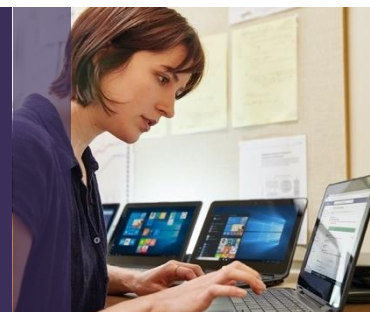




AZ-104T00: Microsoft Azure Administrator

EDUCATOR TEACHING GUIDE



General overview

This educator teaching guide provides preparation and reference resources for instructors who plan to teach AZ-104T00 Microsoft Azure Administrator 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 AZ-104: Microsoft Azure Administrator](#).
 - Develop your technical learning plan.
- ☐ **Know your course materials**
 - Read this **Educator Teaching Guide**.
 - Preview the presentations, demonstrations, and labs in the **Microsoft Official Course**.
 - Review the **Trainer Prep Guide**.
 - Preview the **online training** on Microsoft Learn.
 - Watch the **Virtual Education Prep Sessions**.
- ☐ **Plan your course**
 - Learn about this course's flexible format guide.
 - Plan your syllabus and calendar.
 - Explore tools to enable remote learning and deliver 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.
 - Understand core concepts and terms in this course.

Overview

This section introduces you to resources for learning 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 AZ-104: Microsoft Azure Administrator](#). 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 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 AZ-104: Microsoft Azure Administrator](#) 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 to register for 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](#)
 - [Learn the value of Azure](#)

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](#), on [Microsoft Learn](#), or on the [MSLE Training and Tools](#) page. Watch the Virtual Educator Prep Session (VEPS) [onboarding series](#) for a video explanation of the educator resources and how to access.

| RESOURCE | INFORMATION |
|---|---|
| Microsoft Official Course | <p>Location: Learning Download Center</p> <p>Description: Stand-alone modules that can be delivered in 60 -105 minutes of class time. The modules are facilitated through PowerPoint slide decks that include lecture topics, instructor notes, demonstrations, and hands-on activities.</p> <p>Best practices:</p> <ul style="list-style-type: none"> • 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 | <p>Location: Microsoft Learn</p> <p>Description: Self-paced online learning content on Microsoft Learn that aligns directly to AZ-104T00 Microsoft Azure Administrator 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.</p> <p>Best practices:</p> <ul style="list-style-type: none"> • Complete the online training 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. |
| Virtual Educator Prep Session (VEPS) | <p>Location: Microsoft Learn</p> <p>Description: On-demand recordings to support you as you join the MSLE program and prepare to teach Microsoft curriculum. There are Microsoft Learn for Educator (MSLE) VEPS that will guide you from onboarding to the MSLE program to wrapping up your course. Microsoft Official Curriculum (MOC) VEPS contains course-specific tips and tricks from Microsoft Technical Trainers on how to deliver MOC content to your students.</p> <p>Best Practices:</p> <ul style="list-style-type: none"> • View prior to teaching each module. • Useful to view while planning your course and revisit after the first couple of weeks. |

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. View the MSLE VEPS for more information on [planning for your course](#).

Design Your Syllabus

The course is designed to enable you to deliver a complete subject from the Microsoft Official Course during 1-2 class meetings and then direct students to complete the aligned segments of the online training on Microsoft Learn. However, the content and online learning 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 Azure is being used in the real-world:

- [Azure Architecture Center](#)
- [Microsoft Azure Customer Stories](#)

We recommend that you consider your students' prior experience with technology when determining how to design your course syllabus. Successful **Azure** Administrators start this role with experience on operating systems, virtualization, cloud infrastructure, storage structures, and networking. Completing the [AZ-104: Prerequisites for Azure administrators](#) learning path or the [AZ-900: Microsoft Azure Fundamentals](#) learning path can help obtain this knowledge:

- Understanding of on-premises virtualization technologies, including: VMs, virtual networking, and virtual hard disks.
- Understanding of network configuration, including TCP/IP, Domain Name System (DNS), virtual private networks (VPNs), firewalls, and encryption technologies.
- Understanding of identity concepts, including users, groups, role-based access control.
- Understanding resilience and disaster recovery, including backup and restore operations.

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 Microsoft 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
- Azure subscription

Student hardware and software requirements:

- PC or laptop

- Access to the internet
- Modern operating system
- Modern browser
- Azure subscription

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 the content.
 - Badges to [demonstrate completion of a Learn 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.

Azure Subscriptions

An Azure subscription is required to teach this course, and your students will need an Azure subscription to complete hands-on labs and activities. If you use an Authorized Lab Hoster (ALH) a hosting environment and subscription will be provided. If you don't use an ALH there are several ways to obtain a subscription.

Azure for Students gives eligible students access to free developer tools and Azure credit. It does not require a credit card. Check the [Azure for Students website](#) and the [Azure for Students frequently asked questions](#) document for the most up-to-date details, including eligibility and activation instructions. Remind students to use their school email address to verify their student status.

Students can visit the [Education Hub](#) to download free software once they've activated their Azure for Students offer.

Educators, faculty, and students who do not qualify for Azure for Students are eligible for an Azure free account and free Azure credit. A credit card is required to sign up, but you pay nothing up front. Check the [Microsoft Azure Official Site](#) and the [Azure free account frequently asked questions](#) document for the most up-to-date details.

Once you and your students activate your Azure subscriptions, verify you can sign into the Azure portal at <https://portal.azure.com>.

Tools and technologies

The table below shows 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.

| Technology | Description |
|----------------------------|--|
| Azure | All services and resources |
| Compute | Virtual machines, App Services, Container Instances, Virtual Machine Scale Sets, Web Apps |
| Governance | ARM templates, Azure Backup, Azure Cloud Shell, Log Analytics, Azure Site Recovery, Azure portal, Network Watcher, Azure Monitor |
| Networking | Application Gateway, Azure DNS, Azure Bastion, Load Balancer |
| Storage | Azure Files, Blob storage, Azure storage, Storage Explorer, Disk 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 lab and demonstration exercises in the [AZ-104-MicrosoftAzureAdministrator \(microsoftlearning.github.io\)](#).
- Review the [Virtual Educator Prep Sessions \(VEPS\)](#) content.
- The instructions in Microsoft Learn often include guidance for shutting down Azure resources after completing hands-on practice activities. We encourage you to reinforce this information with students when class first begins and after each lab.
- 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.
- You can check your Azure credit balance in the Azure portal by visiting [Track Microsoft Customer Agreement Azure credit balance](#) and review [How credits are used](#).
- Prompt students to check their Azure balance as an activity during class by visiting [Check your credit balance](#).
- For Microsoft assistance in resolving issues with Azure credit, go to [contact support](#).