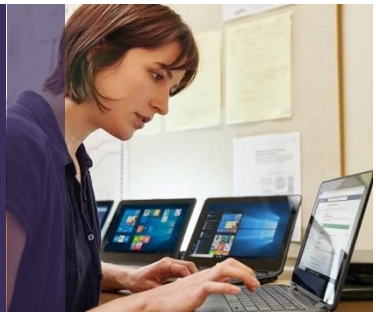
Microsoft

DP-900T00 Microsoft Azure Data Fundamentals

EDUCATOR TEACHING GUIDE



General overview

This educator teaching guide provides preparation and reference resources for instructors who plan to teach DP-900T00 Microsoft Azure Data Fundamentals in higher education or similar education settings (for example, early college programs in secondary schools or workforce training, adult education, or continuing education programs).

This guide includes:

- Required preparation and resources to master the core concepts and terms,
- A high-level overview of course materials and course planning tools, and
- Technology requirements with recommendations for configuring your classroom labs.

Planning checklist for preparing to teach the course

Instructors should aim to complete the following planning checklist prior to teaching the course. Each checklist item is bookmarked to the corresponding detailed content section.

☐ Master core concepts and terms

- Review the list of skills measured for Exam DP-900: Microsoft Azure Data Fundamentals.
- Develop your technical learning plan.

☐ Know your course materials

- Read the **Course Datasheet**.
- Preview the presentations, demonstrations, and labs in the **Microsoft Official Course**.
- Read this **Educator Teaching Guide**.
- Preview the **Online Training** on Microsoft Learn.
- Watch the **Reference Delivery Videos** (as available).
- Watch the **On-Demand Train the Trainer** videos.

☐ Plan your course

- Plan your syllabus and calendar.
- Explore tools for enabling remote learning and delivering inclusive and accessible instruction.

☐ Prepare technologies and tools

- Understand the minimum technical requirements for you, your students, and your classroom.

☐ Configure your classroom labs

- Set up your Microsoft Learn profile and Azure subscription.
- Provide students with instructions on how to set up their own Microsoft Learn profile and Azure subscription.
- Set up in-class demonstration and lab technologies.
- Review best practices for using Azure resources.

Master core concepts and terms

Overview

This section will introduce you to resources for learning the technical concepts and skills in this course. It will also provide guidance for developing a technical learning plan.

Review exam objective domains

This course is directly mapped to Exam DP-900: Microsoft Azure Data Fundamentals. A great way to start your technical skilling journey is to review the skills measured in the exam and note the extent to which they cover familiar versus new technical concepts and skills.

Develop your technical learning plan

We strongly recommend that you complete the certification exam prior to teaching the course to verify your understanding of the course content and gain insight into how to support students preparing for the exam. We maintain a continually updated list of options for learning the skills measured in the Exam DP-900: Microsoft Azure Data Fundamentals landing page. The list includes free online learning paths on the Microsoft Learn platform, instructor-led courses delivered online and in-person by our learning partners, and official practice tests. You can also find up-to-date information about options for registering to take the exam at an authorized testing center or via remote proctoring.

You may also find the following resources helpful as you prepare to teach the class:

- Microsoft Azure
  - Learn how to create an Azure account
  - Learn how to use the Microsoft Azure portal

Know your course materials

Overview

In addition to this Educator Teaching Guide, the table below will help you get to know your course materials. It includes the location and a brief description of each resource as well as recommended best practices.

All of the course materials are located in the Learning Download Center or on Microsoft Learn. We created a video to help illustrate the steps to access the materials and the content included in each. The Microsoft Learn for Educators page also includes step-by-step instructions to gain access to the course materials in the Materials Access section.

RESOURCE	INFORMATION
Course Datasheet	**Location**: Learning Download Center **Description**: A high-level summary of the course and its exam relationship **Best practices:** • Read prior to teaching to get a general overview of the course and its intended audience • See Appendix A for a snapshot of the Microsoft Official Course, timings, technologies used during in-class demos and labs, and aligned online learning. • See Appendix B for more detailed information about each segment of the Microsoft Official Course.
Microsoft Official Course	**Location**: Learning Download Center **Description**: Stand-alone modules that can be delivered in 60 -180 minutes of class time. The modules are sub-divided into 2 shorter lessons and facilitated through PowerPoint slide decks that include lecture topics, instructor notes, demonstrations, and hands-on activities. **Best practices:** • Search for "Notes" in the help section of PowerPoint if you don't see the Instructor Notes. • Use PowerPoint's embedded accessibility features to facilitate inclusive instruction. • Consider accessibility standards when modifying slides or creating additional content.
Online Training	**Location:** Microsoft Learn **Description:** Self-paced online learning content on Microsoft Learn that aligns directly to Exam DP900: Microsoft Azure Data Fundamentals and to the Microsoft Official Course. Each module stands alone and includes explanations of technical concepts, hands-on activities, and knowledge checks. The activities include modules from the exam learning path plus supplemental modules that provide additional hands-on practice with the technologies discussed in the course. **Best practices:** • Complete prior to teaching and taking the certification exam. • Follow prompts in PowerPoint slide decks to determine when to assign aligned online learning activities to students. • Emphasize to students that hands-on practice activities in the Online Training are particularly useful for solidifying understanding of exam concepts, completing projects, and transferring knowledge to real-world problems.

Plan your course

Overview

This section is designed to help you plan your course and syllabus. It includes information on other resources from Microsoft that you can utilize to supplement the course materials described above, enable remote learning, and deliver inclusive and accessible instruction.

Design Your Syllabus

The course is designed to enable you to deliver a complete module from the Microsoft Official Course during one or two class meetings and then direct students to complete the aligned segments of the Online Training on Microsoft Learn. However, the modules and Online Training have a flexible design that includes stand-alone lessons and units. This allows you to easily modify the delivery format, supplement the content, or integrate the course with other curricula.

It is often helpful to provide real-world scenarios and business use cases to students when first introducing new technical concepts. The following resources give overviews of how data is being used in the real-world:

- Microsoft Data Platform
- Microsoft Customer Stories

We recommend that you consider your students' prior experience with technology when determining how to design your course syllabus. The course has no prerequisites and students do not need prior experience with Microsoft Azure before taking this course; however, a basic level of familiarity with computer technology, cloud computing, and the Internet is assumed.

Consider using the following resources if you determine you need to modify the recommended delivery format or supplement the content:

- Microsoft Learn for Students
- Microsoft Learn for Educators
- Microsoft Educator Center

Enable Remote Learning

Microsoft's Remote learning in education page includes resources, training, and how-to guides to help schools and educators deliver remote instruction. The Special education and accessibility resources for remote learning page also provides extensive resources for accommodating students in remote learning contexts.

Deliver Inclusive and Accessible Instruction

The diversity of learning needs demands that instructors provide inclusive, accessible learning environments that inspire confidence and encourage independence differently for each student.

Several resources are available to help create an inclusive learning environment:

- The Microsoft Educator Center course Creating a digitally inclusive learning community.
- Microsoft Style Guide Bias-free communication article.
- Microsoft's Inclusive Design methodology website.

Microsoft Office and the Edge browser include embedded features that you can use to create a personalized and engaging learning experience for all your students. Use these resources to learn more:

- Make your PowerPoint presentations accessible
- Create accessible content
- Accommodate students' diverse needs:
  - Reading, writing, and math
  - Executive function
  - Speech, language, and communication
  - Hearing
  - Mobility
  - Vision
  - Neurodiversity
  - Multiply impaired and medically fragile
  - Mental health
- Support second language learners

- Support highly capable and twice exceptional students

Microsoft has a support resource for questions about the accessibility and product compliance of all Microsoft products, including the technologies used in the hands-on practice activities for this course. The support team can help resolve issues relating to a disability and the functionality of the products to be used with assistive technology, as well as find conformance documentation.

Prepare technologies and tools

Overview

This section provides the requirements needed for hardware, software, devices, and Azure Services, for you, your students, and your classroom.

Technical requirements

Educator hardware and software requirements:

- PC or laptop
- Access to the internet
- Modern operating system
- Modern browser
- Microsoft PowerPoint
  - If you do not already have PowerPoint, students and educators at eligible institutions can sign up for free access to Office 365 Education.
- Ability to display PowerPoint slides to students

Student hardware and software requirements:

- PC or laptop
- Access to the internet
- Modern operating system
- Modern browser

Classroom hardware and software requirements

- Access to the Internet
- An open Port 80 and Port 443 so you and your students can access Azure via a modern web browser

Configure your classroom labs

Overview

Review the following information on platforms, technologies, and best practices to ensure you are ready to teach the course labs.

Microsoft Learn

The Microsoft Learn platform is used for instructor-led demonstrations, in-class labs, and aligned online learning. All relevant links to Microsoft Learn appear in the text of the slides or the Instructor Notes (search for "Notes" in the help section of PowerPoint online if you don't see the Instructor Notes).

- Students can access course content on Microsoft Learn without a profile or signing in.
- Additional features become available when students are signed-in and create a profile. These features include:
  - Free Azure resources to access tools.
  - Progress tracking on learning activities.

- Experience points to measure achievement in completing lessons.
- Badges to demonstrate completion of a module.
- Trophies when an entire learning path is completed.

See the description of the Learn Catalog API to understand the options for integrating Microsoft Learn content into your learning management system (LMS). You can also apply to participate in the Catalog API Preview (CAP) Program if you wish to participate in early previews of new features.

In-Class Demo and Lab technologies

The table below shows all the technologies and tools used in the course. Use the links provided to access the product information page for each technology. The product information pages include additional links to documentation and support resources.

Note that the table below lists technologies in alphabetical order, but you can refer to Appendix B of the Course Datasheet to determine which technologies are used for hands-on practice activities in each module of the course.

TECHNOLOGY	DESCRIPTION
Azure Portal	Manage subscriptions, create workspaces, create resources, manage services.
Azure SQL Database	Support modern cloud applications on an intelligent, managed database service, that includes serverless compute.
Azure Database for PostgreSQL	Azure Database for PostgreSQL is a relational database service based on the open-source Postgres database engine.
Azure Database for MySQL	Focus on application development, not database management. Azure Database for MySQL is easy to set up, operate, and scale. Ensure your database is always running and secure with a 99.99-percent service level agreement, AI–powered performance optimization, and advanced security.
Azure Cosmos DB	Azure Cosmos DB is Microsoft's globally distributed, multi-model database service for operational and analytics workloads. It offers multi-mastering feature by automatically scaling throughput, compute, and storage.
Azure Data Lake Storage	A data lake is a repository of data that is stored in its natural format, usually as blobs or files. Azure Data Lake Storage is a comprehensive, scalable, and cost-effective data lake solution for big data analytics built into Azure.
Azure Blob storage	Azure Blob storage is Microsoft's object storage solution for the cloud. Blob storage is optimized for storing massive amounts of unstructured data. Unstructured data is data that doesn't adhere to a particular data model or definition, such as text or binary data.
Azure File storage	Take advantage of fully managed file shares in the cloud that are accessible via the industry-standard Server Message Block (SMB) protocol. Mount file shares concurrently in the cloud or on-premises on Windows, Linux, and macOS. Plus, cache Azure file shares on Windows Servers with Azure File Sync for local access performance. Use premium shares for performance-sensitive, IO intensive workloads and standard shares for reliable, general purpose file storage.

Best practices for Demos and Labs

- Communicate Azure for Students setup instructions to students at least 2 weeks prior to the start of class.
- Before class starts, complete the exercises in the online modules on Learn.
- Content in Microsoft Learn is designed to be modular, so many of the hands-on practice activities include repetitive instructions for creating an environment. Let students know they can reuse environments and do not need to create a new one for each activity.