# Course Description

Aruba Campus Access Fundamentals, Rev 22.41

This course teaches you the fundamental knowledge, skills, and practical experience required to configure and manage modern, open standards-based networking solutions using Aruba’s wired, wireless, security and management technologies. This course consists of approximately 60% lecture and 40% hands-on lab exercises to help you learn how to implement and validate small-to-medium enterprise network solutions. This 5-day course prepares you for the Aruba Certified Associate – Campus Access exam.

# Ideal candidate for this course

The ideal candidate has 1+ years of experience with networking, vendor agnostic understanding of basic network protocols. Under the direction of a Professional or Expert, can apply the configuration and verify the status of a campus network.

# Suggested Pre-requisites

It is recommended that candidates have foundational networking experience or attend Aruba’s Essentials eLearning series to glean knowledge on Aruba’s Campus Access design solution.

# Topics

* Networking Fundamentals
	+ Defines networking, LAN, WAN and their components
	+ Explains OSI model & encapsulation
	+ Discusses different types of physical media
	+ Compares unicast, multicast, and broadcast
	+ Explains TCP/IP stack
	+ Discusses different types of networking devices
* Switching Fundamentals
	+ Explains how to connect to and access a switch
	+ Describes initial switch setup
	+ Describes how to and configure VLANs, tagging, and IP addressing
	+ Explains how to use LLDP and ICMP for network discovery and diagnosis
	+ Explains how to configure link aggregation to improve performance/resiliency
* Basic IP Setup
	+ Discusses Inter-VLAN routing
	+ Explains DHCP relay
	+ Discusses static IP routing
	+ Explains how to configure single-area OSPF
* Network Redundancy
	+ Discusses Spanning Tree
	+ Explains VRRP and VSX
* VSF
	+ Describes VSF
	+ Explains how to configure VSF
	+ Describes Auto-VSF
	+ Explains VSF MAD
* Introduction to Aruba Solutions
	+ Discusses ESP
	+ Introduces Aruba switching products
	+ Introduces Aruba WLAN portfolio
	+ Introduces to Aruba Central
	+ Introduces to Aruba ClearPass
* Central for Device Management
	+ Explains how to perform device onboarding
	+ Describes how to create Central Groups
	+ Describes UI config mode
	+ Describes template config mode
	+ Describes Central licensing
* Device Profiling and AP onboarding
	+ Describes the use of device profiling
	+ Describes LLDP and MAC profiling
	+ Explains how to connect AP to Aruba Central
	+ Explains how to perform initial AP setup
* WLAN Fundamentals
	+ Describe the fundamentals of 802.11, RF frequencies and channels
	+ Explain RF Patterns and coverage including SNR
	+ Roaming Standards and QOS requirements
	+ Describe aspects of RF design
	+ Explains how to configure WLANs
* Implementing Secure WLANs
	+ Explain AAA
	+ Describe 802.1X authentication
	+ Explain how to configure secure WLANs
	+ Discuss roles and access rules
* Guest Access
	+ Describe guest access
	+ Explain how to setup captive portal authentication
	+ Describe how to configure guest WLANs
* WLAN Security
	+ Describe WLAN security
	+ Explain certificates
	+ Describe cloud authentication
* Monitoring and Maintenance
	+ Explains the use Aruba Central monitoring capabilities
	+ Describe how to identify LED status
	+ Explain how to perform firmware upgrades
	+ Describe how to enable SNMP on devices
	+ Describe AI Insights
	+ Describe Alerts & Reports
	+ Explain UXI
* Troubleshooting
	+ Describe how to perform password recovery and factory reset procedures
	+ Explain Central connectivity troubleshooting
	+ Describe how to enable spectrum analysis
	+ Explore Central Troubleshooting tools

# Course Objectives:

After you successfully complete this course, expect to be able to:

* Explain Networking Fundamentals
* Install and configure devices running the ArubaOS-CX Network Operating System
* Describe and configure VLANs
* Explain, describe and configure Spanning Tree Protocol
* Understand when to use VRRP and how to configure it
* Explain and configure Link Aggregation
* Understand and configure IP Routing
* Understand and configure OSPFv2 – Single Area
* Describe and configure Switch Stacking using VSF
* Describe Aruba ESP platform and product portfolio
* Perform AP onboarding
* Explain how Aruba’s wireless networking solutions meet customers’ requirements
* Explain fundamental WLAN technologies, RF concepts, and 802.11 Standards
* Recognize and explain Radio Frequency Bands and channels, and the standards used to regulate them
* Describe the concept of radio frequency coverage and interference and successful implementation and diagnosis of WLAN systems
* Identify and differentiate antenna technology options to ensure optimal coverage in various deployment scenarios
* Describe RF power technology including, signal strength, how it is measured and why it is critical in designing wireless networks
* Control secure access to the WLAN using Aruba Firewall Policies and Roles
* Perform network monitoring functions and troubleshooting