

# Generative AI Infrastructure Engineer - AZURE

**Beyond the Cloud** is designed to empower you for success in the rapidly evolving IT landscape. This is a 10-week comprehensive program that provides essential technical and soft skills training for in-demand digital infrastructure roles. Please note *Transition to your Cloud Career* and *Agile Industry Mindset (AIM)* workshops run concurrently with Technical and Soft Skills courses during the 10-week period. Please contact your administrator for the schedule.

	Course Name	Learning Platform	Learning Objectives	Time Commitment
Course 1	Building Generative AI-Powered Applications with Python	Coursera	<ul style="list-style-type: none"> <li>Learn about the basics of cloud computing, its advantages, and how to choose the right Microsoft Azure solution for different business scenarios.</li> <li>learn about several of the database and big data services that are available on Microsoft Azure.</li> <li>learn how to take advantage of several virtualization services in Microsoft Azure compute</li> <li>learn about the different storage and virtual network options available in Microsoft Azure.</li> </ul>	13 hours (approximately)
Course 2	Introduction to Microsoft Azure Cloud Services	Coursera	<ul style="list-style-type: none"> <li>Describe the benefits of cloud computing in Microsoft Azure</li> <li>Explain core cloud concepts</li> <li>Describe core Microsoft Azure services</li> <li>Describe core Microsoft Azure architect components</li> </ul>	9 hours (approximately)
Course 3	Artificial Intelligence on Microsoft Azure	Coursera	<ul style="list-style-type: none"> <li>How to identify guiding principles for responsible AI</li> <li>How to identify features of common AI workloads</li> </ul>	3 hours (approximately)
Course 4	Generative AI: Introduction and Applications	Coursera	<ul style="list-style-type: none"> <li>Describe generative AI and distinguish it from discriminative AI.</li> <li>Describe the capabilities of generative AI and its use cases in the real world.</li> <li>Identify the applications of generative AI in different sectors and industries.</li> <li>Explore common generative AI models and tools for text, code, image, audio, and video generation.</li> </ul>	6 hours (approximately)
Course 5	Bui Generative AI and LLMs: Architecture and Data Preparation lding a Generative AI-Ready Organization	Coursera	<ul style="list-style-type: none"> <li>Differentiate between generative AI architectures and models, such as RNNs, Transformers, VAEs, GANs, and Diffusion Models.</li> <li>Describe how LLMs, such as GPT, BERT, BART, and T5, are used in language processing.</li> <li>Implement tokenization to preprocess raw textual data using NLP libraries such as NLTK, spaCy, BertTokenizer, and XLNetTokenizer.</li> <li>Create an NLP data loader using PyTorch to perform tokenization, numericalization, and padding of text data.</li> </ul>	4 hours (approximately)

Course 6	Operationalizing LLMs on Azure	Coursera	<ul style="list-style-type: none"> <li>Gain proficiency in leveraging Azure for deploying and managing Large Language Models (LLMs).</li> <li>Develop advanced query crafting skills using Semantic Kernel to optimize interactions with LLMs within the Azure environment.</li> <li>Acquire hands-on experience in implementing patterns and deploying applications with Retrieval Augmented Generation (RAG)</li> </ul>	10 hours (approximately)
Course 7	End to End LLMs with Azure	Coursera	<ul style="list-style-type: none"> <li>Create Large Language Model endpoints in Azure</li> <li>Use GitHub Actions to deploy a containerized application for LLMs</li> </ul>	9 hours (approximately)
			Total hours	54 hours (approximately)