



# Executive Summary

<b>Qualification</b>	Occupational Certificate: Internet of Things Developer
<b>Purpose</b>	<p>The Occupational Certificate: Internet of Things (IoT) Developer prepares learners to coordinate, deploy and manage Internet of Things solutions that connect devices, sensors, systems and cloud environments to enable intelligent data-driven decision-making.</p> <p>Internet of Things Developers play a critical role in modern digital ecosystems by connecting physical devices to communication networks, collecting and processing data and integrating these solutions with organisational systems and platforms.</p>
<b>Qualification ID</b>	119262
<b>NQF Level</b>	4
<b>Minimum Credits</b>	141
<b>Duration</b>	12-18 Months
<b>Field</b>	Information and Communication Technology
<b>Subfield</b>	Software Development / Internet of Thing
<b>Quality Partner</b>	MICT SETA
<b>Entry Requirements</b>	NQF Level 3

**Head Office**

3<sup>rd</sup> Floor, South Wing  
20 Skeen Boulevard  
Bedfordview

**Centre of Leadership Excellence**

3<sup>rd</sup> Floor, North Wing  
20 Skeen Boulevard  
Bedfordview

**Telephone**

+27 11 856 4700

**Website**

www.klmempowered.com

**Contacts**

Lyn Mansour: +27 82 330 5160  
Portia Matuludi: +27 67 421 0051  
Clayton Lendrum: +27 66 478 2706

**Qualification Overview**

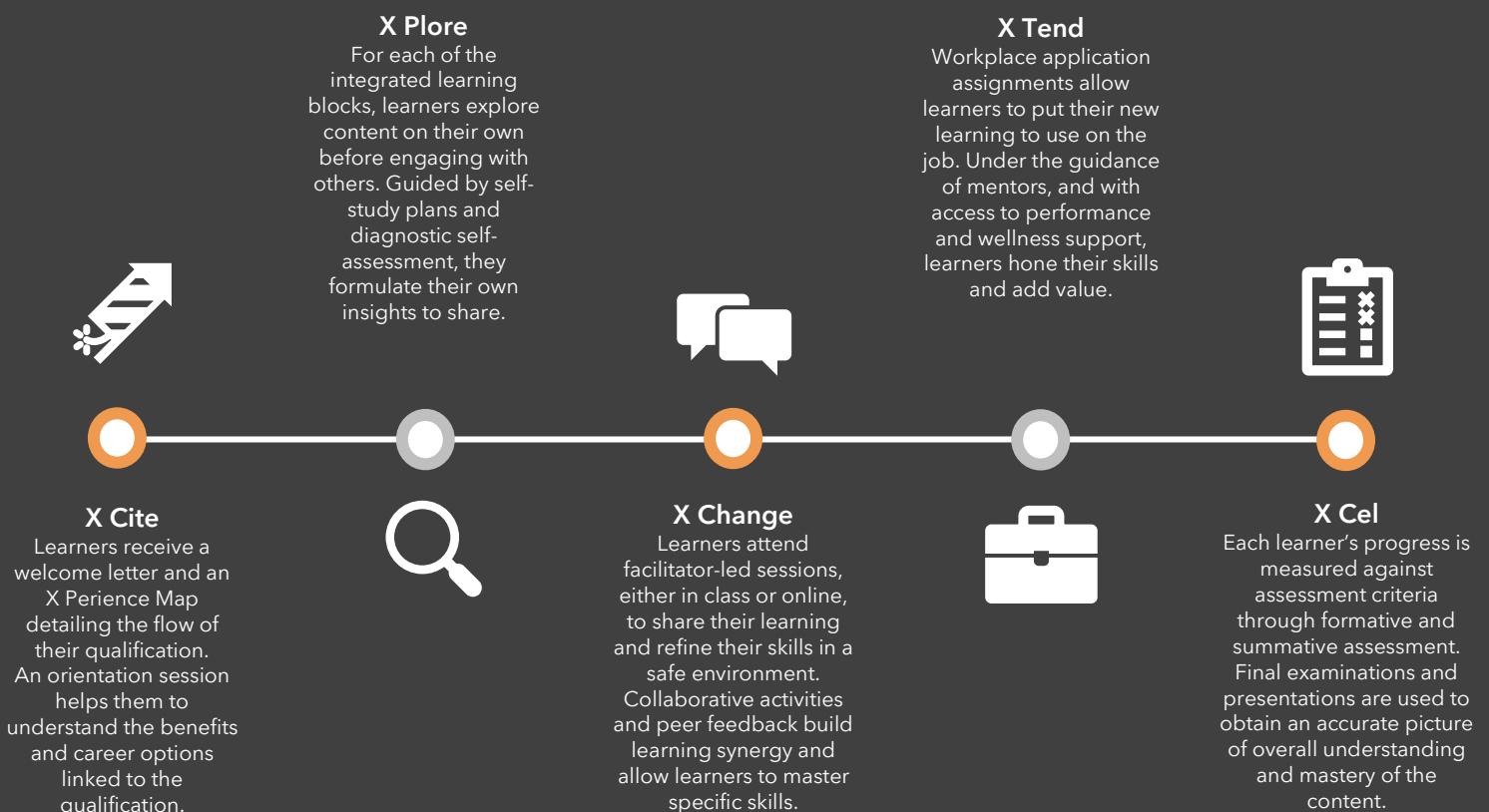
This programme develops both technical and workplace capability in IoT deployment, data management, device management and system integration. Learners gain competence in the implementation of IoT infrastructure, and the management of data generated by connected environments.

Through an integrated combination of knowledge development, applied practical skills and workplace exposure, learners develop the ability to support the full IoT lifecycle from device deployment to data integration and optimisation.

On completion learners will be able to:

- Deploy Internet of Things solutions through connected devices and infrastructure
- Collect, aggregate and store structured and unstructured data
- Integrate IoT solutions with organisational systems and environments
- Monitor and optimise IoT performance and functionality
- Implement security and ethical practices within IoT environments

**The KLM Empowered Learning X Perience**



## Qualification Outline

The Occupational Certificate: Internet of Things Developer is structured into six integrated learning blocks, combining Knowledge Modules (KM), Practical Skill Modules (PM) and Work Experience Modules (WM).

1

### DIGITAL FOUNDATIONS AND COMPUTING PRINCIPLES (18 CREDITS)

ID	Title	Level	Credits
KM-02	Computers, Devices and Computing Systems	4	6
KM-08	Basic Electronic Principles	4	4
KM-06	4IR and Future Skills	4	4
KM-07	Function Ethically and Effectively in the Workplace	4	3
PM-09	Design Thinking Principles for Innovation	4	1

2

### INTERNET OF THINGS FOUNDATIONS AND ARCHITECTURE (23 CREDITS)

ID	Title	Level	Credits
KM-01	Introduction to Internet of Things	4	4
KM-03	Building Blocks of Internet of Things	4	8
KM-04	Internet of Things Design and Development Considerations	4	8
PM-08	Participate in a Design Thinking for Innovation Workshop	4	3

3

### DEVICE DEPLOYMENT AND INFRASTRUCTURE MANAGEMENT (35 CREDITS)

ID	Title	Level	Credits
PM-03	Implement the Internet of Things Solution Infrastructure and Deploy Edge Devices	5	10
PM-04	Provision and Manage Devices	5	10
WM-01	Internet of Things Solution Deployment Processes	5	15

4

## DATA COLLECTION AND DATA MANAGEMENT (31 CREDITS)

ID	Title	Level	Credits
KM-05	Strategic Employment Relations Management	4	4
PM-02	Access, Analyse and Visualise Structured Data using Spreadsheets	4	4
PM-05	Process and Manage Data in an Internet of Things Solution	5	8
WM-02	Data Collecting, Aggregating, Disseminating and Storing Processes	5	15

5

## SECURITY AND OPTIMISATION OF IOT ENVIRONMENTS (18 CREDITS)

ID	Title	Level	Credits
PM-06	Monitor, Troubleshoot and Optimise Internet of Things Solutions	5	8
PM-07	Implement Security Measures for Internet of Things Solution	5	10

6

## INTEGRATED IOT SYSTEMS AND SOLUTION DELIVERY (16 CREDITS)

ID	Title	Level	Credits
PM-01	Apply Basic Scriptwriting for Internet of Things Toolsets	4	4
WM-03	Data Integration Systems and Processes	5	12

*The Greatness Effect*