Microsoft Fabric Data Engineer DP700- Course Syllabus

Section 1: Introduction to Microsoft Fabric

- Overview of Microsoft Fabric
- Components: Data Factory, Synapse, Power BI, Data Activator
- Understanding the Unified Data Platform
- Role of a Data Engineer in Microsoft Fabric

Section 2: Ingesting and Transforming Data with Dataflow Gen2

- Ingesting data using Dataflow Gen2
- Transform data using Power Query
- Data pipeline concepts and activities
- Managing and monitoring pipelines

Section 3: Managing Data in One Lake and Lake Houses

- Introduction to One Lake
- Creating and managing Lake houses
- Working with files and tables
- Partitioning, indexing, and optimization

Section 4: Data Engineering with Apache Spark in Fabric

- Introduction to Spark in Fabric
- Writing PySpark notebooks
- Data wrangling and processing using Spark
- Managing compute and performance

Section 5: Building Data Pipelines with Data Factory

- Create and manage pipelines in Fabric
- Mapping and Wrangling Data Flows
- Pipeline triggers and dependencies
- Monitoring and troubleshooting

Section 6: Creating and Managing Data Warehouses

- Data Warehouse vs Lake house
- Designing a Fabric Data Warehouse
- Ingesting data into warehouses
- Querying with T-SQL in Fabric

Section 7: Designing End-to-End Data Solutions

- Integrating Lake house, Data Warehouse & Power BI
- Orchestrating pipelines and activities
- Real-time analytics and alerting with Data Activator
- Best practices for performance and scalability

Section 8: Security, Governance & Monitoring

- Data access and workspace roles
- Row-level and column-level security
- Monitoring Fabric workloads and diagnostics
- Integration with Microsoft Purview

Section 9: Data Governance & Compliance in Fabric

- Implement data classification and labeling
- Secure sensitive data with RLS & CLS
- Integrate with Microsoft Purview for governance
- Track lineage and auditing within workspaces

Section 10: Automation with Fabric Pipelines

- Automate end-to-end data workflows
- Schedule and trigger pipelines for business
- Use Fabric API & Logic Apps for integration
- Error handling and retries in pipeline execution