



## Key Data

**Course number:** 80011

**Number of Days:** 2

**Available:** August 2008

**Languages:**

- U.S. English

**Format:**

- Instructor-Led Training (lecture and labs)

**Student Materials:**

- Student Courseware

**Certification Exam:**

- AX 2009 Development Introduction

**Certification Track:** Development

**This course syllabus should be used to determine whether the course is appropriate for the students, based on their current skills and technical training needs.**

**Course content, prices, and availability are subject to change without notice.**

**Key Related Courses:**

- 80020: Introduction to Microsoft Dynamics® AX 2009
- 80012: Development II in Microsoft Dynamics® AX 2009
- 80013: Development III in Microsoft Dynamics® AX 2009
- 80014: Development IV in Microsoft Dynamics® AX 2009

## Course Syllabus

### **Course 80011: Development I in Microsoft Dynamics AX 2009**

*Elements of this syllabus are subject to change.*

#### **Introduction**

This two day instructor led course introduces the student to the Microsoft Dynamics AX 2009® MorphX® development environment. This course develops your understanding of the integrated development environment of the Microsoft Dynamics AX 2009 MorphX Development Suite. By learning the basics of MorphX, you will understand the building blocks of the Microsoft Dynamics AX 2009 solution. These are necessary toward building customizations to add to a customer's final solution.

Topics include Microsoft Dynamics AX 2009 architecture, data objects, user interfaces in Microsoft Dynamics AX 2009, reporting, and a case study to incorporate all the tools. This course provides a solid foundation for development in Microsoft Dynamics AX 2009 and will enable the student to be successful in more advanced development courses.

This is the first course in the Dynamics AX 2009 Development curriculum and will serve as the entry point for other AX 2009 development courses.

#### **Audience**

This course is intended for individuals who will be developing and customizing Microsoft Dynamics AX 2009 applications. This audience typically includes application consultants who are tasked with creating a customized application that is based on specific client requirements. Additionally, consultants who are responsible for training or supporting the customer will benefit from the course.

#### **At Course Completion**

After completing this course, students will be able to:

- Describe the architecture of Microsoft Dynamics AX 2009.
- List the main elements of Microsoft Dynamics AX 2009 development.
- Use the MorphX development environment and the AOT.
- Design and create tables, forms, reports, and menus.
- Add Places, Forms and Menus to the Navigation Pane and the Area Page.
- Modify objects within each major Data Dictionary category.
- Create a customized user interface.
- Use the Microsoft Dynamics AX 2009 Help documentation.
- Create report and section templates.
- Build a customized application that is based on specific requirements.

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**For a referral to a Microsoft Certified Partner of Learning Solutions in your area, see the Microsoft Training and Certification Web site at <http://www.microsoft.com/traincert>. Call your local Microsoft CPLS for more information and to register for classes.**

## Prerequisites

Before attending this course, students must have:

- Some working knowledge of Microsoft® Windows®
- Basic knowledge of programming methodologies and integrated development environments.
- General Microsoft Dynamics AX 2009 knowledge helps but is not required for this course.

In addition, it is recommended, but not required, that students have completed:

- Course 280020: Introduction to Microsoft Dynamics® AX 2009.

## Student Materials

The student kit includes a comprehensive workbook and other necessary materials for this class.

To help you prepare for this class, review the following resources:

## Chapter 1: Microsoft Dynamics AX 2009 Architecture

This chapter explains the concepts behind the Microsoft Dynamics AX 2009 architecture. The student is also introduced to the main elements of the MorphX development environment.

Sections
<ul style="list-style-type: none"><li>▪ Features of Microsoft Dynamics AX 2009</li><li>▪ Microsoft Dynamics AX 2009 Application Essentials</li><li>▪ Microsoft Dynamics AX 2009 Layered Architecture</li><li>▪ Tools for Customization</li><li>▪ Security</li><li>▪ Inquiry and Reports</li><li>▪ Best Practices</li></ul>
Demonstrations and Labs
<ul style="list-style-type: none"><li>▪ Creating a New Record in the Customer Table</li><li>▪ Sorting Records</li><li>▪ Filtering Records on the Sales Order Form</li><li>▪ Finding Records</li><li>▪ Setup the Data Crawler</li><li>▪ Lab - Filtering Records on the Customer Form</li><li>▪ Using the Label File Wizard</li><li>▪ Using Intellimorph</li><li>▪ Lab - Moving a Column</li><li>▪ Work with a Company</li><li>▪ Creating a New User Group</li><li>▪ Creating a Simple Query on an Auto Report</li><li>▪ Adding a Table in an Advanced Query</li><li>▪ Lab - Creating a Simple Inquiry on an Auto-Report</li><li>▪ Test Your Knowledge Questions</li></ul>

After completing this chapter, students will be able to:

- List the advantages of using Microsoft Dynamics AX 2009.
- Describe the main elements of Microsoft Dynamics AX 2009 development.
- Navigate throughout Microsoft Dynamics AX 2009.
- Understand the layered architecture of Microsoft Dynamics AX 2009.
- Describe the basic security architecture.
- Describe how Microsoft Dynamics AX 2009 uses Companies.
- Use Microsoft Dynamics AX 2009 Auto-Reporting.

## **Chapter 2: Data Dictionary**

This chapter explores the MorphX development environment. By the end of this chapter, the student can create and modify objects within each major Data Dictionary category.

<b>Sections</b>
<ul style="list-style-type: none"><li>▪ MorphX and the Application Object Tree</li><li>▪ Tables</li><li>▪ Relations</li><li>▪ Data Types – Extended and Primitive</li><li>▪ Base Enumerations</li><li>▪ Maps</li><li>▪ Views</li><li>▪ Indices</li></ul>
<b>Demonstrations and Labs</b>
<ul style="list-style-type: none"><li>▪ Opening the AOT</li><li>▪ Creating a table</li><li>▪ Lab – Table Creation</li><li>▪ Creating a Relation on a Table</li><li>▪ Creating an Extended Data Type</li><li>▪ Assigning an Extended Data Type to a Field</li><li>▪ Creating Base Enums</li><li>▪ Creating an Extended Data Type By Using Base Enums</li><li>▪ Creating Views</li><li>▪ Lab - Views</li><li>▪ Creating an Index</li><li>▪ Lab - Indices</li></ul>

After completing this chapter, students will be able to:

- Describe the MorphX development environment and the Application Object Tree (AOT).
- Design and create tables using MorphX.
- Use relations on Microsoft Dynamics AX 2009 tables.
- Use the different data types within Microsoft Dynamics AX 2009.
- Describe the role of Views.
- Use the different types of Indices.
- Create and modify objects within each major Data Dictionary category.

### Chapter 3: User Interfaces

This chapter focuses on graphical interfaces in Microsoft Dynamics AX 2009 such as forms and menus. Students will be able to customize and build both of these objects. Microsoft Dynamics AX 2009 Non Graphical objects are also discussed.

Sections
<ul style="list-style-type: none"> <li>▪ Projects</li> <li>▪ Forms</li> <li>▪ Menu items in MorphX</li> <li>▪ Navigation Panes and Area Pages</li> <li>▪ Microsoft Dynamics AX 2009 Non Graphical Objects</li> </ul>
Demonstrations and Labs
<ul style="list-style-type: none"> <li>▪ Create a Project</li> <li>▪ Examining a Form's Design</li> <li>▪ Build a Form</li> <li>▪ Create the Form Design</li> <li>▪ Lab – Form Creation</li> <li>▪ Creating a Display Menu Item</li> <li>▪ Adding a Menu Item to a Menu</li> <li>▪ Create a Menu and Add a Menu Reference</li> <li>▪ Lab – Menu Item Creation</li> <li>▪ Create a Query</li> <li>▪ Create an Advanced Query</li> </ul>

After completing this chapter, students will be able to:

- Use projects in Microsoft Dynamics AX 2009.
- Describe Microsoft Dynamics AX 2009 graphical interfaces.
- Design and build Forms in Microsoft Dynamics AX 2009.
- Create customized menus and menu items.
- Describe non-graphical objects in Microsoft Dynamics AX 2009.
- Create Queries and describe where queries can be used.

### Chapter 4: Report Adjustments

This chapter focuses on report elements. The student will design reports using different methods in addition to create report and section templates.

Sections
<ul style="list-style-type: none"> <li>▪ Introduction to Report Adjustments</li> <li>▪ Working with Report Design</li> <li>▪ Report Templates</li> </ul>

### Demonstrations

- Working with the Visual Report Designer
- Modifying Report Properties
- Using the Auto Design Specs
- Create a Custom Report Design
- Building a Custom Generated Report
- Create and Attach a Report Template
- Create and Attach a Section Template
- Test Your Knowledge Questions

After completing this chapter, students will be able to:

- Use the visual report designer in Microsoft Dynamics AX 2009.
- Work effectively with report elements.
- Design reports using different methods.
- Create report and section templates.
- Use best practices creating reports.

### Appendix: Case Study

This chapter serves as a case study using MorphX and its components. Elements discussed in previous chapters are used to build a functional application that is based on a client's requirements.

### Sections

- Scenario
- Part 1: Metadata Design
- Part 2: Creating the Basic Data Objects
- Part 3: Creating the Graphical Components

### Exercises

- Use the tools and utilities described in the previous chapters to design and customize an application.

Use this chapter to build:

- Tables
- Relations
- Base enumerations
- Extended data types
- Basic forms
- Reports
- Menus
- Menu items

### Appendix: Solutions

This Appendix contains all the answers to the Test Your Knowledge and Test Your Skills sections.