

## **STEAM with Robotics Exam**

### **From Learning to Demonstrating Understanding**

The STEAM with Robotics Certification is not a theoretical assessment. It is a practical robotics challenge in which students demonstrate how they think, design and solve problems using engineering reasoning.

During the examination, each student works individually in a supervised environment and completes a structured task based on a real-life scenario. The student must understand the problem, design a solution, build a robotic model and program its behaviour. Finally, the student presents and explains how the solution works.

The emphasis is not only on whether the model works, but on the thinking process followed to reach the solution.

### **How Students Are Evaluated**

Throughout the examination, trained evaluators observe the student's work and record performance using specific assessment criteria.

The evaluation focuses on three main areas:

**Construction** — how the student structures and improves the model

**Programming** — how logical behaviour is implemented, tested and corrected

**STEAM Understanding** — how the student explains decisions and applies reasoning

Students are encouraged to test, adjust and improve their solutions.

Mistakes are considered a valuable part of the learning and evaluation process.

### **Examination Experience**

The examination lasts **two hours** and takes place **in small groups** to ensure fair observation and supervision procedures.

This is not a memory-based test and students are not asked to reproduce exercises they have memorized.

Instead, they are asked to apply their knowledge in a new situation, similar to the way engineers and designers work.

Students are required to use their learning book throughout the examination. The book is a core element of the assessment process, not merely a reference tool.

Students will be instructed to use designated pages during the exam and are expected to work with the book continuously for its full duration

## **Grading**

Students receive one of the following grades:

Fail

Pass

Merit

Distinction

Each participant receives detailed structured feedback describing performance and highlighting strengths, helping them improve at future levels.

## **Educational Value**

The Robotics Examination develops abilities that support success both at school and future academic studies:

logical thinking, persistence, creativity, structured reasoning and confidence in explaining ideas.

For many students, this becomes their first experience working independently on a complete project - from idea to presentation.

## **Purpose**

The goal of the Robotics Examination is not to create pressure but to provide students with a meaningful objective.

Preparing for a challenge encourages deeper learning, responsibility and pride in achievement.

The certification recognizes not only what students know, but what they can do!