



CURRICULUM BLENDED COURSE EXCELLENCE IN MATH

Description of the Excellence in Math programm

Profile of the programme

The programme is included in the Erasmus+ project “E = MD²: Excellence in Math Education through (e-) Debate and Diversity”, project number 2021-1-ES01-KA220-SCH-000024455.

The program is aimed at all primary and secondary teachers who will be able to improve their knowledge, skills and ability through LLL process (professional qualification) after finishing the project.

The courses are designed to provide participants with the skills they need to organise inclusive lessons and motivate all pupils, including those with special needs, to learn mathematics.

Through various methods of teaching mathematics, teachers will be supported in increasing the motivation of pupils who often find this subject difficult and detached from everyday life. To improve technological skills, some online activities will be carried out as part of STEAM to encourage students to develop their digital skills.

Inclusion and in particular learning disabilities such as dyscalculia (a disability that directly affects the area of mathematics) are considered in this programme when creating the materials.

Key learning outcomes

Primary and lower secondary mathematics teachers will be able to:

- Gain first-hand knowledge of the needs of the students in order to motivate them in mathematics.
- To become familiar with good practices for motivating learners and creating an inclusive classroom.
- Learn a methodology based on e-debate to include and motivate all learners in the class.
- Get familiar with learning disabilities, such as dyscalculia, dysgraphia, dyslexia and ADHD among others, how to detect and address them
- Know more about the needs of gifted students and how to motivate them.
- Have access to lesson plans based on STEAM.
- Learn how to apply the new methodology in context.



Occupational profile/s of graduates

Students who complete the programme will be better prepared to motivate students and create an inclusive classroom for all. They will also learn more about how to organise STEAM projects with students and will be able to work together with teachers of other subjects. In this way, students will not see mathematics as something abstract and detached from their daily lives, but as something useful and attractive.

They will have a positive impact on their schools and educational community.

Single course unit learning outcomes

The student who successfully completes the course will have the ability to master the basic concepts motivation, inclusive classroom, learning disabilities, gifted students, STEAM classroom and e-debate.

Assessment methods and criteria

Assessment methods

At the end of the online course and the face-to-face training, the students (who will be primary or lower secondary teachers) will choose at least one good practice and a lesson plan, which they will implement in class with the students. They will also organise an e-debate with the students.

At the end, the student (who will be a primary or lower secondary teacher) will write a report on the activities carried out and how they worked in the classroom. The report will be between 35 and 50 pages long and will contain at least the following information:

- the age and characteristics of the pupils
- the activities carried out
- the response of the pupils
- positive things and things to improve
- conclusion

The cut-off mark is 60%.

Assessment criteria

Students will be assessed on their demonstrated ability to understand the main contents of the course and to adapt them to specific cases to solve problems.



Learning outcomes breakdown

Learning outcome 1:

LO 1.1 The needs of the students

LO 1.2 The needs of the teachers

LO 1.3 The needs of the parents

LO 1.4 Online debates for the exchanges of experiences

LO 1.5 Good practices

Total hours of study: 25 hours

Learning outcome 2:

LO 2.1 Methodology

LO 2.2 Evaluation rubric

LO 2.3 Learning disabilities

LO 2.4 Gifted students in the classroom

LO 2.5 Lesson plans based on STEAM

Total hours of study: 25 hours

Learning outcome 3:

LO 3.1 From theory to practice

LO 3.2 The rule of three

LO 3.3 String. A general array member

LO 3.4 Counting principles

LO 3.5 Symmetry all around us

LO 3.6 Integers – Adding and subtracting

LO 3.7 Cooking

LO 3.8 Using the e-debate platform with hands-on activities

LO 3.9 Teachers competences



LO 3.10 IPL and PBL methods explained

LO 3.11 The STEAME school of the future

LO 3.12 Mathematical theatre

Total hours of study: 25 hours

Learning outcome 4:

LO 3.1 Applying the knowledge in the class

LO 3.2 Identifying students' needs

LO 3.3 Adapting and implementing good practices in the classroom

LO 3.4 Adapting and implementing lesson plans in the classroom

LO 3.5 Writing a report

Total hours of study: 25 hours

Total hours of study: 100 hours

Students who successfully complete the entire course and submit the report in accordance with all the requirements specified above will be awarded 5 European Transfer Credits (ECT), which will be conferred by Goce Delchev University (GDU) of the Republic of North Macedonia.