

Learning Paths for Developers and Administrators

February 2024

Learning Paths by Role and Topic

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Edge Computing	Simulation, Data Modeling, and Design
Generative Al and Large Language Models (LLMs)	
Industry-Related Training	
Simulation, Data Modeling, and Design	

To develop a customized training plan for your organization, connect with one of our training advisors.



Accelerated Computing Training

For Developers

SELF-PACED COURSE SELF-PACED COURSE SELF-PACED COURSE SELF-PACED COURSE **INSTRUCTOR-LED WORKSHOP** Fundamentals of Accelerated Scaling CUDA C++ **An Even Easier Accelerating CUDA C++ Applications Scaling Workloads Across Multiple GPUs With CUDA C++*** With Concurrent Streams* **Applications to Multiple Nodes* Introduction to CUDA** Computing With CUDA C/C++* (8 Hours) (4 Hours) (4 Hours) (8 Hours) (1 Hour) **INSTRUCTOR-LED WORKSHOP** SELF-PACED COURSE **INSTRUCTOR-LED WORKSHOP** Accelerating CUDA C++ **Optimizing CUDA ML Codes With Fundamentals of Accelerated** Computing With CUDA C/C++* **Applications With Multiple GPUs* NVIDIA Nsight's Profiling Tools** (8 Hours) (4 Hours) (8 Hours) SELF-PACED COURSE **Fundamentals of Accelerated** SELF-PACED COURSE SELF-PACED COURSE **Computing With OpenACC** (8 Hours) **GPU Acceleration With the** Scaling GPU-Accelerated Applications

Fundamentals of Accelerated Computing With OpenACC* (8 Hours)



SELF-PACED COURSE GPU Acceleration With the C++ Standard Library (2 Hours) Scaling GPU-Accelerated Applications With the C++ Standard Library (2 Hours)

High-Performance Computing With Containers (2 Hours)

SELF-PACED COURSE

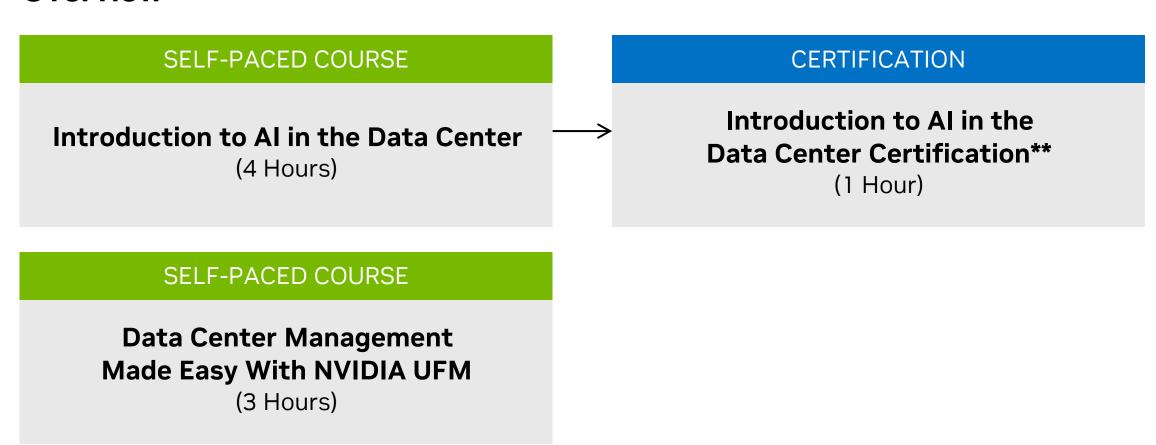
- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- Braces Indicate Alternate Paths



Accelerated Computing Training

For Administrators

Overview



NVIDIA AI Enterprise Choose the courses that best match your learning needs.

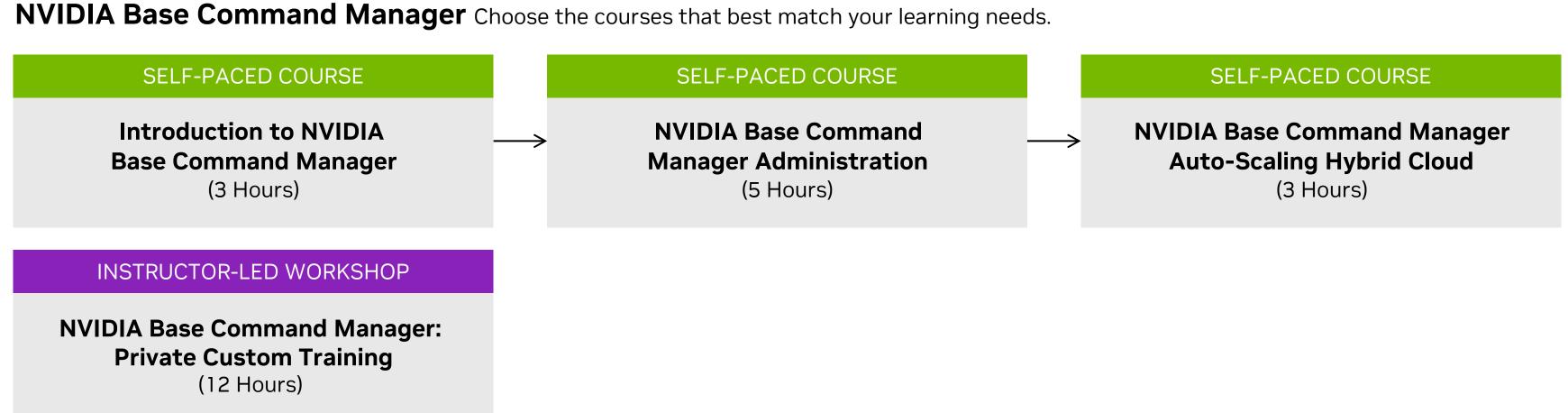
SELF-PACED COURSE **NVIDIA AI Enterprise Administrator** (8 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA AI Enterprise Administrator: Public Training (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA AI Enterprise Administrator: Private Customized Training (12 Hours)



NVIDIA DGX Choose the courses that best match your learning needs.

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX H100/A100 **Administration: Public Workshop** (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX H100/A100 **Administration: Private Workshop** (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX BasePOD Administration: Private Workshop (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX SuperPOD Administration: Private Workshop (12 Hours)

SELF-PACED COURSE

NVIDIA DGX Cloud (1 Hour)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- Braces Indicate Alternate Paths



Computer Vision and Video Analytics Training

For Developers



SELF-PACED COURSE

Building Video Al Applications at

the Edge on NVIDIA Jetson Nano

(8 Hours)

SELF-PACED COURSE

Getting Started With Al

on NVIDIA Jetson Nano*

(8 Hours)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- Braces Indicate Alternate Paths

Cybersecurity and Fraud Detection Training

For Developers

SELF-PACED COURSE

Digital Fingerprinting With NVIDIA
Morpheus
(1 Hour)

Building Al-Based
Cybersecurity Pipelines
(8 Hours)

INSTRUCTOR-LED WORKSHOP

Building Deep Learning-Based
Anti-Fraud Applications
(Chinese Only) (8 Hours)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- **{ }** Braces Indicate Alternate Paths



Data Center Overview Training

For Administrators

Platform Overview Choose the courses that best match your learning needs.

SELF-PACED COURSE

Introduction to AI in the Data Center (4 Hours)

SELF-PACED COURSE

Data Center Management Made Easy With NVIDIA UFM (3 Hours)

SELF-PACED COURSE

NVIDIA AI Enterprise Administrator (8 Hours)

SELF-PACED COURSE

NVIDIA Omniverse Administration (6.5 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA AI Enterprise Administrator: Private Customized Training (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA AI Enterprise Administrator: Public Training (12 Hours)

SELF-PACED COURSE

Introduction to NVIDIA **Base Command Manager** (3 Hours)

SELF-PACED COURSE

NVIDIA License System (2 Hours)

Compute Choose the courses that best match your learning needs.

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX BasePOD Administration: Private Workshop (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX SuperPOD Administration: Private Workshop (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX H100 / A100 **Administration: Public Workshop** (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX H100 / A100 **Administration: Private Workshop** (12 Hours)

SELF-PACED COURSE

NVIDIA DGX Cloud Administration (1 Hour)

Networking Choose the courses that best match your learning needs.

SELF-PACED COURSE

Introduction to Networking (1 Hour)

SELF-PACED COURSE

NVIDIA BlueField DPU Administration (3 Hours)

SELF-PACED COURSE

InfiniBand Essentials

(1.5 Hours)

Networking Software Choose the courses that best match your learning needs.

SELF-PACED COURSE

Introduction to NVIDIA DOCA for DPUs (2 Hours)

SELF-PACED COURSE

Network Administration With NVIDIA Onyx Switch System (3 Hours)

SELF-PACED COURSE

Linux Networking Fundamentals (6 Hours)

SELF-PACED COURSE

Fundamentals of RDMA Programming (4 Hours)

SELF-PACED COURSE

Ansible Essentials for Network Engineers (3 Hours)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- Braces Indicate Alternate Paths



Data Center and Cloud Training

For Administrators

DPU and DOCA Overview **SELF-PACED COURSE** SELF-PACED COURSE SELF-PACED COURSE CERTIFICATION SELF-PACED COURSE Introduction to AI in the Introduction to **Getting Started With** Introduction to AI in the Data Center **NVIDIA BlueField DPU Administration NVIDIA DOCA Flow Data Center Certification** NVIDIA DOCA for DPUs** (3 Hours) (4 Hours) (1 Hour) (2 Hours) (2 Hours) SELF-PACED COURSE **Data Center Management** Made Easy With NVIDIA UFM (3 Hours) **NVIDIA AI Enterprise** Choose the courses that best match your learning needs. **INSTRUCTOR-LED WORKSHOP INSTRUCTOR-LED WORKSHOP SELF-PACED COURSE NVIDIA AI Enterprise Administrator: NVIDIA AI Enterprise Administrator: NVIDIA AI Enterprise Administrator Public Training Private Customized Training** (8 Hours) (12 Hours) (12 Hours) **Cluster Administration** SELF-PACED COURSE SELF-PACED COURSE SELF-PACED COURSE **NVIDIA Base Command Manager** Introduction to NVIDIA **NVIDIA Base Command Auto-Scaling Hybrid Cloud** Manager Administration **Base Command Manager** (3 Hours) (3 Hours) (5 Hours) **NVIDIA DGX** Choose the courses that best match your learning needs. SELF-PACED COURSE INSTRUCTOR-LED WORKSHOP INSTRUCTOR-LED WORKSHOP **INSTRUCTOR-LED WORKSHOP INSTRUCTOR-LED WORKSHOP** NVIDIA DGX H100/A100 NVIDIA DGX H100/A100 **NVIDIA DGX BasePOD NVIDIA DGX SuperPOD NVIDIA DGX Cloud Administration Administration: Public Workshop Administration: Private Workshop Administration: Private Workshop Administration: Private Workshop** (1 Hour) (12 Hours) (12 Hours) (12 Hours) (12 Hours) **COURSE LEGEND**



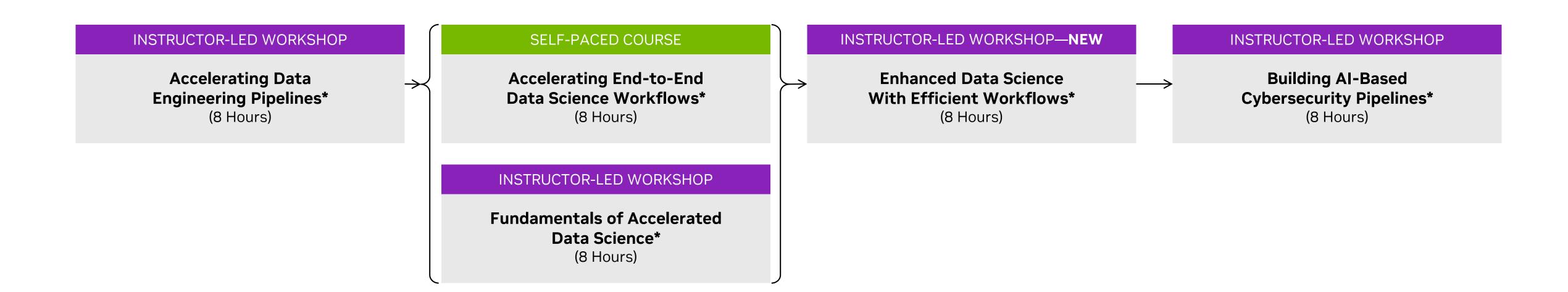
* NVIDIA Certificate of Competency

Braces Indicate Alternate Paths

** Digital Badge Available

Data Science Training

For Developers



SELF-PACED COURSE—**NEW**

RAPIDS Accelerator for Apache Spark (2 Hours)

SELF-PACED COURSE—**NEW**

Accelerate Data Science Workflows
With Zero Code Changes
(1 Hour)

- NVIDIA Certificate of Competency
- ** Digital Badge Available
- **{ }** Braces Indicate Alternate Paths



Deep Learning Training For Developers

SELF-PACED COURSE SELF-PACED COURSE **Building a Brain in 10 Minutes Optimized Vehicle Routing** (10 Minutes) (1 Hour) SELF-PACED COURSE SELF-PACED COURSE SELF-PACED COURSE INSTRUCTOR-LED WORKSHOP **INSTRUCTOR-LED WORKSHOP** SELF-PACED COURSE Data Parallelism: How to Train Deep **Building Real-Time Disaster Risk Monitoring** Model Parallelism: Building and **Deploying a Model for Inference Getting Started With Deep Learning* Learning Models on Multiple GPUs*** at Production Scale **Video AI Applications Using Satellite Imagery Deploying Large Neural Networks*** (8 Hours) (8 Hours) (8 Hours) (8 Hours) (8 Hours) (4 Hours) SELF-PACED COURSE SELF-PACED COURSE **INSTRUCTOR-LED WORKSHOP Getting Started With Introduction to Graph** Fundamentals of Deep Learning* **Image Segmentation Neural Networks** (8 Hours) (2 Hours) (2 Hours) SELF-PACED COURSE **INSTRUCTOR-LED WORKSHOP Building Intelligent Modeling Time-Series Data With Recommender Systems* Recurrent Neural Networks in Keras** (8 Hours) (2 Hours) SELF-PACED COURSE INSTRUCTOR-LED WORKSHOP **Introduction to Physics-Informed Building Deep Learning-Based** Anti-Fraud Applications (Chinese Only) (8 Hours) Machine Learning With NVIDIA Modulus (4 Hours) SELF-PACED COURSE **NVIDIA NeMo Framework** (8 Hours) **COURSE LEGEND** * NVIDIA Certificate of Competency



** Digital Badge Available

Braces Indicate Alternate Paths

Edge Computing Training For Developers

SELF-PACED COURSE

Getting Started With Al on NVIDIA Jetson Nano*

(8 Hours)

SELF-PACED COURSE

Building Video AI Applications at the Edge on NVIDIA Jetson Nano* (8 Hours)

SELF-PACED COURSE

Integrating Sensors With NVIDIA DRIVE (2 Hours)

SELF-PACED COURSE

Optimized Vehicle Routing (1 Hour)

SELF-PACED COURSE

Introduction to Robotic Simulations in NVIDIA Isaac Sim (4 Hours)

SELF-PACED COURSE

Assemble a Simple Robot in NVIDIA Issac Sim (30 Minutes)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- Braces Indicate Alternate Paths

Generative Al and Large Language Model Training

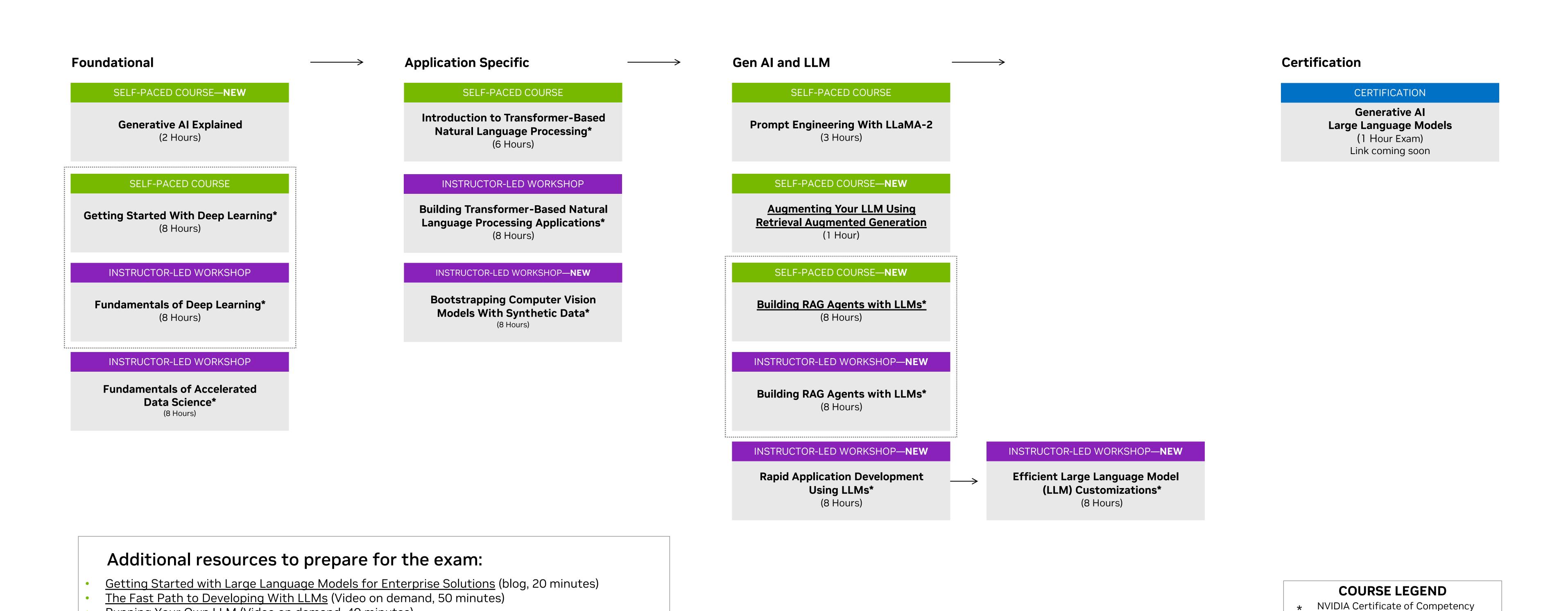
For Developers

Foundational Gen Al and LLM **Scaled Production Application Specific** SELF-PACED COURSE—**NEW** SELF-PACED COURSE **SELF-PACED COURSE** SELF-PACED COURSE—**NEW** SELF-PACED COURSE **Introduction to Transformer-Based Augmenting Your LLM Using Deploying a Model for Inference Generative AI Explained Prompt Engineering With LLaMA-2 Natural Language Processing* Retrieval-Augmented Generation** at Production Scale (2 Hours) (3 Hours) (4 Hours) (6 Hours) (1 Hour) SELF-PACED COURSE SELF-PACED COURSE SELF-PACED COURSE—**NEW** SELF-PACED COURSE—**NEW** INSTRUCTOR-LED WORKSHOP **Get Started With Highly Accurate** Data Parallelism: How to Train Deep **Getting Started With Deep Learning* Generative AI With Diffusion Models* Building RAG Agents With LLMs* Custom ASR for Speech AI Learning Models on Multiple GPUs*** (8 Hours) (8 Hours) (8 Hours) (3 Hours) (8 Hours) **INSTRUCTOR-LED WORKSHOP** INSTRUCTOR-LED WORKSHOP **INSTRUCTOR-LED WORKSHOP** INSTRUCTOR-LED WORKSHOP—**NEW** INSTRUCTOR-LED WORKSHOP Model Parallelism: Building and **Building Conversational Generative AI With Diffusion Models* Fundamentals of Deep Learning* Building RAG Agents With LLMs* Al Applications* Deploying Large Neural Networks*** (8 Hours) (8 Hours) (8 Hours) (8 Hours) (8 Hours) INSTRUCTOR-LED WORKSHOP—**NEW** INSTRUCTOR-LED WORKSHOP—**NEW** INSTRUCTOR-LED WORKSHOP **Efficient Large Language Model Building Transformer-Based Natural Rapid Application Development** (LLM) Customizations* **Language Processing Applications*** Using LLMs* (8 Hours) (8 Hours) (8 Hours)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- **Braces Indicate Alternate Paths**



Recommended Training for Gen Al LLM Certification





** Digital Badge Available

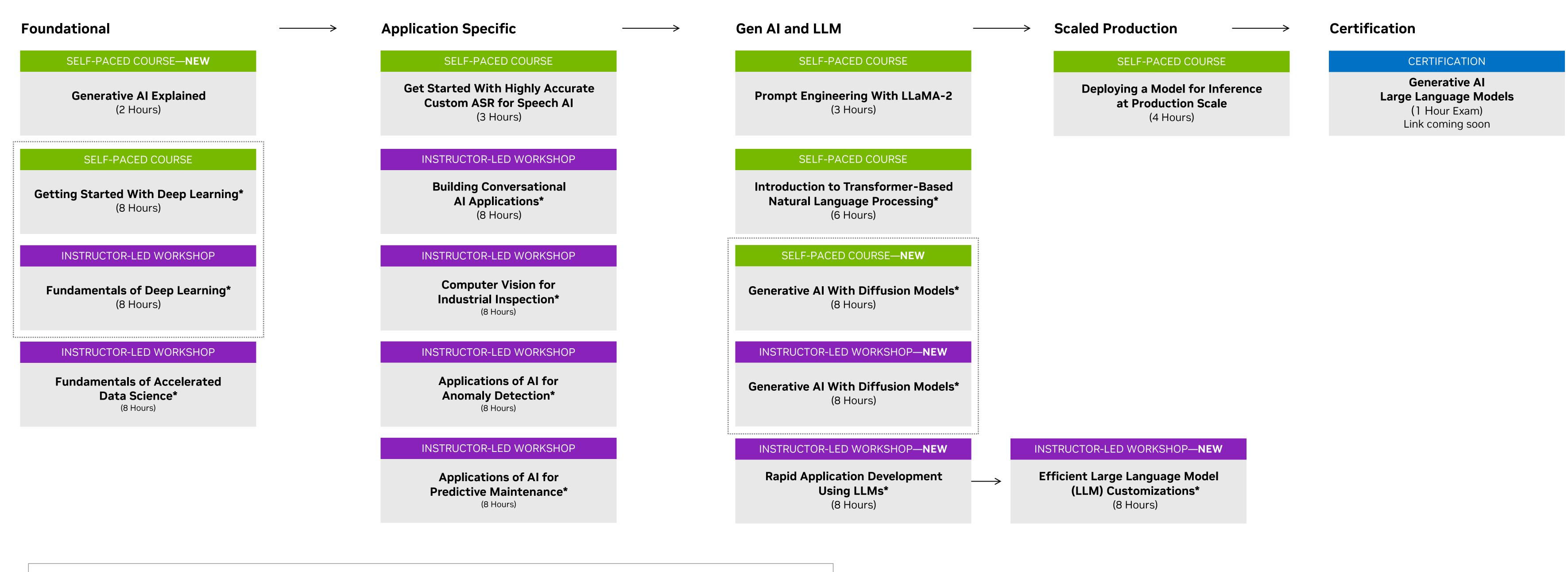
Braces Indicate Alternate Paths

Running Your Own LLM (Video on demand, 40 minutes)

Trustworthy AI (Webpage)

What Is Retrieval-Augmented Generation aka RAG? (Blog, 15 minutes)

Recommended Training for Gen Al Multimodal Certification



Additional resources to prepare for the exam:

- <u>High-Resolution Image Synthesis via Two-Stage Generative Models</u> (Video on demand, 35 minutes)
- Accelerated Creative AI –Using NVIDIA-optimized image generation for Media and Entertainment (Webinar on demand, 1 hour)
- Building Lifelike Digital Avatars with NVIDIA ACE Microservices (Blog, 15 minutes)
- The Future of Generative AI for Content Creation (Video on demand, 35 minutes)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- Braces Indicate Alternate Paths



Infrastructure for Generative AI and Large Language Models Training

For Administrators

Overview

SELF-PACED COURSE

Introduction to AI in the Data Center (4 Hours)

CERTIFICATION

Introduction to AI in the **Data Center Certification**** (1 Hour)

NVIDIA AI Enterprise

SELF-PACED COURSE

NVIDIA AI Enterprise Administrator (8 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA AI Enterprise Administrator: Public Training (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA AI Enterprise Administrator: Private Customized Training (12 Hours)

SELF-PACED COURSE

NVIDIA NeMo Framework (8 Hours)

SELF-PACED COURSE

RAPIDS Accelerator for Apache Spark (2 Hours)

NVIDIA DGX

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX H100/A100 **Administration: Public Workshop** (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX H100/A100 **Administration: Private Workshop** (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX BasePOD Administration: Private Workshop (12 Hours)

INSTRUCTOR-LED WORKSHOP

NVIDIA DGX SuperPOD Administration: Private Workshop (12 Hours)

SELF-PACED COURSE

NVIDIA DGX Cloud Administration (1 Hour)

Introduction to Networking

SELF-PACED COURSE

Introduction to Networking (1 Hour)

SELF-PACED COURSE

InfiniBand Essentials

(1.5 Hours)

Additional Recommended Training

SELF-PACED COURSE

Introduction to NVIDIA Base Command Manager (3 Hours)

SELF-PACED COURSE

Data Center Management Made Easy With NVIDIA UFM (3 Hours)

SELF-PACED COURSE

Introduction to **NVIDIA DOCA for DPUs** (2 Hours)

SELF-PACED COURSE

Getting Started With NVIDIA DOCA Flow (2 Hours)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- Braces Indicate Alternate Paths



Industry-Related Training For Developers

Energy

INSTRUCTOR-LED WORKSHOP

Computer Vision for Industrial Inspection* (8 Hours)

Applications of AI for Predictive Maintenance* (8 Hours)

INSTRUCTOR-LED WORKSHOP

Financial Services

SELF-PACED COURSE

Digital Fingerprinting With NVIDIA Morpheus

(1 Hour)

INSTRUCTOR-LED WORKSHOP

Building AI-Based Cybersecurity Pipelines (8 Hours)

INSTRUCTOR-LED WORKSHOP

Applications of AI for Anomaly Detection*

(8 Hours)

INSTRUCTOR-LED WORKSHOP

Building Intelligent Recommender Systems* (8 Hours)

Manufacturing

INSTRUCTOR-LED WORKSHOP

Computer Vision for Industrial Inspection*

(8 Hours)

INSTRUCTOR-LED WORKSHOP

Applications of AI for Predictive Maintenance* (8 Hours)

Transportation

SELF-PACED COURSE

Integrating Sensors With NVIDIA DRIVE (2 Hours)

Healthcare and Life Sciences

Fundamentals of Deep Learning*

(8 Hours)

SELF-PACED COURSE **INSTRUCTOR-LED WORKSHOP** Data Parallelism: How to Train Deep **Getting Started With Deep Learning* Learning Models on Multiple GPUs*** (8 Hours) (8 Hours) INSTRUCTOR-LED WORKSHOP

INSTRUCTOR-LED WORKSHOP

Model Parallelism: Building and **Deploying Large Neural Networks*** (8 Hours)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- Braces Indicate Alternate Paths



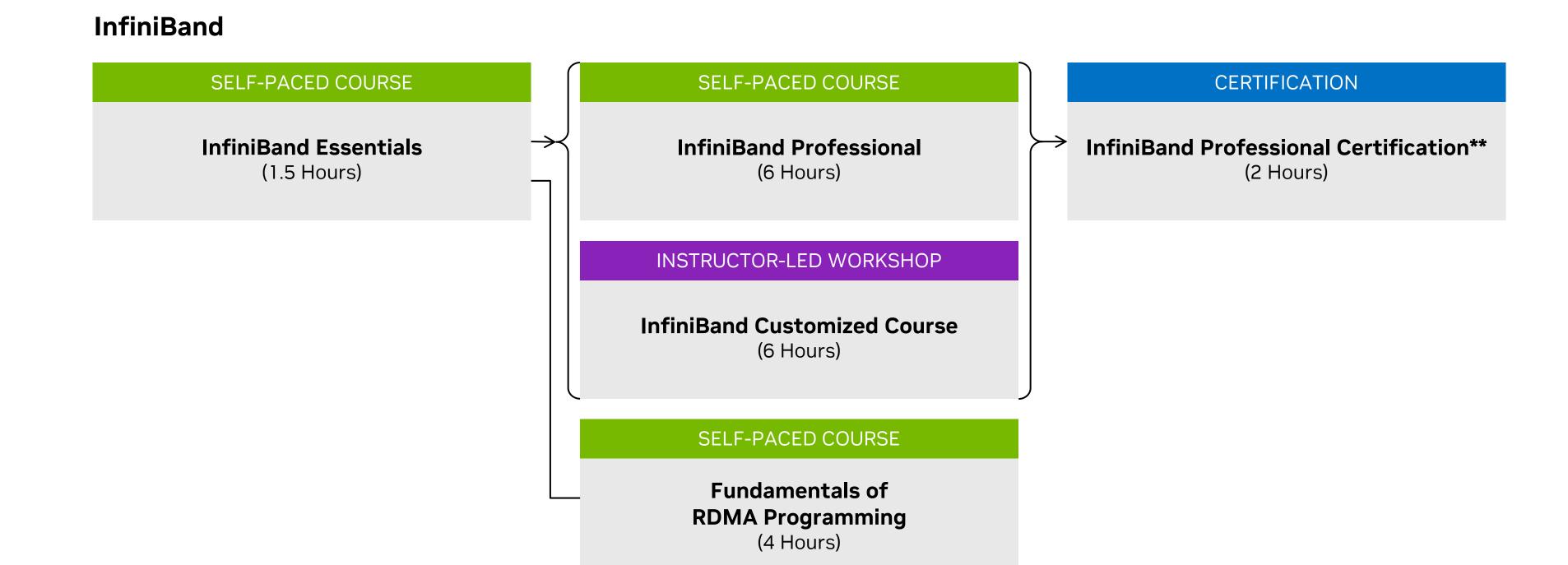
Networking Training

For Administrators

Overview SELF-PACED COURSE Introduction to Networking (1 Hour) **NVIDIA Cumulus** SELF-PACED COURSE **INSTRUCTOR-LED WORKSHOP NVIDIA Cumulus Linux: Linux Networking Fundamentals Public Boot Camp** (6 Hours) (12 Hours) **INSTRUCTOR-LED WORKSHOP NVIDIA Cumulus Linux:** Private Customized Workshop (20 Hours) Other SELF-PACED COURSE SELF-PACED COURSE **Network Administration With RDMA Over Converged** Ethernet From A to Z **NVIDIA Onyx Switch System**

(10 Hours)

(3 Hours)



- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- **Braces Indicate Alternate Paths**

Simulation, Data Modeling, and Design Training

For Developers and Administrators

Extensions

SELF-PACED COURSE—**NEW**

Essentials of Developing NVIDIA Omniverse Kit Applications

SELF-PACED COURSE

Develop, Customize, and Publish in

NVIDIA Omniverse With Extensions

(8 Hours)

(2 Hours)

SELF-PACED COURSE

Build Beautiful, Custom UI for 3D Tools on NVIDIA Omniverse (90 Minutes)

SELF-PACED COURSE

Easily Develop Advanced 3D Layout Tools on NVIDIA Omniverse

(90 Minutes)

SELF-PACED COURSE

How to Build Custom 3D Scene Manipulator Tools on NVIDIA Omniverse (90 Minutes)

Generative Al

SELF-PACED COURSE—**NEW**

Generative Al Explained (2 Hours)

NVIDIA Omniverse Administrators

SELF-PACED COURSE

NVIDIA Omniverse
Enterprise Administration
(6.5 Hours)

Simulation and Synthetic Data

SELF-PACED COURSE

Introduction to Robotic Simulations in NVIDIA Isaac Sim

(4 Hours)

INSTRUCTOR-LED WORKSHOP—**NEW**

Bootstrapping Computer Vision Models With Synthetic Data*(8 Hours)

SELF-PACED COURSE—**NEW**

Synthetic Tabular Data Generation
Using Transformers
(4 Hours)

INSTRUCTOR-LED WORKSHOP

Building Digital Avatar Pipelines With NVIDIA Omniverse Audio2Face and Riva*

(Chinese) (8 Hours)

SELF-PACED COURSE

Assemble a Simple Robot in NVIDIA Issac Sim (30 Minutes)

OpenUSD

SELF-PACED COURSE

Getting Started With USD for Collaborative 3D Workflows (4 Hours)

SELF-PACED COURSE

Essentials of USD in NVIDIA Omniverse (2 Hours)

- * NVIDIA Certificate of Competency
- ** Digital Badge Available
- { } Braces Indicate Alternate Paths



