



Erasmus+

Functions in Real Life



Curriculum developed within project research

1. General objectives (competences)

1. Data and mathematical relations identifying and relating them in the context they appear.
2. Qualitative, quantitative, structural and contextual data processing from everyday situations and transforming them into mathematical language.
3. The use of the algorithms and of the mathematical concepts for local or general characterization of a real life situation.
4. Expression of the quantitative and qualitative characteristics of a concrete situation and of their processing algorithms.
5. The analysis and interpretation of the mathematical characteristics of a problem situation.
6. Mathematical modelling of various problems, using different intra-curricular subjects.
7. Using specific mathematical language in communicating explanations, conducting interdisciplinary investigations and reporting the results.
8. Using modern ITC in data collecting, their processing and communicating.
9. Personal development by forming interdisciplinary thinking and by self-learning management.

2. Content

1. Functions as an instrument:
 - a)-introduction by examples
 - b) General properties
 - c) Linear functions
 - d) Trigonometric functions
 - e) Quadratic functions
 - f) Exponential function

g) Logarithmic function

h) Graphs interpretation

2. Applications in statistics and economy

a) The Maths of Money

b) Company budget

b) Family budget

c) Consumer's behavior

d) Company budget

e) Data interpolation

3. Applications in engineering

a) Binary system

b) Adders

c) Channel capacity

d) Sound waves

e) Newton law

f) Measuring length on slopes

g) Bending stress

h) Alternating current

4. Applications in other sciences

a) Applications in nature (biology)

b) Growth

c) Speed

d) The Braille code

e) Applications in architecture

f) Applications in topography



g) Activities with real life things

i) Applications in agriculture

5. Evaluation

1. Functions quizzes

2. Real world applications quizzes

