

DP-604T00

Implement a data science and machine learning solution for AI with Microsoft Fabric

Duration: 01 day

Course description

This course is designed to be delivered in one full day.

The course is designed as a blended learning experience that combines instructor-led training with online materials on the Microsoft Learn platform (<https://docs.microsoft.com/learn>). Students are encouraged to use the content on Learn as reference materials to reinforce what they learn in class and to explore topics in more depth.

Learning objectives

After completing this course, students will be able to:

- Load data into a Lakehouse in Microsoft Fabric
- Explore data for data science with notebooks in Microsoft Fabric
- Preprocess data with Data Wrangler in Microsoft Fabric
- Train and track machine learning models with MLflow in Microsoft Fabric
- Generate batch predictions using a deployed model in Microsoft Fabric

Audience profile

The course is designed to teach students how to perform the complete data science process in Microsoft Fabric. Preferably, the audience should already be familiar with the data science process, Python and open-source frameworks like scikit-learn to train machine learning models.

Course Schedule

Estimated time	Module	Classroom activity
30 minutes	Introduction	Introduce yourself and get familiar with your audience
45 minutes	Get started with data science in Microsoft Fabric	Present section: Get started with data science in Microsoft Fabric (15 minutes) Demo the exercise (30 minutes)
45 minutes	Explore data for data science with notebooks in Microsoft Fabric	Present section: Explore data for data science with notebooks in Microsoft Fabric (15 minutes) Demo the exercise (30 minutes)
75 minutes	Preprocess data with Data Wrangler in Microsoft Fabric	Present section: Preprocess data with Data Wrangler in Microsoft Fabric (30 minutes) Exercise (45 minutes)
75 minutes	Train and track machine learning models with MLflow in Microsoft Fabric	Present section: Train and track machine learning models with MLflow in Microsoft Fabric (30 minutes) Exercise (45 minutes)
75 minutes	Generate batch predictions using a deployed model in Microsoft Fabric	Present section: Generate batch predictions using a deployed model in Microsoft Fabric (30 minutes) Exercise (45 minutes)
15 minutes	Conclusion – Wrap-up	Create opportunity for final questions and follow-up actions (exam overview)

There is a very large amount of content and you cannot spend longer than 3 minutes per slide. Any questions will have to be fielded after the course. Introductions and breaks will have to be very short. All demos are also available as exercises to allow for flexibility at the trainer's discretion.

Labs

The labs must be completed within the lab environment provided by your lab hosting provider. Detailed, step-by-step instructions are provided for each lab and presented as part of the UI experience within your lab environment.

At the time the courses were released, the lab instruction had been thoroughly tested and the lab steps were 100% accurate. However, given the nature of Microsoft's cloud products and the fact that Microsoft releases UI updates on a regular basis, it's possible that at some point in time, the UI for a given feature may change so that it no longer matches the lab instruction.

If students encounter lab steps that don't accurately reflect the UI, they'll have to work through the UI to determine what needs to be done. Typically, UI changes are quite subtle, so hopefully you don't find yourself in a situation where a feature was completely overhauled.

However, if you do run into major UI changes, challenge your students to work through it, and only offer help if they definitely need it. Product UI changes will be part of their daily life in today's cloud-centric world. As IT/Pros, they must learn how to work through such situations.

One thing Microsoft does ask of you is that if you run into situations such as this where lab instructions no longer match the corresponding UI, please document the issue in the course's GitHub repository. This will help Microsoft's World-Wide Learning team update the lab instructions to keep them as up to date as possible. For information on how to submit an issue, please see [GitHub User Guide for MCTs](#).

Azure subscriptions

To complete the labs and any additional demonstration exercises in this course, students will need an Azure Subscription. If you are not using a hosted lab environment, you will be provided with Azure passes for you and your student. Additional information can be found on [Access to Microsoft Learning Azure Passes for Students of Authorized Microsoft Learning Partners](#). Please ensure that your Learning partner has requested Azure passes for both you and the students. After receiving the passes, each student will need to activate their pass.

The Azure pass effectively functions in the same way as the [publicly available Microsoft Azure Trial Subscription](#). This means there are limitations on what you can do with the pass.

Tips and tricks for teaching DP-3007

Are you looking to improve when teaching this course? Maybe you don't teach the course very often, or you haven't taught the course before? If so, this section offers some tips from our top trainers to help you deliver the best course possible.

Course timing

When teaching this course in one day, the timing might be tight. Minimize time for introduction and conclusion, and try to focus on time allocated for the content. The slide decks have been kept to a minimum. As a trainer, you can decide how long you want to present, adapting to your audience.

Throughout the content, code examples are omitted or on hidden slides. You can use code examples at your own discretion. However, given the time restrictions, it might be best to focus on explaining concepts with the slides, and allow for enough lab time to let the students become familiar with the code.

DP-3007 provides a lot of content for you to select from based on your audience and teaching style. **It is not intended** that you cover every slide, demo, lab, discussion, and review question.

You must select the combination of course elements that fit best within the allotted classroom time. Consider your audience, consider your ability to tell the story, and consider the depth of coverage.

Hands-on Labs

DP-3007 provides GitHub labs throughout the course. These labs assume a level of student familiarity with the Azure portal and Python. However, students may not have this knowledge, which means you need to consider your audience and their ability to complete various labs.

You may opt to demo certain labs instead of letting the students walk through the labs themselves.

Feedback

In this course, we have provided a framework for you to work with. Take time to prepare and think about the value that only an instructor can bring to training. We hope to partner with you to provide an exceptional student experience, and we welcome your feedback.