednesday:

Myths in Education: Aligning expectations with facts
Project-based learning in STEAM
Field Learning Project "Contexts4Content" – *What art do the Spanish create and treasure?*

Thursday:

The 3Cs of STEAM: Coordination, Creativity and Cooperation
Linking subjects for curriculum design

Friday:

Deep analysis of a STEAM project
Field Learning Project "Contexts4Content" – *The Spain of 16th Century and beyond*

Saturday

Reflection about Dissemination Strategies
Presentation of participants' portfolios
Final reflection on learning acquired
Evaluation of the programme

NOTE: These Reference programmes may be subject to amendment. Such amendment, if necessary, would be kept to a minimum, consistent with the quality and balance of the programme.

