

ADD_ON_SKILLS

Intellectual Outputs.

O1. Online Modules

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O1. Online Modules

The teachers of all the high schools participating in the project have prepared materials in English that will help develop the practical skills of young engineers, transfer them to the modern environment and find employment not only in the local market.

Sustainable buildings' development

Modern, low energy buildings, HVAC systems and renewable energy sources

Green buildings and management of energy consumption

Building Information Modeling (BIM)

Internet of Things (IoT)

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Sustainable buildings' development



Topics

- The concept of sustainability,
- Construction site analysis,
- Sustainable school buildings,
- General information on vertical closures,
- External insulated walls,
- Rainscreen facades,
- Glazing and glass facades.

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Modern, low
energy
buildings,
HVAC systems
and renewable
energy sources



Topics

- Heat loss by building barriers,
- Buildings,
- Wind Energy – Wind Turbines,
- Ecological wastewater treatment plants,
- Sustainable materials in buildings,
- Renewable energy sources for houses,
- Heating systems.

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Green
buildings and
management
of energy
consumption



Topics

- Green and Blue roof,
- Ventilation and Indoor Air Quality.

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Building Information Modeling (BIM)



Topics

- BIM: What is BIM?
- BIM file extensions and readers,
- BIM analysis tools overview,
- BIM CDE principles and creation,
- Employer's Information Requirements,
- The BIM Execution Plan (BEP). Producing documents,
- BIM model: BIM software, Modeling, etc.

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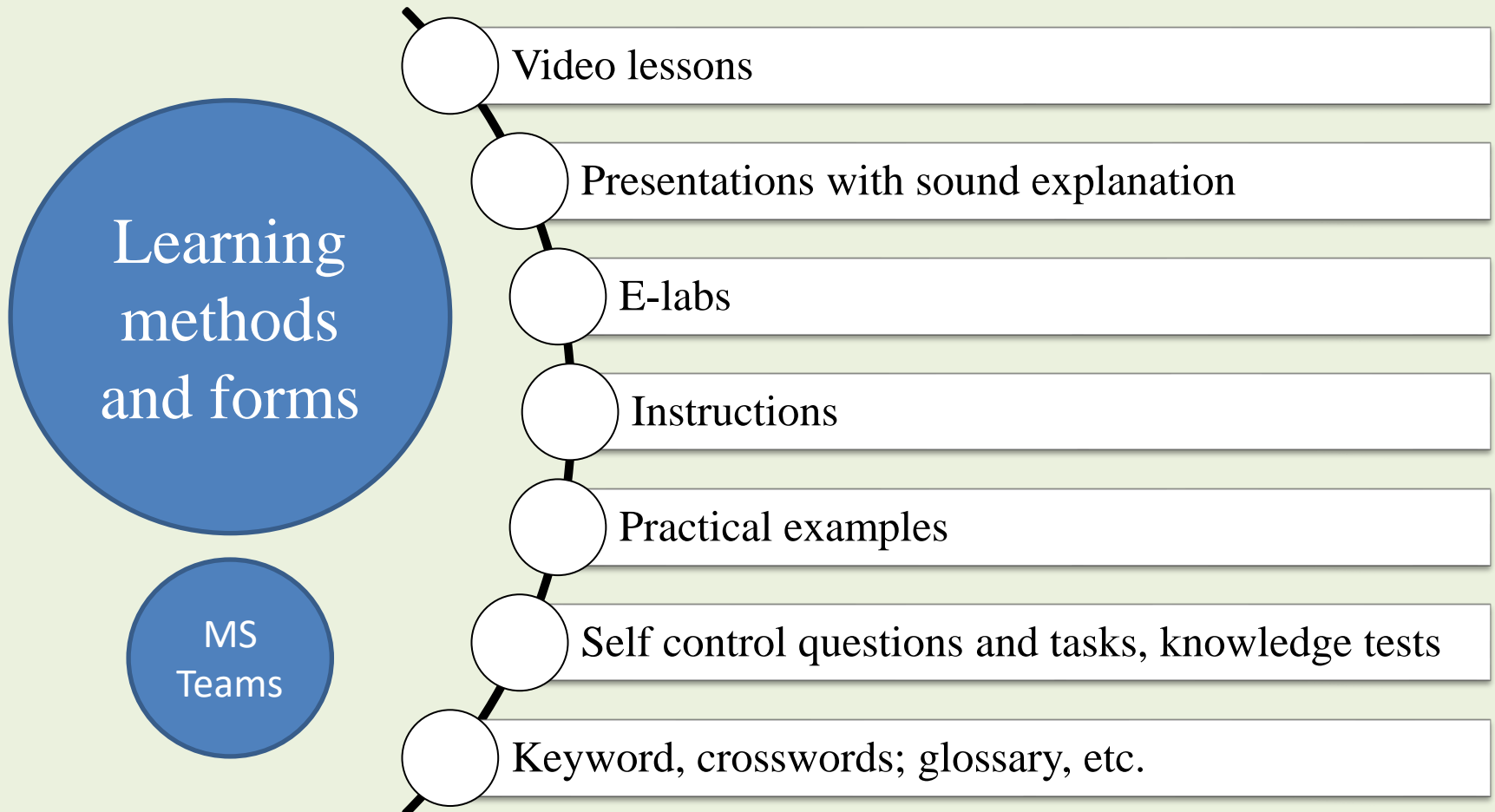
Internet of Things (IoT)



Topics

- Internet of Things (IoT): Introduction to programming with C++,
- Basics of programming in Arduino environment,
- Work with Wokwi simulator,
- Monitor the temperature and gas changes,
- Circuito.io: A platform for idea development.

01. Online Modules



O1. Online Modules

Module
topics in
national
languages

- **The concept of sustainability**
(Module: *Sustainable buildings' development*)
- **Heat loss by building barriers**
(Module: *Modern, low energy buildings, HVAC systems and renewable energy sources*)
- **Green and Blue roof**
(Module: *Green buildings and management of energy consumption*)
- **BIM introduction**
(Module: *BIM*)
- **Theoretical aspects of programming**
(Module: *IoT*)



Prepared material for virtual Modules
will be available on the project website

<https://addonskills.pb.edu.pl/>

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