



Erasmus+

STEM EDUCATION FOR MORE INNOVATIVE SCHOOLS

TO HELP YOU DEVELOP INCLUSIVE
STEM LEARNING ENVIRONMENTS

Cengiz Project



We'll work closely together for the EU's recovery and a green, digital & bright European future.

Ursula von der Leyen
President of the European
Commission



OVERVIEW

Scientific and technological developments change the society and the understanding of education. Today, individuals need to develop their 21st century skills. This can only be possible with interdisciplinary approaches such as STEM. Rather than preparing individuals for life, the STEM approach brings them the real world, so that individuals can develop creative, innovative and critical thinking, problem solving, interactive communication, cooperation, entrepreneurship and adaptation skills.

STEM is formed by combining the initials of the words Science, Technology, Engineering and Mathematics. STEM approach integrates these four disciplines. The traditional understanding is based on separation of disciplines such as physics, chemistry, biology, and mathematics, on the other hand, STEM represents an understanding that envisages the integration of these disciplines.

This course will cover the history, philosophy, advantages and disadvantages of STEM education, effective use of digital tools in STEM, the ways creating inclusive and disabled friendly STEM course.

This course is designed to improve our participants' awareness, self-efficacy, and ability to create inclusive STEM learning environments for their students

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TARGET AUDIENCE

Teachers, educational counsellors, headmasters, school management and administrative staff working in primary schools, middle schools, secondary schools, and vocational schools, NGO staff

2

LANGUAGE OF THE COURSE

The course is held in English

3

METHODOLOGY

The Erasmus+ program emphasis the course should be engaging and interactive, it should facilitate sharing and productive dialogue between participants. Thus, during the course active learning methods like case studies, role-playing, debate, brainstorming, round table, jigsaw, reverse brainstorming, discussion, group activity, concept mapping, and learning by doing will be preferred.

4

COST

The cost is fully covered by the Erasmus grant. The fee includes:

- Course and course materials

5

LOCATION

Ankara, the capital city of Turkey

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LEARNING OUTCOMES

The participant will be able to:

- Develop competencies in STEM teaching.
- Analyse advantages, disadvantages and limitations of problem and project-based learning.
- Learn how to use digital tools effectively in STEM education.
- Create an inclusive STEM course.
- Learn how to foster an inclusive and disabled friendly climate in the STEM classroom.
- Learn how to develop effective assessment strategies in STEM education.
- Learn best practices in STEM.
- Enrich communication, team-working, active listening skills.
- Improve foreign language competences.
- Appreciate social, linguistic, and cultural diversity.
- Strengthen lifelong learning understanding.
- Increase motivation and satisfaction in their daily work.

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MODULES

Module 1: STEM education – history of development, and important facts

Module 2: Problem- based learning in STEM

Module 3: Project- based learning in STEM

Module 4: Effective use of digital tools in STEM

Module 5: Creating an inclusive STEM course

Module 6: Measurement and assessment in STEM

Module 7: Fostering an inclusive climate in the STEM classroom

Module 8: Disabled friendly STEM education

Module 9: Gender equality in STEM

Module 10: Best STEM practices



DAILY PROGRAMME

DAY 1

Participants arrival

Presentation: EU values, Turkish culture, course venue, timetable and practical arrangements

Erasmus+ program: objectives, priorities, actions

Group dynamic: Expectations & personal learning goals

Group dynamic: Communication process and team building values

City tour

Welcome dinner

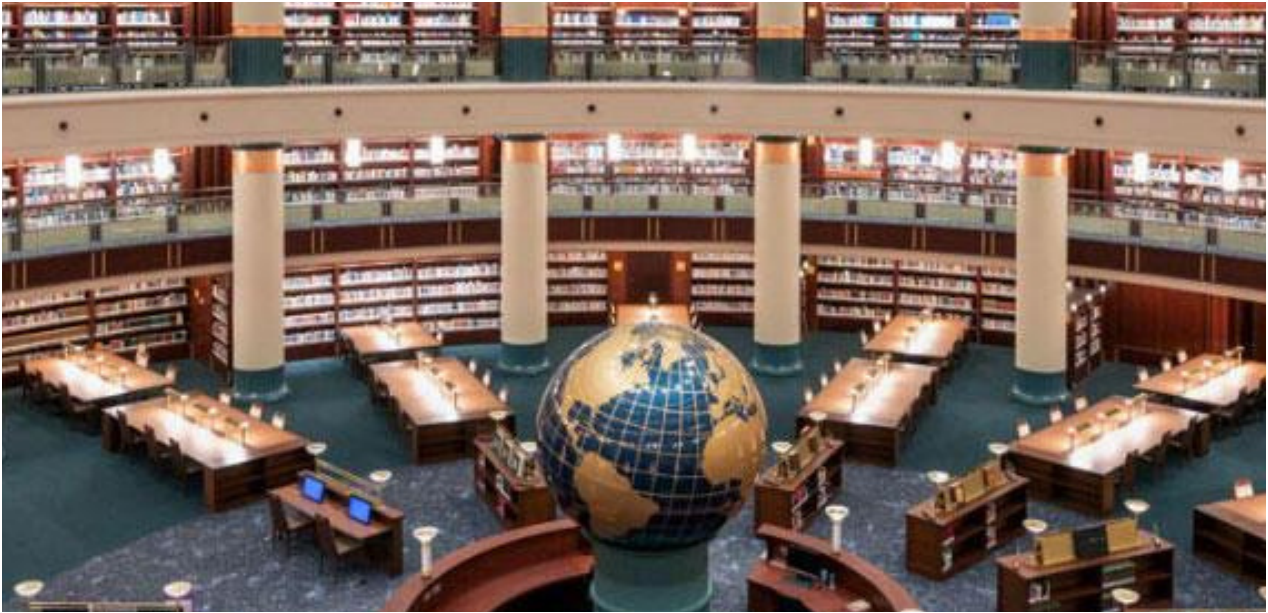
DAY 2

Module 1: STEM education – history of development, and important facts

Module 2: Problem- based learning in STEM

Module 3: Project- based learning in STEM

Discussion: advantages and disadvantages of STEM education



DAY 3

Module 4: Effective use of digital tools in STEM

Module 5: Creating an inclusive STEM course

Advantages, disadvantages, and limitations of problem-based and project-based learning in STEM

Outdoor activity: Visit to ODTÜ Science and Technology Museum

DAY 4

Module 5: Creating an inclusive STEM course (continue)

Module 6: Measurement and assessment in STEM

Module 7: Fostering an inclusive climate in the STEM classroom

Outdoor activity: Visit to Feza Gürsey Science Centre

DAY 5

Module 5: Creating an inclusive STEM course (continue)

Module 8: Disabled friendly STEM education

Module 9: Gender equality in STEM

Outdoor activity: Visit a local school- Best practices about STEM education



DAY 6:

Module 10: Best STEM practices

Summary of key learning points

Final course evaluation and feedback

Planning dissemination activities

Validation of learning outcomes and handling certificates

Discussing possibilities for future cooperation

Cultural Activities

Leisure time

DAY 7:

A guided tour to Cappadocia

Participants departure

****The daily programme can be personalized on participants' needs and expectations.**

WHY SHOULD YOU PREFER CENGIZ PROJECT?

Before mobility:

- We offer a transparent, accessible, and straightforward application process.
- We inform the participants about necessary preparation they need to accomplish.
- We address questions, and requests of the participants in an effective way.
- We share a list of services that the fee cover and inform the participants about any optional services that need to be paid separately.
- The participants have the possibility to cancel their participation at no extra costs and with at reasonable advance notice.

During mobility:

- Our course combine theory with practical application and participants receive clear feedback about their improvement during the course.
- Our staff members create a supporting, positive and respectful learning environment. They can teach and interact with a multicultural audience and are proficient in English.
- We use digital tools and blended learning approach.
- We meet our participants from different countries and their Turkish colleagues and form heterogenous group to create cultural diversity thus our participants have networking opportunities.
- Our building is in a central location and is disabled friendly.
- We provide certification to the participant.

After mobility:

- We offer guidance and materials to facilitate the transfer of acquired knowledge and competences into practice at the participants' institutions. They can use the materials for visibility and dissemination purposes.

CONTACT US



www.cengizproje.com



+90 544 810 3012



info@cengizproje.com



Maltepe Mahallesi,
Necatibey Caddesi,
No:86/15,
Çankaya/Ankara/TURKEY

School
Education
Gateway



/cengizproject