



Executive Summary

Qualification	Advanced Occupational Certificate: Extended Reality (XR) Developer
Purpose	<p>The Advanced Occupational Certificate: Extended Reality (XR) Developer prepares learners to design, develop, test and implement immersive digital experiences using technologies supporting augmented reality (AR), virtual reality (VR) and mixed reality (MR).</p> <p>Extended Reality Developers operate at the intersection of software development, interactive design and emerging technologies. They research user requirements, develop XR applications, integrate immersive environments and troubleshoot software issues to create engaging user experiences across industries.</p>
Qualification ID	121296
NQF Level	6
Minimum Credits	218
Duration	12-18 Months
Field	Information and Communication Technology
Subfield	Software Development / Extended Reality
Quality Partner	MICT SETA
Entry Requirements	NQF Level 5 qualification or relevant software development experience

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Qualification Overview

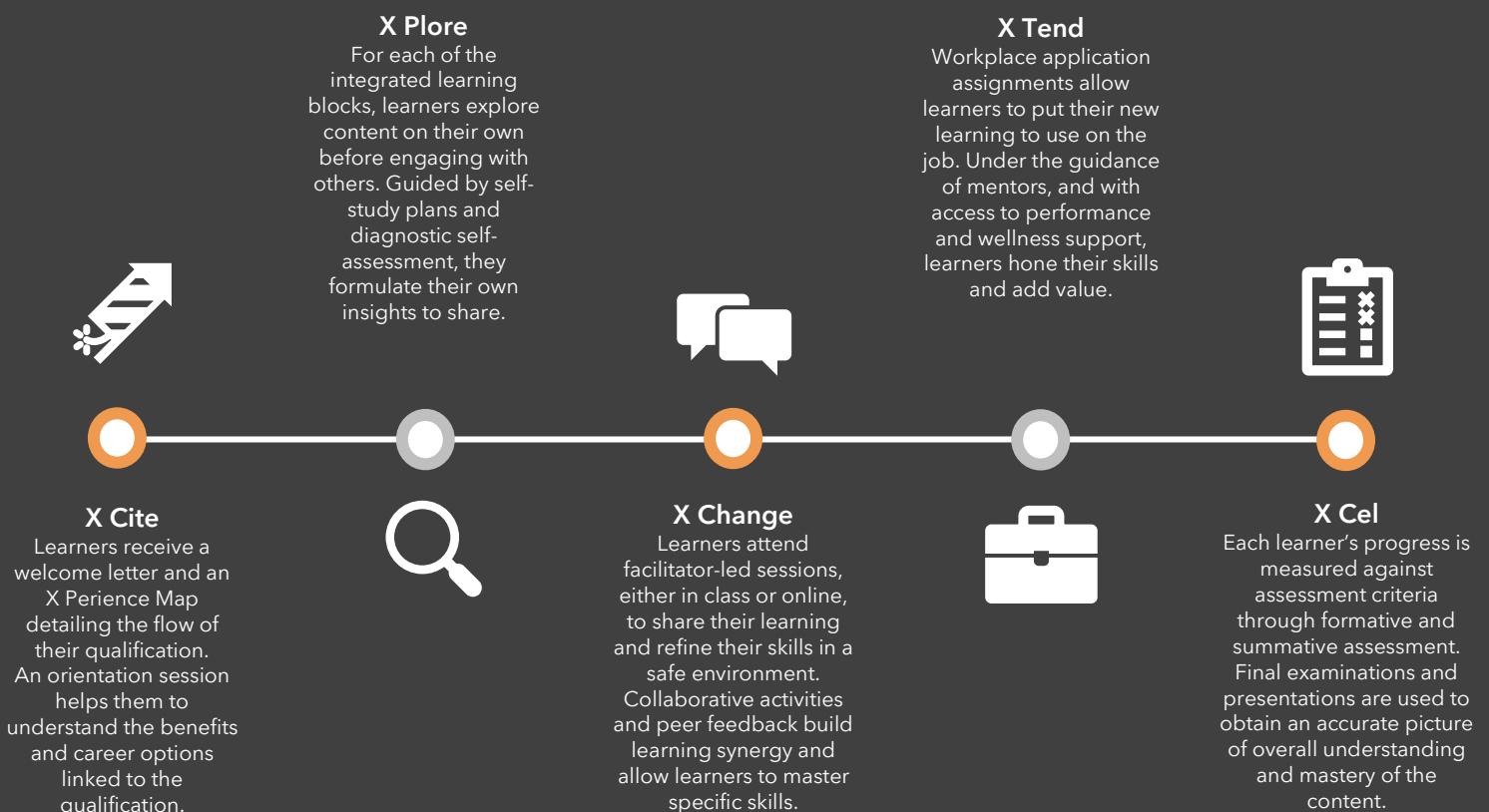
This programme develops both technical and professional capability in XR content pipelines, immersive application development, mobile integration, programming and deployment of XR experiences.

Through an integrated combination of knowledge development, applied practical skills and workplace exposure, learners develop the competence to support the full XR development lifecycle.

On completion learners will be able to:

- Analyse user and business requirements for XR solutions
- Design and develop immersive XR software and applications
- Integrate interactive and mobile application functionality
- Deploy, troubleshoot and optimise XR environments
- Apply leadership and project management principles within XR development teams

The KLM Empowered Learning X Perience



Qualification Outline

The Advanced Occupational Certificate: Extended Reality (XR) Developer is structured into six integrated learning blocks, combining Knowledge Modules (KM), Practical Skill Modules (PM) and Work Experience Modules (WM).

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XR FOUNDATIONS AND WORKPLACE READINESS (21 CREDITS)

ID	Title	Level	Credits
KM-01	Introduction to the Extended Reality (XR) and Workplace Fundamentals	5	3
KM-08	Leadership and Self-Management	6	15
PM-01	Determine Work Package Requirements using Established System Design Methodologies	6	3

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XR CONTENT PIPELINE AND PROGRAMMING FOUNDATIONS (43 CREDITS)

ID	Title	Level	Credits
KM-02	Extended Reality (XR) Content Pipeline	6	8
KM-03	Fundamentals of Programming in XR Ecosystem	6	20
WM-01	Processes of Developing or Coding the Required Work Package and Designed Solutions	6	15

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DEVICE DEPLOYMENT AND INFRASTRUCTURE MANAGEMENT (32 CREDITS)

ID	Title	Level	Credits
KM-04	Fundamentals of Interactive Application Development in Extended Reality (XR)	6	2
KM-05	Fundamentals of Mobile Application Development	6	2
PM-03	Plan and Develop XR Software and Applications	7	15
WM-05	Process of Developing Software and Interactive applications in XR	7	5

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IMMERSIVE SYSTEMS AND XR EXPERIENCE DEVELOPMENT (50 CREDITS)

ID	Title	Level	Credits
KM-06	Fundamentals of Immersive XR Systems and Shaders	6	15
WM-02	Processes of XR Software and Applications Development, Deployment and Publishing	6	20
WM-04	Processes of Animation for Extended Reality (XR) Experience/Application	7	15

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CHANGE MANAGEMENT AND XR DOCUMENTATION (17 CREDITS)

ID	Title	Level	Credits
KM-07	Documenting Extended Reality (XR) Software and Applications Development Processes	5	2
PM-02	Participate in Change and Release Management of XR Work Packages	6	10
WM-03	Change and Release Management Processes in XR Design and Development	6	5

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INTEGRATED TROUBLESHOOTING AND XR SOLUTION OPTIMISATION (68 CREDITS)

ID	Title	Level	Credits
PM-04	Diagnose, Debug and Resolve Issues/Problems Pertaining to XR Applications	7	30
WM-06	Processes of Fault-Finding and Troubleshooting on XR Software and Applications	7	38

The Greatness Effect