

# Microsoft Dynamics 365 Finance and Operations Developer

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## Course Description:

This course offers an in-depth exploration of Microsoft Dynamics 365 Finance and Operations, focusing on development and customization. Participants will gain foundational knowledge of Dynamics 365 architecture, data modeling, and the X++ programming language. Additionally, the course covers user interface design, security configurations, workflows, and extension methods, providing the skills necessary to develop and extend the functionalities within Dynamics 365 Finance and Operations.

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## Audience Profile:

This course is tailored for developers, technical consultants, and IT professionals involved in customizing and extending Microsoft Dynamics 365 Finance and Operations. It is also suitable for those aspiring to deepen their technical knowledge and skills in developing within the Dynamics 365 environment.

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## Prerequisites:

- A basic understanding of ERP systems and programming concepts.
  - Familiarity with object-oriented programming is advantageous.
  - Prior experience with Microsoft technologies is recommended but not required.
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## Course Objectives:

By the end of this course, participants will be able to:

1. Understand the architecture and components of Microsoft Dynamics 365 Finance and Operations.
  2. Navigate and customize the Dynamics 365 user interface.
  3. Develop and manage data models within Dynamics 365.
  4. Utilize the X++ programming language for customization and development.
  5. Configure security roles, workflows, and user permissions effectively.
  6. Extend Dynamics 365 functionalities through various extension methods.
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### **Module 01: Introduction**

- Introduction to ERP
- ERP and Dynamics AX
- Dynamics AX Versions
- On-premises vs. Cloud, Pros and Cons
- Introduction to Azure
- Creating users
- Introduction to LCS
- Downloading and Setting up VM
- Introduction to D365
- Architecture of D365
- Models and Packages in D365

### **Module 02: Data Model**

- Primitive Data Types
- Extended Data Types
- Base Enumeration
- Tables
- Tables – Relations
- Tables – Delete Actions
- Tables – Methods
- AOT Queries
- Views
- Data Entities
- Composite Data Entities
- Aggregated Data Entities
- Data Migration
- Maps
- Table Collections

### **Module 03: The X++ Programming Language**

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- Loops
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- Inheritance
- Polymorphism
- Select Statements in D365
- Using AOT and X++ in V1

### **Module 05: User Interface**

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- MVC Architecture
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- Power BI Reports
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### **Module 06: Security and Workflows**

- Introduction
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- Duties
- Privileges
- Extensible Data Security
- Assigning Roles to Users

- Managing Users
- The State Machine Concept
- Working with State Machine in D365
- Creating and Authorizing a Workflow
- Workflow Categories
- Workflow Approvals
- Workflow Tasks
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#### **Module 07: Extensions**

- Base Enumeration Extensions
- Extended Data Type Extensions
- Table Extensions
- View Extensions
- Query Extensions
- Data Entity Extensions
- Class Extensions
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