

# EduScrum in Action: A PBL journey towards sustainable solutions – Part I

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**P.PORTO**



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**Innovative strategies for teaching and  
learning mathematics**  
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**Pythagoras**  
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# Outline

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- **What is EduScrum?**
- **The EduScrum framework**
- **Applications**
  - **Linear Algebra**
  - **Calculus**
  - **Statistics**

# EduScrum in Action



<https://eduscrum.org/how-eduscrum-works/>



# EduScrum in Action



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# EduScrum in Action





# EduScrum in Action

Drive-Math ERASMUS project



Pinto, C. M., Mendonça, J., & Nicola, S. (2022). DrIVE-MATH Project: Case Study from the Polytechnic of Porto, PT. *Open Education Studies*, 4(1), 1-20.

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Course	Academic Year	Classes	Tasks
Linear Algebra	17/18	Practical	Exercises
Calculus	17/18 ; 18/19	Practical	Exercises
Computational Mathematics	18/19; 20/21; 21/22	Laboratory	Exercises (Excel environment)
Statistical Models	20/21 ; 21/22; 22/23	Practical	Case studies

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## Work group

- The group is constituted in the first practical class of the semester
- The group consists of 4/5 students
- The teacher provides each group with a record sheet
- Each group work consists on a resolution of a set of exercises provided to students (via Moodle).



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## Work steps

**Step 1.** The teacher provides 3(4) exercises to solve during the class.

**Step 2.** Two students solve the first one and the remaining students solve the 2nd exercise.

**Step 3.** The students who have solved the 1st(2nd) exercise will verify the solution of the exercise 2nd(1st).

**Step 4.** Repeat the steps 2 and 3 until all exercises proposed by the teacher are done.

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## Steps Evaluation

The teacher fill the appending table marking 1/0 (right/wrong answer)  
(The teacher selects one or more groups to reply to questions)

**Step 1** - The teacher selects one group

**Step 2** - The teacher ask each one of the group members questions

**Step 3** - If the solution is wrong the group has one more time to solve and present the solution to the teacher

**Step 4** - If the solution is right but the student doesn't know the correct answer, the group must solve another exercise.

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## WORK GROUP\_




Number	Name	Signature

## SCRUM table Student

Task	Student solves	Done	Student verifies	Done	Teacher Review

## Mini-PBL project

### Teacher data sheet: Teaching Guide

<b>Title</b>	Global Green Challenge: Analyzing CO2 Emissions																																															
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