



ICDL PROFESSIONAL

Internet of Things (IoT)



The IoT module introduces the Internet of Things, which extends Internet connectivity from computers and related devices to other physical devices or common objects and leverages from technologies such as embedded systems, wireless sensors, and automation.

Over the last few years, there has been an explosion in the scale of the Internet of Things. Homes, offices, factories and entire cities are being made "smart" by the proliferation of Internet-connected devices. Some estimates suggest that the number of connected IoT devices will reach 41.6 billion by 2025. Organisations and societies are only now starting to grasp the potential and implications of this trend.

This module is suitable for a wide range of candidates; for example, non-technical professionals who wish to build and demonstrate an understanding of IoT, facilitating engagement with their technical colleagues or their suppliers, or students who wish to add general technical knowledge to sector-specific or general studies.

Build an understanding of the key concepts and potential of the Internet of Things (IoT) for organisations and for society



The Internet of Things (IoT) module is part of ICDL PROFESSIONAL, designed to meet the needs of modern professionals in a range of sectors.

Main learning outcomes

The IoT module consists of e-learning followed by a brief certification test. Together, these components deliver a short, focused professional development solution.

- Understand key concepts relating to Internet of Things (IoT), including common structure and requirements
- Recognise examples of consumer, commercial, industrial, and infrastructural applications of IoT
- Identify current trends in IoT, including the evolution of IoT components and the important role played by governance
- Understand ethical, security, and interoperability considerations around adoption of IoT, and consider how IoT could be implemented in a given scenario

Why certify with ICDL?

- ICDL certification is internationally recognised by employers and institutions.
- ICDL Insights modules combine cutting-edge e-learning with a brief certification test to demonstrate your mastery of the relevant concepts and good practice.
- ICDL Insights modules can be coupled with more comprehensive, skills-focused modules to build a profile of skills, knowledge, and competences that are relevant to your career.
- ICDL syllabus content is vendor-independent so that skills, knowledge, and competence are transferable.

Module Overview

Category	Content
What is IoT?	• Define the term Internet of Things (IoT) • Recognise the common structure of an IoT system: application, data processing, network, sensing • Identify physical components of an IoT system • Identify processing requirements in an IoT system • Recognise the origins and development of IoT
IoT Examples	• Recognise common examples of consumer and commercial IoT applications • Recognise common examples of industrial IoT applications • Recognise common examples of infrastructural IoT applications
Trends in IoT	• Recognise physical trends in the evolution of IoT like: minimisation, ubiquity, scale • Recognise the increasing role of governance in the design of IoT systems
IoT Adoption	• Understand key ethical considerations that must inform adoption of IoT systems like: decision making, privacy • Understand security risks associated with adopting IoT systems