Information Technology Institute

Data Management Executive Summary

People Develop Countries… We Develop P.E.O.P.L.E.

Program Admission Arrangement

Who May Apply?

- **Applicants must have a first degree from a recognized university or institution of higher education or provide documentation indicating that they will earn such a first degree before enrolment in the 9-month program. Admission Requirements for Students vary depending on the student's area of study.**

Prerequisites

Applicants preferred to have adequate knowledge in Database Fundamentals and Basic Knowledge about technical concepts

- **Database Fundamentals** https://maharatech.gov.eg/course/view.php?id=740
- **Career Talk in Data Analytics** https://maharatech.gov.eg/course/view.php?id=514
- **Good Fundamentals for Data Warehousing, Data Engineering and understanding the Data Analytics life cycle**

Selection Process

- **Phase 1: IQ and Problem-Solving exam | English exam**
- **Phase 2: Technical Exam**
  Computer-based technical exam in the field of your interest
- **Phase 3: Technical Interview**
  Those applicants would be discussing with the interviewing panel their pre-work -"Before You Apply"- in a one-to-one interview
- **Phase 4: Interpersonal Skills Interview**
  Those how pass phase 3 will be promoted to this interview

Delivery Approach

- 75% face to face Learning| 25% Online
- Hardware requirement: Core i7 laptop with at least 16 GB of RAM

Students' Deliverables

- Each student must deliver at lest ONE **freelancing** job and an international **certificate** based on his track

Data Management Track

1 Programs Offered

☑ **Professional Training Program:**
- Data Management

☑ **Intensive Code Camps:**
- Data Integration & Visualization
- Data Analysis & Visualization

2 Industry/Academy Stakeholders

- Pluralsight
- Splunk
- BBI Consultancy
- IBM
- SAS Institute

3 Targeted Outcome

- **Employability**

- Vodafone Egypt
- VOIS
- BBI
- EFG Hermes
- Etisalat Misr
- AAIB
- Fawry
- Aman
- CyShield
- CIB
- Orange Egypt
- Valeo
- Integrant
- IBM
- Giza Systems
- PwC

4 Certifications

AWS Certified Data Engineer – Associate
Azure Data Engineer Associate
IBM Infosphere DataStage 11.5
SAP Business Object
Databricks Certified Data Engineer Associate
Microsoft Certified: Power BI Data Analyst Associate

5 Graduates Job Profiles

Data Warehouse Architect / Modeler
A Data Warehouse Modeler is responsible for developing, managing, and updating data models, including the physical and logical models of data warehouses, data marts, staging areas, and operational data stores. In addition to supporting model management activities on the enterprise level.

Data Integration Specialist
A Data Integration Specialist is to design, build, map and maintain integration solutions based on integration needs from business users and load data across various sources into an organized and unified view. s/he also responsible for the monitoring of data flow between databases, servers and Cloud services to identify and implement the most suitable data integration architecture for the organization's needs.

Business Intelligence Analyst / Developer
A Business Intelligence Analyst / Developer is responsible for building reports and dashboards to help inform decision-making by converting data into information and facilitating insightful solutions to complex problems. In addition to translating the business requirements into technical specifications which are used to implement the required reports and dashboard.

Big Data Engineer
A Big Data Engineer have knowledge of data analysis, end-user requirements analysis, and business requirements analysis to develop a clear understanding of the business needs and to incorporate these needs into technical solutions.
S/He develop, maintain, test and evaluate big data solutions in organizations. They build a robust, fault-tolerant data pipeline that cleans, transforms, and aggregates unorganized and messy data into databases or data sources. As well as building large-scale data processing systems, also should be an expert in data warehousing solutions and should be able to work with the latest (NoSQL) database technologies.

Data Engineer
They are responsible for designing, maintaining, and optimizing data infrastructure for data collection, management, transformation, and access. They are in charge of creating pipelines that convert raw data into usable formats for data scientists and other data consumers to utilize. They also create optimal data warehouses, pipelines, and reporting systems to solve business problems.

Data Management Track

Program Content Structure

957 Hours

Essential Courses
- Operating Systems Fundamentals
- Computer Networks Fundamentals
- Database Fundamentals
- Object Oriented Paradigm Using Java
- Red Hat System Administration I

Business courses
- Financial Accounting
- Enterprise Systems
- Project Management

SQL & Scripting Courses
- Introduction to Oracle SQL and PL/SQL
- Oracle Advanced PL/SQL
- Analytical SQL
- Bash Shell Scripting
- SQL Tuning
  No SQL using Mongo DB

Core Concepts
- Introduction to Agile Software Development Methodologies
- Cloud Computing Fundamentals
- Data Warehousing Fundamentals and Data Modeling

Programming for Data Management
- Data Management with Python
- Advanced Java SE for Data Management

Analytics, Integration & BI Tools
- Incorta Business Analytics
- Informatica PowerCenter Basics
- IBM InfoSphere DataStage Essentials
- Business Objects Webi / Universe
- Visualization & Storytelling using Tableau

Big Data Tools & Techniques
- Apache Hadoop Essentials
- Apache Kafka
- Apache Spark Essentials
- Apache Scala Programming Language
- Apache pig, Hive and Impala
- Apache Airflow
- Apache HBase Essentials
- Big Data Case Study

Soft Skills Courses
- Best Practices For Remote Working (Workshop)
- Communication Essentials for Professionals
- High Impact Presentations
- Job Seeking Skills
- Professional Demeanor (Workshop)
- Progressive Teamwork (Workshop)