

# NVIDIA Training Course Catalog

May 2023



# Introduction

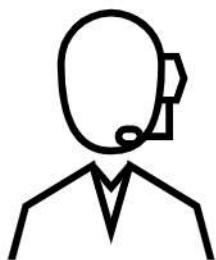
NVIDIA Training offers resources for diverse needs, giving individuals and teams across organizations what they need to advance their knowledge in AI, accelerated computing, data science, data center administration, graphics and simulation, networking, and more.

With access to high performance computing, you'll learn how to train, optimize, and deploy neural networks using the latest deep learning tools, frameworks, and SDKs. You'll also learn how to assess, parallelize, optimize, and deploy GPU-accelerated computing applications.

NVIDIA Training offers both self-paced online courses and instructor-led, prescheduled workshops. The self-paced courses range from 10 minutes to 8 hours and guide you through applying a specific technology, setting up a project or administering solutions in a data center, exposing you to fundamental skills. Instructor-led workshops and boot camps go deeper into topic areas, teaching you how to implement a project or solution from end to end. Both types of courses give you valuable hands-on experience using the latest technologies.

## Why Choose NVIDIA Training?

- Learn how to build deep learning and accelerated computing applications for industries such as healthcare, robotics, autonomous driving, manufacturing, and more.
- Gain hands-on experience with the most widely used, industry-standard platforms including software, hardware, tools, and frameworks. Each student will have access to a fully configured, GPU-accelerated server in the cloud or access to NVIDIA solutions in our training lab.
- Become proficient in administering NVIDIA's hardware and software solutions such as DGX, InfiniBand, Cumulus, NVIDIA AI Enterprise and more.
- Access instructor-led workshops and online courses from anywhere using just a laptop and internet connection.
- Acquire real-world expertise through content designed in collaboration with industry leaders such as Children's Hospital of Los Angeles, Mayo Clinic, and PwC.
- Earn NVIDIA certifications and course completion certificates to indicate subject matter competency and support your career growth.



For team training, contact an **NVIDIA training advisor**, who will work with you to create a customized plan that addresses your team's specific training needs and is aligned to your business objectives and priorities.

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# Instructor-Led Workshops for Developers

Workshop Name	Description	Prerequisites			
Accelerated Computing					
<b>Accelerating CUDA® C++ Applications With Multiple GPUs</b>	Discover how to write CUDA C++ applications that efficiently and correctly utilize all available GPUs in a single node, dramatically improving the performance of applications and making the most cost-effective use of systems with multiple GPUs.	Professional experience programming CUDA C/C++ applications, including the use of the NVIDIA CUDA Compiler (NVCC), kernel launches, grid-stride loops, host-to-device and device-to-host memory transfers, and CUDA error handling. Familiarity with the Linux command line and experience using makefiles to compile C/C++ code.			
	<a href="#">&gt; Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
	CUDA C++, NVCC, Nsight Systems	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes
<b>Fundamentals of Accelerated Computing With CUDA C/C++</b>	Learn how to accelerate and optimize existing C/C++ CPU-only applications to leverage the power of GPUs using the most essential CUDA techniques and the NVIDIA Nsight Systems profiler.	Basic C/C++ competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of CUDA programming is assumed.			
	<a href="#">&gt; Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
	NVIDIA Nsight Systems, nsys	English, Korean, Japanese, Simplified Chinese, Traditional Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes
<b>Fundamentals of Accelerated Computing With CUDA Python</b>	Explore how to use Numba—the just-in-time, type-specializing Python function compiler—to create and launch CUDA kernels to accelerate Python programs on massively parallel NVIDIA GPUs.	Basic Python competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. Also, must have NumPy competency, including the use of ndarrays and ufuncs.			
	<a href="#">&gt; Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
	CUDA, Python, Numba, NumPy	English, Simplified Chinese, Traditional Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes
<b>Fundamentals of Accelerated Computing With OpenACC®</b>	Find out how to write and configure code parallelization with OpenACC, optimize memory movements between the CPU and GPU accelerator, and apply the techniques to accelerate a CPU-only Laplace heat equation to achieve performance gains.	Basic C/C++ or Fortran competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of GPU programming is assumed.			
	<a href="#">&gt; Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
	NVIDIA Nsight, OpenACC	English	8 hours	\$500 (excludes tax, if applicable)	Yes

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Workshop Name	Description	Prerequisites				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>Scaling CUDA C++ Applications to Multiple Nodes</b>	Learn the tools and techniques needed to write CUDA C++ applications that can scale efficiently to clusters of NVIDIA GPUs.	C++, CUDA, MPI, NVSHMEM	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes

## Data Science

<b>Accelerating Data Engineering Pipelines</b>	Explore how to employ advanced data engineering tools and techniques with GPUs to significantly improve data engineering pipelines.	Intermediate knowledge of <b>Python</b> (list comprehension, objects). Familiarity with <b>pandas</b> and <b>introductory statistics</b> (mean, median, mode) a plus.										
	<p><b>&gt; Learn More</b></p> <table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th><th>Languages</th><th>Duration</th><th>Price</th><th>Certificate</th></tr> </thead> <tbody> <tr> <td>pandas, cuDF, Dask, NVTabular, Plotly</td><td>English</td><td>8 hours</td><td>\$500 (excludes tax, if applicable)</td><td>Yes</td></tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	pandas, cuDF, Dask, NVTabular, Plotly	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
pandas, cuDF, Dask, NVTabular, Plotly	English	8 hours	\$500 (excludes tax, if applicable)	Yes								
<b>Fundamentals of Accelerated Data Science</b>	Learn how to perform multiple analysis tasks on large datasets using NVIDIA RAPIDS™, a collection of data science libraries that allows end-to-end GPU acceleration for data science workflows.	Professional data science experience with Python, including proficiency in pandas and NumPy. Also, must have familiarity with common machine learning algorithms, including XGBoost, linear regression, DBSCAN, K-Means, and SSSP.										

## Deep Learning

<b>Applications of AI for Anomaly Detection</b>	Learn to detect anomalies in large datasets to identify network intrusions using supervised and unsupervised machine learning techniques, such as accelerated XGBoost, autoencoders, and generative adversarial networks (GANs).	Experience with convolutional neural networks (CNNs) and Python										
	<p><b>&gt; Learn More</b></p> <table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th><th>Languages</th><th>Duration</th><th>Price</th><th>Certificate</th></tr> </thead> <tbody> <tr> <td>NVIDIA RAPIDS, XGBoost, TensorFlow, Keras, pandas, autoencoders, GANs</td><td>English</td><td>8 hours</td><td>\$500 (excludes tax, if applicable)</td><td>Yes</td></tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	NVIDIA RAPIDS, XGBoost, TensorFlow, Keras, pandas, autoencoders, GANs	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
NVIDIA RAPIDS, XGBoost, TensorFlow, Keras, pandas, autoencoders, GANs	English	8 hours	\$500 (excludes tax, if applicable)	Yes								
<b>Applications of AI for Predictive Maintenance</b>	Discover how to identify anomalies and failures in time-series data, estimate the remaining useful life of the corresponding parts, and use this information to map anomalies to failure conditions.	Experience with Python and deep networks										

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Workshop Name	Description	Prerequisites			
<b>Building AI-Based Cybersecurity Pipelines</b>	<p>Traditional cybersecurity methods include creating barriers around your infrastructure to protect it from intruders. However, as enterprises continue to digitally transform, they're faced with a proliferation of devices, more sophisticated cybersecurity attacks, and an incredibly vast network of data to protect—which means new cybersecurity methodologies must be explored. An alternative approach is to address cybersecurity as a data science problem: Aim to better understand all the users and activities across your network so that you can identify which transactions are typical and which are potentially nefarious.</p> <p>The <b>NVIDIA Morpheus AI framework</b> lets cybersecurity developers and practitioners harness the power of GPU computing to implement cybersecurity solutions that perform on a scale never before possible. With Morpheus, cybersecurity developers can create optimized AI pipelines for filtering, processing, and classifying large volumes of real-time data. Bringing a new level of information security to data centers, Morpheus enables dynamic protection, real-time telemetry, and adaptive defenses for detecting and remediating cybersecurity threats.</p>	<ul style="list-style-type: none"> <li>&gt; Familiarity with defensive cybersecurity themes</li> <li>&gt; Professional data science and/or data analysis experience</li> <li>&gt; Competency with the Python programming language</li> <li>&gt; Competency with the Linux command line</li> </ul>			
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	
NVIDIA Morpheus, NVIDIA Triton™ Inference Server, NVIDIA RAPIDS, CLX, Helm, Kubernetes	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
<b>Building Conversational AI Applications V2.0</b>				Experience with Python coding and use of library functions and parameters. Also, a fundamental understanding of a deep learning framework, such as TensorFlow, PyTorch, or Keras, and a basic understanding of neural networks.	
<p>Discover how to quickly build and deploy production-quality speech AI applications with real-time transcription and natural language processing capabilities.</p>					
<p>&gt; <a href="#">Learn More</a></p>					
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	
NVIDIA Riva, NVIDIA TAO Toolkit, Kubernetes	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
<b>Building Intelligent Recommender Systems</b>				Intermediate knowledge of Python, including an understanding of list comprehension. Data science experience using Python and familiarity with NumPy and matrix mathematics.	
<p>Explore the fundamental tools and techniques for building highly effective recommender systems, as well as how to deploy GPU-accelerated solutions for real-time recommendations.</p>					
<p>&gt; <a href="#">Learn More</a></p>					
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	
CuDF, CuPy, TensorFlow 2, NVIDIA Merlin™, NVTTabular, and NVIDIA Triton Inference Server	English	8 hours	\$500 (excludes tax, if applicable)	Yes	

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Workshop Name	Description	Prerequisites			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>Building Transformer-Based Natural Language Processing</b>	Explore how to use Transformer-based natural language processing models for text classification tasks, such as categorizing documents. You will also explore how to leverage Transformer-based models for named-entity recognition (NER) tasks and analyze various model features, constraints, and characteristics to determine which model is best suited for a particular use case—based on metrics, domain specificity, and available resources.	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes
<a href="#">&gt; Learn More</a>		<ul style="list-style-type: none"> <li>➤ Experience with Python coding and use of library functions and parameters. Fundamental understanding of a deep learning framework, such as TensorFlow, PyTorch, or Keras. And basic understanding of neural networks.</li> </ul>			
<b>Computer Vision for Industrial Inspection</b>	Deep learning-based computer vision technology enables manufacturers to perform automated visual inspection. Compared to traditional visual inspection processes—which are often manual and rules-based—visual inspection AI can improve efficiency, reduce operating costs, and deliver more consistent results.  In this workshop, developers will learn how to create an end-to-end hardware-accelerated industrial inspection pipeline to automate defect detection. Using NVIDIA's own production dataset as an example, we will illustrate how the application can be easily applied to a variety of manufacturing use cases. Developers will also learn to identify and mitigate common pitfalls in deep learning-based computer vision tasks and be able to deploy and measure the effectiveness of their AI solution.	Python, pandas, NVIDIA NeMo, NVIDIA Triton Inference Server	English, Simplified Chinese	\$500 (excludes tax, if applicable)	Yes
<a href="#">&gt; Learn More</a>		<ul style="list-style-type: none"> <li>➤ Experience with Python; basic understanding of data processing and deep learning</li> <li>➤ To gain experience with Python, we suggest this <a href="#">Python tutorial</a></li> <li>➤ For a basic understanding of data processing and deep learning, we suggest <a href="#">Fundamentals of Deep Learning</a></li> </ul>			
<b>Data Parallelism: How to Train Deep Learning Models on Multiple GPUs</b>	This workshop teaches you techniques for data-parallel deep learning training on multiple GPUs to shorten the training time required for data-intensive applications. Working with deep learning tools, frameworks, and workflows to perform neural network training, you'll learn how to decrease model training time by distributing data to multiple GPUs, while retaining the accuracy of training on a single GPU.	Python, pandas, DALI, NVIDIA TAO Toolkit, NVIDIA TensorRT™, and NVIDIA Triton Inference Server	English, Simplified Chinese	\$500 (excludes tax, if applicable)	Yes
<a href="#">&gt; Learn More</a>		<ul style="list-style-type: none"> <li>➤ Experience with deep learning training using Python. See Fundamentals of Deep Learning self-paced course <a href="#">here</a>.</li> </ul>			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	PyTorch, PyTorch Distributed Data Parallel, NCCL	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes

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Workshop Name	Description	Prerequisites				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>Fundamentals of Deep Learning</b>	<p>Learn how deep learning (DL) works through hands-on exercises in computer vision and natural language processing (NLP). You'll train deep learning models from scratch and pick up tricks and tools for achieving highly accurate results along the way. You'll also learn to leverage freely available, state-of-the-art pretrained models to save time and get your deep learning application up and running quickly.</p> <p>&gt; <a href="#">Learn More</a></p>	Tensorflow, Keras, Pandas, NumPy	English, Simplified Chinese, Japanese	8 hours	\$500 (excludes tax, if applicable)	Yes
<b>Model Parallelism: Building and Deploying Large Neural Networks</b>	<p>Very large deep neural networks (DNNs), whether applied to natural language processing (e.g., GPT-3), computer vision (e.g., huge Vision Transformers), or speech AI (e.g., Wave2Vec 2) have certain properties that set them apart from their smaller counterparts. As DNNs become larger and are trained on progressively larger datasets, they can adapt to new tasks with just a handful of training examples, accelerating the route toward general AI. Training models that contain tens to hundreds of billions of parameters on vast datasets isn't trivial and requires a unique combination of AI, high-performance computing (HPC), and systems knowledge. The goal of this course is to demonstrate how to train the largest neural networks and deploy them to production.</p> <p>&gt; <a href="#">Learn More</a></p>				<ul style="list-style-type: none"> <li>&gt; Good understanding of <b>PyTorch</b>, <b>deep learning</b>, and <b>data parallel</b> training concepts</li> <li>&gt; Practice with <b>multi-GPU training</b> and <b>natural language processing</b> are useful, but optional</li> </ul>	
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
		PyTorch, Megatron-LM, DeepSpeed, Slurm, NVIDIA Triton Inference Server, NVIDIA Nsight	English, Korean, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes

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# Online, Self-Paced Courses for Developers

Course Name	Description	Prerequisites			
Accelerated Computing Fundamentals					
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>Accelerating CUDA C++ Applications With Concurrent Streams</b>	Discover how to improve performance for your CUDA C/C++ applications by overlapping memory transfers to and from the GPU with computations on the GPU.  <a href="#">&gt; Learn More</a>	English	4 hours	\$30 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks				Prerequisites	
<b>An Even Easier Introduction to CUDA</b>	Learn the basics of writing parallel CUDA kernels to run on NVIDIA GPUs.  <a href="#">&gt; Learn More</a>	English	1 hour	Free	N/A
<b>Fundamentals of Accelerated Computing With CUDA C/C++</b>	Discover how to accelerate and optimize existing C/C++ CPU-only applications to leverage the power of GPUs using the most essential CUDA techniques and the Nsight Systems profiler.  <a href="#">&gt; Learn More</a>	English, Japanese, Korean, Simplified Chinese, Traditional Chinese	8 hours	\$90 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks				Prerequisites	
<b>Fundamentals of Accelerated Computing With CUDA Python</b>	Explore how to use Numba—the just-in-time, type-specializing Python function compiler—to create and launch CUDA kernels to accelerate Python programs on massively parallel NVIDIA GPUs.  <a href="#">&gt; Learn More</a>	English, Simplified Chinese, Traditional Chinese	8 hours	\$90 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks				Prerequisites	
<b>Fundamentals of Accelerated Computing With OpenACC</b>	Find out how to build and optimize accelerated heterogeneous applications on multiple GPU clusters using a combination of OpenACC, CUDA-aware MPI, and NVIDIA profiling tools.  <a href="#">&gt; Learn More</a>	English	8 hours	\$90 (excludes tax, if applicable)	N/A

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Course Name	Description	Prerequisites			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>GPU Acceleration With the C++ Standard Library</b>	Learn to write simple, portable, parallel-first applications using only standard C++ language features that can be compiled without modification to take advantage of NVIDIA GPU-accelerated environments.	<a href="#">C++, NVIDIA HPC SDK</a>	English	2 hours	\$30 (excludes tax, if applicable)
<a href="#">Learn More</a>				Beginner-level experience with <b>C++11</b> . Comfort working with <b>C++ lambdas and standard library algorithms</b> .	
<b>High-Performance Computing With Containers</b>	Learn how to reduce complexity and improve portability and efficiency of your code by using a containerized environment for HPC application development.	Docker, Singularity, HPC Container Maker (HPCCM), C/C++	English	2 hours	\$30 (excludes tax, if applicable)
<a href="#">Learn More</a>				Proficiency programming in C/C++ and professional experience working on HPC applications	
<b>Optimizing CUDA Machine Learning Codes With NVIDIA Nsight™ Profiling Tools</b>	NVIDIA Developer Tools are a collection of applications, spanning desktop and mobile targets, which enable developers to build, debug, profile, and develop class-leading and cutting-edge software utilizing the latest visual computing hardware from NVIDIA. In this course, you'll learn the effective use of two powerful NVIDIA developer tools: <b>Nsight Systems</b> and <b>Nsight Compute</b> .  Nsight Systems provide developers with a system-wide visualization of an application's performance. Developers can optimize bottlenecks to scale efficiently across any number or size of CPU and GPU—from large servers to the smallest systems on chip. Nsight Compute is an interactive kernel profiler for CUDA applications. It provides detailed performance metrics and API debugging via a user interface and command-line tool.  By the time you complete this course, you'll be able to use Nsight Systems and Nsight Compute to analyze and optimize CUDA applications. Following best practices, you'll begin by using Nsight Systems to analyze overall application structure and explore parallelization opportunities before turning to Nsight Compute to analyze and optimize individual CUDA kernels.	<a href="#">Nsight Systems</a> , <a href="#">Nsight Compute</a>	English	2 hours	\$30 (excludes tax, if applicable)
<a href="#">Learn More</a>				Familiarity with machine learning applications using CUDA. We suggest <b>Fundamentals of Accelerated Computing with CUDA C/C++</b>	
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate

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Course Name	Description		Prerequisites		
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>Scaling GPU-Accelerated Applications With the C++ Standard Library</b>	C++, NVIDIA HPC SDK, MPI	English	2 hours	\$30 (excludes tax, if applicable)	N/A
<a href="#">Learn More</a>					
<b>Scaling Workloads Across Multiple GPUs With CUDA C++</b>	C/C++, accelerated computing, CUDA	English	4 hours	\$30 (excludes tax, if applicable)	Yes
<a href="#">Learn More</a>					

## Data Science

<b>Accelerating End-to-End Data Science Workflows</b>	Explore how to perform multiple analysis tasks on large datasets using RAPIDS, a collection of data science libraries that allows end-to-end GPU acceleration for data science workflows.	Experience with Python, ideally including pandas and NumPy
	<a href="#">Learn More</a>	
Tools, Libraries, Frameworks	Languages	Duration
RAPIDS, cuDF, cuML, cuGraph, Apache Arrow	English, Simplified Chinese	6 hours
		\$90 (excludes tax, if applicable)
		Yes

## Deep Learning

<b>Building a Brain in 10 Minutes</b>	This one-click notebook explores the biological and psychological inspirations for the world's first neural networks.	An understanding of fundamental programming concepts in Python 3 such as functions, loops, dictionaries, and arrays.
	<a href="#">Learn More</a>	
Tools, Libraries, Frameworks	Languages	Duration
N/A	English	10 minutes
		Free
		N/A
<b>Building Real-Time Video AI Applications</b>	Gain the knowledge and skills needed to enable the real-time transformation of raw video data from widely deployed camera sensors into deep learning-based insights.	Competency in the Python 3 programming language, some experience manipulating data using pandas DataFrames, and familiarity with deep networks (specifically variations of CNNs)
	<a href="#">Learn More</a>	
Tools, Libraries, Frameworks	Languages	Duration
NVIDIA DeepStream, NVIDIA TAO Toolkit, and NVIDIA TensorRT	English, Simplified Chinese	8 hours
		\$90.00 (excludes tax, if applicable)
		N/A

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Course Name	Description	Prerequisites			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>Building Video AI Applications at the Edge on NVIDIA® Jetson Nano™</b>	Use JupyterLab notebooks and Python application samples on your Jetson Nano to build new projects that extract meaningful insights from video streams through deep learning video analytics.	Basic familiarity with the Linux command line and an understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays.			
	> <a href="#">Learn More</a>	DeepStream, TensorRT, Jetson Nano, Python	English, Simplified Chinese	8 hours Free (hardware required)	N/A
<b>Deploying a Model for Inference at Production Scale</b>	Learn how to deploy your own machine learning models on a GPU server.	Familiarity with at least one machine learning framework, such as PyTorch, TensorFlow, ONNX, or TensorRT			
	> <a href="#">Learn More</a>	NVIDIA Triton	English	4 hours \$30 (excludes tax, if applicable)	N/A
<b>Digital Fingerprinting With Morpheus</b>	In this course, you'll get hands-on experience developing and deploying the NVIDIA digital fingerprinting AI workflow that enables 100 percent data visibility and drastically reduces the time to detect threats. You'll also hear from cybersecurity experts from a variety of institutions about how to use NVIDIA AI frameworks and tools to architect cybersecurity solutions.	This tutorial doesn't have any prerequisites, but familiarity with defensive cybersecurity themes and the Linux command line are a plus.			
	> <a href="#">Learn More</a>	NVIDIA Morpheus AI framework, NVIDIA Triton Inference Server	English	1 hour Free	N/A
<b>Disaster Risk Monitoring Using Satellite Imagery</b>	Learn how to build and deploy a deep learning model to automate the detection of flood events using satellite imagery. This workflow can be applied to lower the cost, improve the efficiency, and significantly enhance the effectiveness of various natural disaster management use cases.	> Competency in the <b>Python 3</b> programming language > Basic understanding of machine learning and deep learning concepts, specifically variations of convolutional neural networks ( <b>CNNs</b> ), and pipelines > Interest in understanding how to manipulate satellite imagery using modern methods			
	> <a href="#">Learn More</a>	NVIDIA DALI®, the NVIDIA TAO Toolkit, NVIDIA TensorRT, NVIDIA Triton Inference Server	English, Simplified Chinese	10 hours Free	Yes
<b>Get Started With Highly Accurate Custom ASR for Speech AI</b>	Learn to build, train, fine-tune, and deploy a GPU-accelerated automatic speech recognition service with NVIDIA Riva that includes customized features.	Basic understanding of machine learning and deep learning concepts and pipelines.  In addition, this lab requires that the user have an NVIDIA NGC account and API key. To fulfill this requirement, please:			
	> <a href="#">Learn More</a>	> <a href="#">Register and activate a free NGC account</a> > <a href="#">Generate your NGC API key and save it in a safe location In</a>			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	Riva, TAO Toolkit, Kubernetes	English	2 hours \$30 (excludes tax, if applicable)		N/A

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Course Name	Description	Prerequisites			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>Getting Started With AI on Jetson Nano</b>	Discover how to build a deep learning classification project with computer vision models using the NVIDIA Jetson Nano Developer Kit.	Basic familiarity with Python (helpful, not required)			
	> <a href="#">Learn More</a>				
	PyTorch, Jetson Nano	English, Simplified Chinese, Japanese, Korean	8 hours	Free (hardware required)	Yes
<b>Getting Started With Deep Learning</b>	Explore the fundamentals of deep learning by training neural networks and using results to improve performance and capabilities.				
	> <a href="#">Learn More</a>				
	An understanding of fundamental programming concepts in <b>Python 3</b> , such as functions, loops, dictionaries, and arrays.				
	> Familiarity with <b>pandas data structures</b> and an understanding of how to compute a <b>regression line</b> .				
	> Suggested materials to satisfy prerequisites: <b>Python Beginner's Guide</b>				
	TensorFlow 2 with Keras, pandas	English, Simplified Chinese	8 hours	\$90 (excludes tax, if applicable)	Yes
<b>Getting Started With Image Segmentation</b>	Learn how to categorize segments of an image.				
	> <a href="#">Learn More</a>				
	TensorFlow 2 with Keras	English	2 hours	\$30 (excludes tax, if applicable)	N/A
<b>Integrating Sensors With NVIDIA DRIVE</b>	Find out how to integrate automotive sensors into your applications using NVIDIA DRIVE.				
	> <a href="#">Learn More</a>				
	C++, NVIDIA DriveWorks	English	2 hours	\$30 (excludes tax, if applicable)	N/A
<b>Introduction to Graph Neural Networks</b>	Learn the basic concepts, models, and applications of graph neural networks.				
	> <a href="#">Learn More</a>				
	Deep Graph Library, PyTorch	English	2 hours	\$30 (excludes tax, if applicable)	N/A

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Course Name	Description	Prerequisites		
<b>Introduction to Physics-Informed Machine Learning With NVIDIA Modulus</b>	<p>High-fidelity simulations in science and engineering are computationally expensive and time-prohibitive for quick iterative use cases, from design analysis to optimization. NVIDIA Modulus, the physics machine learning platform, turbocharges such use cases by building physics-based deep learning models that are 100,000X faster than traditional methods and offer high-fidelity simulation results.</p> <p>Upon completion, you will understand the various building blocks of Modulus and the basics of physics-informed deep learning. You'll also understand how the Modulus framework integrates with the overall Omniverse platform.</p>	<ul style="list-style-type: none"> <li>&gt; Familiarity with the Python programming language</li> <li>&gt; An understanding of partial differential equations and their use in physics</li> <li>&gt; Familiarity with machine learning concepts like training and inference</li> </ul>		
	<p>&gt; <a href="#">Learn More</a></p>			
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>NVIDIA Modulus</b>	English	4 hours	\$30 (excludes tax, if applicable)	N/A
<b>Modeling Time-Series Data With Recurrent Neural Networks in Keras</b>		Basic experience with deep learning		
	<p>Explore how to classify and forecast time-series data using recurrent neural networks (RNNs), such as modeling a patient's health over time.</p>			
	<p>&gt; <a href="#">Learn More</a></p>			
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Keras	English	2 hours	\$30 (excludes tax, if applicable)	N/A
<b>Optimized Vehicle Routing</b>		Anyone can run the code to see how it works, but to get the most out of this content, we recommend:		
	<p>NVIDIA cuOpt™ is a GPU-accelerated logistics solver that uses heuristics and optimizations to calculate complex vehicle-routing problems with a wide range of constraints.</p> <p>In this self-paced course, participants will work through a demonstration of a common vehicle-routing optimization problem. Upon completion, participants will be able to preprocess input data for use by NVIDIA cuOpt and compose variants of the problem that reflect real-world business constraints.</p>			
	<p>&gt; <a href="#">Learn More</a></p>			
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
NVIDIA cuOpt, cuDF, SciPy, NumPy, pandas, GeoPandas, VeRoViz	English	1 hour	Free	N/A
<b>Graphics and Simulation</b>				
<b>Assemble a Simple Robot in NVIDIA Isaac Sim™</b>		A Windows or Linux computer with the ability to install Omniverse Launcher and Omniverse applications; internet bandwidth sufficient to support the Isaac Sim client/server stream (performance will vary).		
	<p>In this course, you'll step through the "Assemble a Simple Robot" tutorial to rig a two-wheel mobile robot in a live NVIDIA Isaac Sim GPU environment.</p>			
	<p>&gt; <a href="#">Learn More</a></p>			
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>NVIDIA Isaac Sim</b>	English	30 minutes	Free	N/A

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Course Name	Description	Prerequisites			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>Build Beautiful, Custom UI for 3D Tools on NVIDIA Omniverse™</b>	Experience the NVIDIA Omniverse development platform for builders and creators of virtual worlds. Become a master in UI with a deep dive into NVIDIA Omniverse Kit's powerful omni.ui suite of tools and frameworks. In this self-paced course, you'll build your own custom UI for workflows in Omniverse with hands-on exercises.	Omniverse Code, Visual Studio Code, Python, and the Python Extension	English, Simplified Chinese	90 minutes	Free
	<a href="#">Learn More</a>				N/A
<b>Develop, Customize, and Publish in NVIDIA Omniverse With Extensions</b>	Want to change the functionality and user interface (UI) of NVIDIA Omniverse? Learn how to customize the Omniverse experience with extensions using Python code.	Omniverse Code, Visual Studio Code, Python, and the Python Extension	English	8 hours	Free
	<a href="#">Learn More</a>				Yes
<b>Easily Develop Advanced 3D Layout Tools on NVIDIA Omniverse</b>	Get hands-on experience with NVIDIA Omniverse—the platform for connecting and creating physically accurate, 3D virtual worlds. See how easy it is to create your own custom scene layout tools in Omniverse Code with a few lines of Python script. In this self-paced course, you'll build your own custom scene layout in Omniverse with hands-on exercises in Omniverse Code and Python.	Universal Scene Description	English, Simplified Chinese	2 hours	Free
	<a href="#">Learn More</a>				N/A
<b>Getting Started With USD for Collaborative 3D Workflows</b>	Learn how to generate a scene using human-readable Universal Scene Description ASCII (.USD) files. Upon completion, participants will be able to create their own scenes within the USD framework and will have a strong foundation to use it in applications, such as <b>NVIDIA Omniverse</b> , Maya, Unity, and Unreal Engine.	Universal Scene Description	English, Simplified Chinese	2 hours	Free
	<a href="#">Learn More</a>				N/A

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Course Name	Description	Prerequisites			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<b>How to Build Customer 3D Scene Manipulator Tools on NVIDIA Omniverse</b>	See how you can build advanced tools on the modular, easily extensible Omniverse platform. You'll learn from the Omniverse developer ecosystem team how you can extend and enhance the 3D tools you know and love today. In this self-paced course, you'll build your own custom scene manipulator tools in Omniverse with hands-on exercises writing a few lines of Python code.	English, Simplified Chinese	90 minutes	Free	N/A
<b>Introduction to Robotic Simulations in NVIDIA Isaac Sim</b>	<p>Robotic automation has enjoyed great success in recent years with increasing hardware capabilities driving innovation in simulation and machine learning. In this course, we introduce you to Isaac Sim, NVIDIA Omniverse's solution for simulation and robotics.</p> <p>In this course, you'll learn how to tap into the simulation loop of a 3D engine and initialize experiments with objects, robots, and physics logic. This can be done programmatically using Omniverse Kit and Pixar USD commands, but the course will use Isaac Sim Core to wrap these low-level operations in an object-oriented fashion. By the end of the course, you'll be able to simulate and control NVIDIA JetBot™ and Franka Emika robots and coordinate them together to perform a handoff.</p> <p>The skills covered in this course are direct prerequisites for working with Isaac Gym and create a good starting point for exploring Isaac Sim and other Omniverse applications. The course is great for those interested in 3D scene specification and robotic simulation, but it's also useful for researchers looking to expand their toolkits and seasoned developers interested in exploring design patterns for Omniverse Kit development.</p>				<ul style="list-style-type: none"> <li>➤ Intermediate knowledge and general comfort with Python 3. This includes familiarity with functions, classes, and basic design patterns.</li> <li>➤ Comfort with NumPy arrays and basic matrix operations.</li> <li>➤ A Windows or Linux machine with NVIDIA Omniverse and the Omniverse Streaming Client app.</li> </ul>
	Isaac Sim, Omniverse Kit, NumPy	English, Simplified Chinese	4 hours	\$30 (excludes tax, if applicable)	N/A

## Infrastructure

<b>Introduction to AI in the Data Center</b>	Explore AI, GPU computing, NVIDIA AI software architectures, and how to implement and scale AI workloads in the enterprise data center.	Basic knowledge of enterprise networking, storage, and data center operations		
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
Artificial intelligence, machine learning, deep learning, GPU hardware and software	English	4 hours	\$49 (excludes tax, if applicable)	Available

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Course Name	Description	Prerequisites		
<b>Introduction to NVIDIA DOCA™ for DPUs</b>	<p>The NVIDIA DOCA Software Framework enables developers to rapidly create applications and services on top of NVIDIA BlueField data processing units (DPUs). Together, DOCA and the BlueField DPU deliver breakthrough networking, security, and storage performance with a comprehensive, open development platform.</p> <p>In this self-paced course, participants will learn the basic concepts of DOCA as a platform for accelerated data center computing on BlueField DPUs. Upon completion, participants will be equipped with introductory knowledge that will enable them to begin using DOCA and DPUs to develop applications that accelerate their data centers services.</p> <p>&gt; <a href="#">Learn More</a></p>	<ul style="list-style-type: none"> <li>&gt; Familiarity with software architecture and how it relates to and executes on hardware.</li> <li>&gt; Suggested materials to satisfy prerequisite: <ul style="list-style-type: none"> <li>• <a href="#">Enterprise Data Center Networking</a></li> <li>• <a href="#">Data Center: Overview</a></li> <li>• <a href="#">Data Center: Virtualization</a></li> </ul> </li> <li>&gt; Some working knowledge of data center networking.</li> <li>&gt; Suggested materials to satisfy prerequisite: <ul style="list-style-type: none"> <li>• <a href="#">Introducing How Computers Work</a></li> <li>• <a href="#">Hardware Acceleration</a></li> <li>• <a href="#">Software Execution and Computing</a></li> </ul> </li> </ul>		
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<a href="#">NVIDIA DOCA SDK</a>	English, Simplified Chinese	2 hours	Free	N/A
<b>Getting Started With DOCA Flow</b>		A working knowledge of networking basics		
<p>NVIDIA DOCA is the key to unlocking the potential of the NVIDIA BlueField DPU, enabling you to offload, accelerate, and isolate data center workloads. With DOCA, developers can program the data center infrastructure of tomorrow by creating software-defined, cloud-native, DPU-accelerated services with zero-trust protection to address the increasing performance and security demands of modern data centers.</p> <p>DOCA Flow is the most fundamental API for building generic execution pipes in hardware. The library provides an API for building a set of pipes, where each pipe consists of match criteria, monitoring, and a set of actions. Pipes can be chained so that after a pipe-defined action is executed, the packet may proceed to another pipe.</p> <p>In this course, you'll be introduced to DOCA Flow programming by building an "ARP Storm Control" application, which prevents network failures caused by broadcast storms. It does so through the creation of a DOCA Flow pipeline that can dampen malicious broadcast network activity without impacting well-behaved traffic.</p> <p>&gt; <a href="#">Learn More</a></p>				
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
<a href="#">DOCA Flow</a>	English, Simplified Chinese	2 hours	Free	N/A

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# Instructor-Led Workshops for Administrators

Workshop Name	Description	Prerequisites			
AI and Data Science					
NVIDIA AI Enterprise Administration: Public Training	This hands-on training course explores architecture, installation, configuration, operation, and management of NVIDIA AI Enterprise.	None			
	> <a href="#">Learn More</a>				
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	
N/A	English	12 hours	\$1,500	N/A	
Ethernet Cumulus					
Cumulus® Linux: Public Bootcamp	Learn how to install, deploy, configure, and troubleshoot Cumulus-based networks. This course offers a perfect blend of hands-on training and theoretical education.	Network administrators and IT professionals that need to install, configure, manage, monitor, and troubleshoot the configuration and performance of Cumulus Linux-based switches			
	> <a href="#">Learn More</a>				
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	
Cumulus Linux switches	English	12 hours	\$1,500	Available	
Cumulus Linux: Private Workshop	In this hands-on private training, you'll learn about NVIDIA Cumulus OS architecture, installation, configuration, operation, and management of Cumulus Linux running on NVIDIA switches.	Network administrators and IT professionals that need to install, configure, manage, monitor, and troubleshoot the configuration and performance of Cumulus Linux-based switches			
	> <a href="#">Learn More</a>				
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	
Cumulus Linux switches	English	20 hours	Contact us	Available	
InfiniBand					
InfiniBand Customized Course	In this course, you'll learn about InfiniBand architecture and how to manage, monitor, and troubleshoot your InfiniBand network.	Network administrators and IT professionals that need to install, configure, manage, monitor, and troubleshoot the configuration and performance of InfiniBand networks.			
	> <a href="#">Learn More</a>				
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	
InfiniBand networks	English	16 hours	Contact us	Available	

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Workshop Name	Description	Prerequisites				
NVIDIA DGX						
Workshop Name	Description	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
<b>NVIDIA DGX H100/A100 Administration: Private Workshop</b>	This course provides an overview the NVIDIA DGX A100 system and NVIDIA DGX Station™ A100, tools for in-band and out-of-band management, NGC, the basics of running workloads, and specific management tools and command-line interface (CLI) commands. In addition, this course includes content on Multi-Instance GPU (MIG), managing storage, performance validation, and other system management tools and concepts.	DGX A100 system and DGX Station A100	English	16 hours	Contact us	N/A
<b>NVIDIA DGX H100/A100 Administration: Public Workshop</b>	This course provides an overview of the DGX A100 system and DGX Station A100's tools for in-band and out-of-band management, the basics of running workloads, specific management tools, and CLI commands.	DGX A100 system and DGX Station A100	English	16 hours	\$1,500	N/A
<b>NVIDIA DGX BasePOD Administration: Private Workshop</b>	This course provides an overview of DGX POD components and related processes, including the NVIDIA DGX A100 system, InfiniBand and ethernet networks, tools for in-band and out-of-band management, NGC, the basics of running workloads, and specific management tools and CLI commands. This course includes instructions for managing vendor-specific storage per the architecture of your specific POD solution.	DGX POD cluster	English	16 hours	Contact us	N/A
<b>NVIDIA DGX SuperPOD™ Administration: Private Workshop</b>	This course is designed to help IT professionals successfully administer all aspects of a DGX SuperPOD cluster, including compute, storage, and networking.	DGX SuperPOD cluster	English	16 hours	Contact us	N/A

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Workshop Name	Description	Prerequisites										
Virtualization												
NVIDIA AI Enterprise Administration: Public Bootcamp	This course covers the platform and solution overview, hardware and software architecture, deployment options, licensing, temporal and spatial GPU partitioning, scaling, comprehensive validation, management, maintenance, monitoring, and troubleshooting.	System administrators and IT professionals that need to install, configure, manage, monitor, and troubleshoot the configuration and performance of their NVIDIA AI Enterprise solution.										
<a href="#">Learn More</a> <table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th><th>Languages</th><th>Duration</th><th>Price</th><th>Certification Exam</th></tr> </thead> <tbody> <tr> <td>NVIDIA AI Enterprise</td><td>English</td><td>12 hours</td><td>\$1,500</td><td>N/A</td></tr> </tbody> </table>			Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	NVIDIA AI Enterprise	English	12 hours	\$1,500	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
NVIDIA AI Enterprise	English	12 hours	\$1,500	N/A								

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# Online, Self-Paced Courses for Administrators

Course Name	Description	Prerequisites			
AI in the Data Center					
<b>Introduction to AI in the Data Center</b>	Explore an introduction to AI, GPU computing, NVIDIA AI software architecture, and how to implement and scale AI workloads in the data center.		None		
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		N/A	English	4 hours	\$49
Cluster Administration					
<b>Bright Cluster Manager Administration</b>	This course is based on NVIDIA Bright Cluster Manager and gives an overview of the cluster management tools, Bright View and cluster management shell (CMSH)		None.		
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		NVIDIA Bright Cluster Manager	English	5 hours	Free
<b>Bright Cluster Manager Autoscaling Hybrid Cloud</b>					
	This course is based on NVIDIA Bright Cluster Manager and gives an overview of extending the cluster to the cloud with Cluster as a service and cluster extension (i.e., hybrid cloud).		None		
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		NVIDIA Bright Cluster Manager	English	3 hours	Free
<b>Introduction to Bright Cluster Manager</b>					
	This course is based on NVIDIA Bright Cluster Manager and gives an overview of the usage and components of the software.		None		
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		NVIDIA Bright Cluster Manager	English	3 hours	Free
Ethernet					
<b>Linux Networking Fundamentals</b>	Learn the fundamental concepts and commands behind Linux-based open networking.		General understanding of networking concepts and principles		
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		Cumulus Linux	English	6 hours	\$99

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Course Name	Description	Prerequisites					
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	
<b>Network Administration With the NVIDIA Onyx™ Switch System</b>	This course provides the required set of skills to configure and manage NVIDIA Ethernet switch systems. You will learn in depth layer 2 configurations such as VLAN, STP, LAG, and MLAG, as well as how to configure layer 3 features such as BGP.	> <a href="#">Learn More</a>	NVIDIA Onyx	English	3 hours	\$99	N/A
<b>NVIDIA Ethernet Products Overview</b>	In this course, you'll learn about the products' key features, benefits, and popular uses. After completion, you'll know how to select the most suitable NVIDIA Ethernet solution for your needs.	> <a href="#">Learn More</a>				None	
<b>RDMA Over Converged Ethernet (RoCE) From A to Z</b>	In this course, you'll learn what RoCE is, how it works, the different network types RoCE can run over, and how to configure RoCE for each network type.	> <a href="#">Learn More</a>	N/A	English	1.5 hours	Free	N/A
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	
		RoCE	English	2 hours	Free	N/A	
<b>Graphics and Simulation</b>							
<b>NVIDIA Omniverse Enterprise Administration</b>	The course covers the solution overview, hardware and software architecture, deployment options, installation, configuration, licensing, scaling, comprehensive validation, security, management, maintenance, monitoring, and troubleshooting. The instruction and guidance are based on NVIDIA's best practices and cover the critical knowledge and skills for deploying, administering, and managing your Omniverse solution.	> <a href="#">Learn More</a>	Omniverse	English	6.5 hours	\$99	N/A
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	

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Course Name	Description	Prerequisites			
InfiniBand					
<b>InfiniBand Essentials</b>	This self-paced course covers the fundamental first steps into the world of InfiniBand. If you're looking to become more familiar with InfiniBand's benefits, uses, architecture layers, and management concepts, this is the best place to start.	General understanding of networking concepts and principles			
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		InfiniBand	English	1.5 hours	Free
<b>InfiniBand Professional</b>	This course covers the fundamentals of the InfiniBand technology from a usability point of view and builds on the details of the InfiniBand architecture specification. You'll learn how to install, configure, manage, troubleshoot, and monitor your InfiniBand network.	General understanding of networking concepts and principles			
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		InfiniBand	English	6 hours	\$250
<b>Working With the NVIDIA S7700 EDR Switch System</b>	In this course, you'll learn how to efficiently work with this switch system, utilize its features in the most effective manner, and troubleshoot various common scenarios to reduce switch downtime.	<ul style="list-style-type: none"> <li>&gt; InfiniBand Essentials course</li> <li>&gt; InfiniBand concepts</li> </ul>			
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		SB7700	English	3 hours	\$49
Management					
<b>Data Center Management Made Easy With NVIDIA UFM</b>	Learn about NVIDIA Unified Fabric Manager (UFM) and its capabilities, advantages, and components through a set of interactive learning units, videos, and simulators.	Understanding of InfiniBand fabrics and management concepts			
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		N/A	English	3 hours	\$49
<b>NVIDIA License System</b>	NVIDIA License System (NLS) is a new licensing solution to support the continued expansion of the NVIDIA enterprise software portfolio. This course will help you to learn about NLS and how you can move from your existing licensing solution to NLS.	<ul style="list-style-type: none"> <li>&gt; Basic understanding of virtual appliances installation and setup</li> <li>&gt; Familiarity with web/cloud-based applications</li> <li>&gt; Familiarity with NVIDIA products like virtual GPU (vGPU) and NVIDIA AI Enterprise</li> </ul>			
	> <a href="#">Learn More</a>	Tools, Libraries, Frameworks	Languages	Duration	Price
		Cloud License Service (CLS) and Delegated License Service (DLS)	English	2 hours	Free

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Workshop Name	Description	Prerequisites			
Network					
<b>Ansible Essentials for Network Engineers</b>	In this course, you'll explore a variety of Ansible modules and write playbooks specifically adapted to modern data centers. This course includes an exclusive hands-on lab environment and exercises to practice real-world scenarios in real cloud environments.	> Basic Linux administration > General understanding of networking concepts and principles			
	<a href="#">Learn More</a>				
		Tools, Libraries, Frameworks	Languages	Duration	Price
		Ansible	English	3 hours	\$49
<b>Introduction to Networking</b>	In this course, we'll cover the basics of Ethernet technology and understand how data is forwarded in an Ethernet network.	None			
	<a href="#">Learn More</a>				
		Tools, Libraries, Frameworks	Languages	Duration	Price
		N/A	English	1 hour	Free
<b>MLXlink and MLXcables Debug Tools</b>	In this course, you'll learn about the MLXlink and MLXcables debug tools. These debug tools are used for both basic link troubleshooting and for analyzing the more complex link characteristics.	Good technical background and understanding of networking hardware			
	<a href="#">Learn More</a>				
		Tools, Libraries, Frameworks	Languages	Duration	Price
		MLXLink and MLXcables	English	2 hours	Free
<b>NVIDIA BlueField DPU Administration</b>	Learn the basic concepts of BlueField DPUs as a platform for accelerated data center computing.	> Basic knowledge and experience in networking concepts and principle > Basic knowledge and experience in Linux administration			
	<a href="#">Learn More</a>				
		Tools, Libraries, Frameworks	Languages	Duration	Price
		N/A	English	3 hours	\$49
RDMA					
<b>The Fundamentals of RDMA Programming</b>	This course allows C programmers to dive into the RDMA programming world without requiring previous experience in networking or RDMA programming. We have also added tips and tricks, as well as do's and don'ts, so that the skills you acquire will truly serve you when you need them.	Understanding of C/C++ programming			
	<a href="#">Learn More</a>				
		Tools, Libraries, Frameworks	Languages	Duration	Price
		RDMA, C/C++	English	4 hours	\$49
		Certification Exam			
		N/A			

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# Certifications

Certification Name	Description	Prerequisites				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
<b>NVIDIA Certified Associate: AI in the Data Center</b>	This is an entry-level certification that validates foundational concepts of adopting artificial intelligence computing by NVIDIA in a data center environment. The exam is online and remote proctored with 50 questions and a time limit of 60 minutes for completion.	N/A	English	1 hour	\$135	Available
<b>NVIDIA Certified Professional: InfiniBand</b>	This is an intermediate level certification that validates core concepts for designing, deploying, and managing NVIDIA InfiniBand fabrics. The exam is online and remote proctored with 40 questions and a time limit of 90 minutes for completion.	NVIDIA InfiniBand fabrics	English	1.5 hours	\$220	Available

## Ready to Get Started?

To get started with hands-on training, visit  
[www.nvidia.com/en-us/learn/enterprise](http://www.nvidia.com/en-us/learn/enterprise)

For questions, contact us at [nvdi@nvidia.com](mailto:nvdi@nvidia.com)