Harnessing **Artificial Intelligence (AI)** and the **Internet of Things (IoT)** for **Sustainable Environments** and **Smart Operations** management

FULLY SUBSIDIZED SEMINAR

Date and Time

May 6 & 8, 2025, 8:30 - 16:45

Duration:

14 hours classroom training and
4 hours private company consultation

Location:

Frederick Univeristy Nicosia

Instructor:

Dr Ryan Costadinos Grammenos

REGISTER HERE

From “things” to “thoughts” to operational intelligence!

Are you ready to lead the digital sustainability revolution?

Join forward-thinking senior executives for this vital importance seminar designed for decision-makers who recognise that ESG compliance isn't just about meeting regulations—**it's about leveraging data and creating strategic advantages**.

FREDERICK UNIVERSITY

ECEC TRAINING AND CERTIFICATION CENTRE

The programmes* have been approved by the HRDA as Vital Importance. Enterprises/organisations participating with their employees who satisfy HRDA´s criteria, are entitled to subsidy.

Human Resource Development Authority of Cyprus HRDA

WHY ATTEND?

Tomorrow's competitive edge lies at the intersection of technology and sustainability; this seminar positions you at the forefront of Industry 4.0 accelerating your ESG journey and compliance with key EU regulations, such as the Energy Efficiency Directive (2012/27/EU, amended 2018/2002/EU), Corporate Sustainability Reporting Directive (CSRD), Energy Performance of Buildings Directive (2010/31/EU) and more.

This isn't a theoretical discussion — it's a practical implementation.

Over two **immersive** days, you will discover how to:

- Position your organisation as a leader in ESG transformation and sustainability innovation.
- Lead technology and sustainability transformation initiatives that overcome organisational resistance.
- Create data-driven frameworks for ESG reporting that impress stakeholders.
- Leverage predictive analytics to prevent costly operational failures.
- Implement smarter maintenance strategies that reduce operational costs while boosting performance.
- Transform environmental data into actionable intelligence aligned with key SDGs (3, 4, 9, 11, 12, 13).

  SDG 3 – Good Health and Well-being
  SDG 4 – Quality Education for professional development
  SDG 9 – Industry, Innovation and Infrastructure
  SDG 11 – Sustainable Cities and Communities
  SDG 12 – Responsible Consumption and Production
  SDG 13 – Climate Action

Dr. Ryan Costadinos Grammenos

A Senior Consultant, Project Manager, and HRDA-certified Trainer with extensive expertise in information and communication technologies. He holds degrees in Electronic Engineering (Cardiff University), Electrical & Electronic Engineering (Université Côte d'Azur), and Communications Engineering (UCL), where he is also a Visiting Academic.

With over 15 years of experience in industry and academia, Ryan has worked on projects related to energy-efficient building systems, AI-driven waste management solutions, and IoT wireless technologies. He has provided training and advisory services to organizations like Arup, IBM, and Rothamsted Research.

Ryan is a Senior Fellow of Advance Higher Education (SFHEA) and advocates for innovative learning methods. Fluent in Greek, English, and French, he focuses on technology solutions that drive ESG compliance and operational excellence.

You will engage with cutting-edge tools, participate in real-world scenarios, and develop actionable future-proof strategies to implement directly within your organisation.

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AGENDA

DAY 1 — 06/05/2025

Introduction to AI and IoT for Sustainable Environments

- Defining the three pillars of the training programme: Artificial Intelligence (AI), the Internet of Things (IoT), and Sustainable Environments.
- Supporting sustainable development goals (SDGs) through the transformative potential of AI and IoT
- Fundamentals of Indoor Environmental Quality (IEQ) and why it matters to organisations
- Linking technological solutions to ESG and Corporate Social Responsibility (CSR)

Core Technologies and Tools for Smart Operations Management

- Novel uses of machine learning, data analytics, and IoT networks
- Practical Tools and Techniques: Overview of IoT sensors, data visualisation techniques, and AI algorithms.
- Strategic Considerations: Aligning AI and IoT initiatives with broader organisational and operational goals

Real-Time Monitoring and Predictive Analytics

- Innovative methods and systems for real-time data collection, processing, and analysis for actionable intelligence
- Industry Applications: Examples of predictive maintenance and proactive risk management

Data-Driven Decision Making for Operational Excellence

- Planning and Implementation: Steps to integrate data-driven decision-support techniques into an organisation
- Benefits and Limitations: Understanding the scope and constraints of AI-powered and IoT-powered support tools for data-driven decision making

DAY 2 — 08/05/2025

Sustainable Building Management through AI and IoT

- The concept of smart, sustainable buildings and their benefits
- Novel techniques for monitoring and analysing Indoor Environmental Quality (IEQ) superseding conventional building management systems
- Balancing energy efficiency, occupant comfort, and operational costs

Case study: Smart Water Management

- Use of AI and IoT in water networks
- Digital twins for water quality monitoring and personalised decision support using complex data
- Utilising AI analytics to implement what-if scenarios in water system operations in organisations

Implementing AI and IoT - Strategies for Organisational Transformation

- Roadmap for integrating AI and IoT into existing business operations
- Addressing resistance to change and skill gaps
- Change management and employee upskilling for AI and IoT adoption

Future Trends and Ethical Considerations in AI and IoT

- Next-generation AI and IoT applications and their role in the new industrial revolution
- Privacy, transparency, and responsible use of AI and IoT technologies