



African Helix
Training

In Pursuit of Excellence and Beyond...



Introduction to 4IR (Fourth Industrial Revolution)

Course Content

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Overview

This 2-day introductory course is designed for individuals with little or no experience with computers. It covers the fundamental concepts of computer hardware, software, operating systems, and essential applications. Learners will gain a basic understanding of how to use computers effectively, and perform common tasks.



Course Prerequisites

Knowledge of data modelling concepts and basic DAX functions. Understanding of SQL queries and databases (preferred but not required).



Target Audience

Data Analysts, Business Intelligence Professionals, Data Scientists, IT Professionals and Decision Makers



Course Outline

Please note that due to the dynamic nature of Office 365/Microsoft 365 some content may change without notice.



Duration

In Class/Virtual Class: 2 Days
(08:30 – 15:30)



Delivery Methods

- On-Site
- At designated location
- Virtual Live



What You Get

- Certificate of Completion



Outcomes and Objectives

- Advanced Data Modelling: Create and manage complex data models.
- Custom Visualizations: Develop custom visualizations and dashboards.
- DAX Formulas: Utilize advanced DAX (Data Analysis Expressions) formulas.
- Optimization: Optimize report performance and data refresh rates.



Day 1: Understanding Computer Basics

Session 1: Introduction to Computers

- What is a computer?
 - Types of computers (desktop, laptop, tablets, smartphones)
 - Basic hardware components (CPU, memory, storage, peripherals)
 - Input and output devices (mouse, keyboard, monitor, printer)
- Activity: Hands-on exploration of different hardware components.

Day 1: Understanding 4IR and Its Technologies

Session 1: Introduction to 4IR

- Welcome and Course Overview
- Objectives and expectations
- Importance of 4IR in today's world
- Historical Context
- Evolution from the First to the Fourth Industrial Revolution
- Key differences and advancements

Session 2: Key Technologies of 4IR

- Artificial Intelligence (AI) and Machine Learning (ML)
- Basic concepts and applications
- Real-world examples
- Internet of Things (IoT)
- Definition and components
- Use cases in various industries
- Big Data and Analytics
- Importance of data in 4IR
- Tools and techniques for data analysis

Session 3: Emerging Technologies

- Blockchain
- Fundamentals and how it works
- Applications beyond cryptocurrency



- Robotics and Automation
- Types of robots and their uses
- Impact on manufacturing and other sectors
- 3D Printing
- Basics of additive manufacturing
- Potential and limitations

Session 4: Practical Applications and Case Studies

- Industry 4.0
- Smart factories and digital twins
- Case studies from manufacturing
- Healthcare
- AI in diagnostics and treatment
- IoT in patient monitoring
- Finance
- Blockchain in banking
- AI in financial services

Day 2: Implementing and Adapting to 4IR

Session 5: Skills for the Future

- Digital Literacy
- Essential skills for the 4IR workforce
- Continuous learning and upskilling
- Soft Skills
- Critical thinking and problem-solving
- Collaboration and communication

Session 6: Ethical and Social Implications

- Ethics in AI and Data Privacy
- Ethical considerations in AI development
- Data protection and privacy laws
- Social Impact
- Job displacement and creation



- Addressing the digital divide

Session 7: Strategic Implementation

- Developing a 4IR Strategy
- Steps to integrate 4IR technologies
- Change management and leadership
- Challenges and Solutions
- Common obstacles in 4IR adoption
- Best practices and success stories

Session 8: Hands-On Workshops

- AI and ML Workshop
- Basic AI/ML model building
- Practical exercises and applications
- IoT Workshop
- Setting up IoT devices
- Real-time data collection and analysis
- Blockchain Workshop
- Creating a simple blockchain
- Exploring smart contracts
- Closing Session



For More Details and to Register, Please Contact

Course Coordinator

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