

Microsoft Dynamics 365 CRM Developer

Course Description

The **Microsoft Dynamics 365 CRM Developer** course is tailored for individuals looking to deepen their expertise in developing, customizing, and extending Microsoft Dynamics 365 Customer Engagement (CE) applications. Participants will explore the core capabilities of Dynamics 365, delve into customization using Microsoft Power Platform, and learn to create tailored solutions that enhance business processes. Through interactive labs and real-world scenarios, learners will develop skills in app customization, client-side scripting, integration using web services, and extending user experiences with advanced developer tools.

Audience Profile

This course is ideal for:

- **CRM Developers:** Professionals who want to build and extend Dynamics 365 applications to meet specific business requirements.
 - **Technical Consultants:** Individuals looking to provide technical expertise and customization for Dynamics 365 implementations.
 - **Solution Architects:** Professionals aiming to design comprehensive solutions leveraging Dynamics 365's capabilities.
 - **Business Analysts:** Those interested in understanding Dynamics 365's technical aspects to better communicate with development teams.
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Prerequisites

Before attending this course, participants should have:

- **Basic Knowledge of Microsoft Dynamics 365:** Familiarity with the core functionalities and modules of Dynamics 365.
 - **Understanding of CRM Concepts:** A solid grasp of Customer Relationship Management principles and practices.
 - **Technical Background:** Experience with programming languages like C# or JavaScript is recommended.
 - **Familiarity with Microsoft Power Platform:** Basic understanding of Power Apps, Power Automate, and Dataverse.
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Course Objectives

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

1. **Navigate and Utilize Dynamics 365 Apps:** Understand and efficiently use Dynamics 365 Customer Engagement applications.
 2. **Customize Dynamics 365:** Use Microsoft Power Platform tools to customize and extend Dynamics 365 solutions.
 3. **Develop Model-Driven and Canvas Apps:** Build custom applications to enhance user experience and meet business needs.
 4. **Integrate and Extend Dynamics 365:** Utilize web services and APIs for integrating and extending CRM capabilities.
 5. **Implement Advanced Development Techniques:** Use client-side scripting, plugins, and custom components for sophisticated customization.
 6. **Leverage AI and Analytics:** Apply AI-based analytics and insights to enhance CRM operations.
 7. **Optimize Sales, Marketing, and Service Processes:** Enhance business processes using Dynamics 365's marketing, sales, and customer service functionalities.
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Module-wise Table of Contents

Module 1: Examine the Core Capabilities of Microsoft Dynamics 365 Customer Engagement Apps

- **Topics Covered:**
 - Navigating Dynamics 365 Customer Engagement Apps
 - Exploring Common Dynamics 365 Activities and Integration Options
 - Understanding Microsoft Dataverse
 - Data Search and Filtering Techniques
 - Reporting and Integration Options
- **Labs:**
 - Validate Lab Environment and Work with Customer Engagement Apps
 - Manage Customers and Activities
- **Key Learnings:**
 - Customer Engagement Applications
 - Microsoft Dataverse

- Data Search and Filtering
 - Reporting and Integration Options
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Module 2: Learn the Fundamentals of Dynamics 365 Marketing

- **Topics Covered:**
 - Exploring Dynamics 365 Marketing Capabilities and Apps
 - Use Cases for Dynamics 365 Marketing
 - Segments and Customer Journeys
 - Lead Generation and Event Management
 - Customer Feedback and AI-based Analytics
 - **Labs:**
 - Create a Customer Journey
 - Create a Segment
 - **Key Learnings:**
 - Use Cases for Dynamics 365 Marketing
 - Segments
 - Customer Journeys
 - Lead Generation
 - Event Management
 - Customer Feedback
 - AI-based Analytics
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Module 3: Learn the Fundamentals of Dynamics 365 Sales

- **Topics Covered:**
 - Examining Dynamics 365 Sales Capabilities
 - Sales Lifecycle and Process Flows
 - Lead and Opportunity Management
 - Sales Forecasting and Insights
 - Utilizing Sales Navigator

- **Labs:**
 - Create and Manage a Lead
 - Create and Manage an Opportunity
 - **Key Learnings:**
 - Sales Lifecycle
 - Lead and Opportunity Management
 - Business Process Flows
 - Sales Forecasting
 - Sales Insights
 - Sales Navigator
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Module 4: Learn the Fundamentals of Dynamics 365 Customer Service

- **Topics Covered:**
 - Exploring Dynamics 365 Customer Service and Related Apps
 - Case Lifecycle and Management
 - Queues, Entitlements, and SLAs
 - Knowledge Management and Omnichannel Support
 - Historical Analytics and Reporting
 - **Labs:**
 - Create and Manage Cases
 - Create and Publish a Knowledge Base Article
 - **Key Learnings:**
 - Use Cases for Dynamics 365 Customer Service
 - Case Lifecycle
 - Queues, Entitlements, SLAs
 - Knowledge Management
 - Omnichannel
 - Historical Analytics
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Module 5: Learn the Fundamentals of Dynamics 365 Field Service

- **Topics Covered:**
 - Exploring Dynamics 365 Field Service Capabilities
 - Scheduling Process and Optimization
 - Work Order Lifecycle and Management
 - Inspections and Asset Management
 - Connected Field Service
 - **Labs:**
 - Create Work Orders in Dynamics 365 Field Service
 - Create an Inspection
 - **Key Learnings:**
 - Field Service Business Process
 - Work Order Lifecycle
 - Inspections
 - Scheduling Capabilities
 - Asset Management
 - Connected Field Service
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Module 6: Introduction to Microsoft Dynamics 365 CE Apps - Customization

- **Topics Covered:**
 - Overview of Microsoft Power Platform for Customization
 - Understanding Data Types and Behaviour
 - Configuring Security Settings
 - AI Builder and Its Applications
- **Labs:**
 - Validate Lab Environment
 - Work with Tables
 - Create an App, Tables, Columns, Relationships, and Additional Table Settings
- **Key Learnings:**

- Microsoft Power Platform
 - Data Types and Behaviour
 - Security Settings
 - AI Builder
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Module 7: Make Custom Apps with Dynamics 365

- **Topics Covered:**
 - Building Blocks of Model-Driven Apps
 - Designing Model-Driven Apps, Forms, and Views
 - Power Apps Studio and Canvas Apps Capabilities
 - Enhancing User Experience with Custom Apps
 - **Labs:**
 - Modify Views and Forms
 - Use App Designer
 - Build a Canvas App
 - Work with Data and Services
 - **Key Learnings:**
 - Model-Driven Apps
 - Forms and Views Design
 - Power Apps Studio
 - Canvas Apps
 - User Experience Enhancement
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Module 8: Architecture, Development, and Extensibility in Dynamics 365 CRM Apps

- **Topics Covered:**
 - Introduction and Why Custom Coding?
 - Understanding the Architecture of Microsoft Dynamics 365 CRM Apps
 - Microsoft Dynamics 365 CRM Apps Web Service
 - Introduction to Dynamics 365 CRM Apps Developer Resources

- Types of Extensibility
 - Developer Tools for Extending Dynamics 365 CRM Apps
 - Extending CRM Apps and Database
 - Introduction to APIs
 - Solutions Overview and SolutionPackager Tool
 - User Experience Extensibility
 - Power Apps Component Framework
 - Event Pipeline and Building Plugins
 - **Exercises:**
 - Install and Use Developer Tools
 - Explore a Registered Plug-in with the Plug-in Registration Tool
 - Create a Custom API
 - Write Your First Plug-in
 - **Key Learnings:**
 - Custom Coding in Dynamics 365 CRM Apps
 - Architecture and Web Services
 - Developer Resources and Tools
 - API Integration
 - Solutions and Plugins
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Module 9: Extending CRM Apps User Experience

- **Topics Covered:**
 - Introduction to Client-Side Scripting
 - Business Rules vs. Client Script
 - Creating Components with Power Apps Component Framework
 - Power Apps Component Framework Architecture
 - Power Apps Component Tooling
- **Exercises:**
 - Use Client Script to Hide a Form Section

- Create a Component
 - **Key Learnings:**
 - Client-Side Scripting
 - Business Rules and Client Script
 - Power Apps Component Framework
 - User Experience Customization
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Module 10: Dynamics 365 CRM Web Services and Integration

- **Topics Covered:**
 - Introduction to Web API
 - Creating a Record Using Web API
 - Web API - Retrieving Data
 - Web API - Advanced Queries
 - Introduction to the Microsoft Dataverse Web API
 - Interacting with Microsoft Dataverse Web API
 - Integrating Dataverse Azure Solutions
 - Publishing Microsoft Dataverse Events with Webhooks
 - Understanding the Plugin Pipeline and Plugin Messages
 - Preparing Project Template
 - Writing Code, Deploying, and Testing
 - Introduction to Xrm Tooling & Console Application
 - Developing Console Application
 - Querying Data Using FetchXML
 - Aggregate Operations Using FetchXML
- **Exercises:**
 - Create Plugin for Data Validation and Correction
 - Use Azure Function
 - Create and Register Webhooks
- **Key Learnings:**

- Web API and Data Interaction
- Microsoft Dataverse Web API
- Integration and Webhooks
- Plugin Pipeline and Xrm Tooling
- Console Application Development
- Data Querying and Aggregation

This course structure provides a comprehensive and hands-on learning experience for developers looking to master Microsoft Dynamics 365 CRM development and customization. It ensures a solid foundation in both the theoretical aspects and practical skills needed for successful Dynamics 365 implementations.