Title:

Microsoft Azure Database Fundamentals

Scope

Proposal aimed at strengthening the training offer of the Tomar School of Technology (ESTT) of the Polytechnic of Tomar (IPT), through the Microcredential course in Microsoft Azure Database Fundamentals, with a view to introducing fundamental knowledge about the creation, implementation and management of databases through the specific functionalities of the Azure Cloud Platform (SQL). Ongoing learning dedicated to query development, system monitoring, routine configuration and the implementation of optimisation, performance enhancement, security protocols and data maintenance.

In line with this, we submit this proposal to create the Microsoft Azure Database Fundamentals Course for approval, awarding 5 ECTS credits and comprising a total workload of 135 hours, including 40 hours of contact hours.

Context

This training is timely, as companies and industries of all sizes and sectors are in increasing demand of qualified consultants and technical professionals who can use, manage and configure efficient solutions in different types of database management systems (DBMS) on the Microsoft Azure cloud platform. The training offers a variety of reliable and scalable cloud computing services (SaaS), enabling companies to increase their operational efficiency, reduce costs and improve their agility in the market. The exponential production of new data requires specialised technical knowledge of storage, processing and management in cloud systems. This translates into a fundamental need for companies to enable digital transformation, providing greater flexibility and competitiveness in a highly technological and constantly evolving market.

Target Audience

This course is aimed at IT technicians and company executives who are interested in acquiring skills in Database Management Systems (DBMS) on the Microsoft Azure cloud platform.

Student Places

The minimum number of places is fifteen (15).

Course Structure

Module 1 - Fundamentals of Microsoft Azure Database (15 hours)

1. Introduction to SQL (Structured Query Language)
2. Introducfion to Microsoft Azure Database
3. Azure SQL Database
4. Query Development in Azure SQL Database

Module 2 - Azure SQL Database Management and Optimisation (25 hours)

1. Monitoring and Performance Optimization in Azure SQL Database
2. Backup and Recovery in Azure SQL Database
3. Security and Compliance in Azure SQL Database
4. Integration with Other Tools and Services
5. Scalability and Availability Considerations
6. Data Management Best Practices

Assessment Method

Each module will be evaluated through practical exercises conducted in a laboratory setting, with each task assessed according to the criteria established for the corresponding objective. Each objective will be evaluated using a scoring scale ranging from 0 to 20.

In order to pass the module, students are required to obtain a minimum of 50% of the total score and to present and defend their practical assignments or proposed projects.