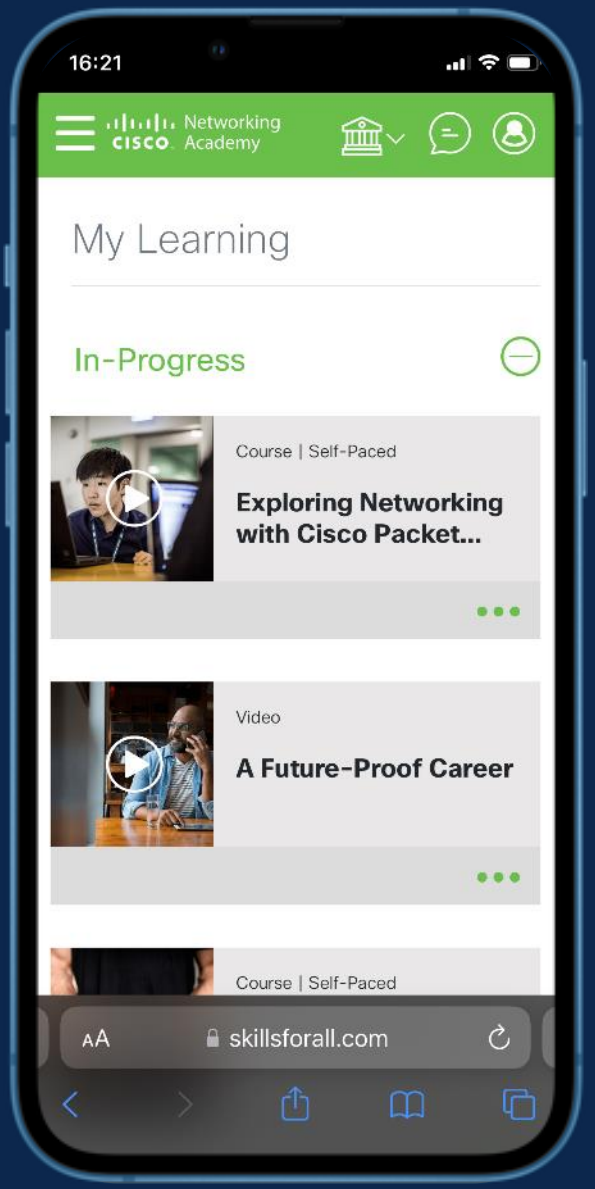
Networking Academy

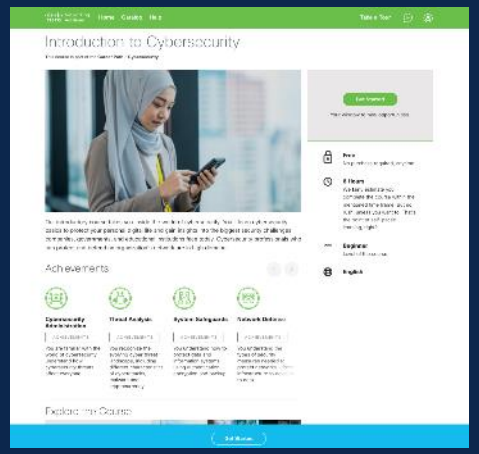
Cybersecurity And Data Pathways

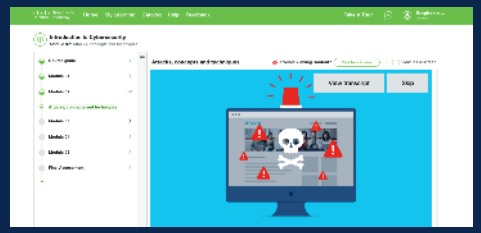
Your window to a world of opportunity.

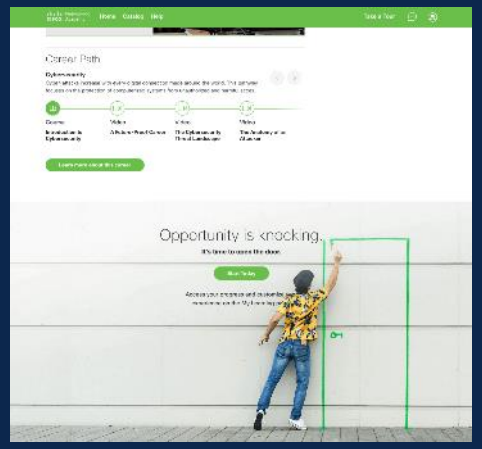
Raquel Martinez Hernandez & **Semyon** Ovsyannikov

NetAcad Europe Technical Managers









Cisco Networking Academy

Skills for All

Skills for All with Cisco Networking Academy is a reimagined learning experience connecting global learners to **free, self-paced, mobile-friendly** courses and learning pathways leading to entry-level technology certifications and jobs.

Building towards a converged experience

We are working to bring our two spaces into one seamless experience, combining the innovations developed on Skills for All with our rich partner and academy ecosystem.

Existing experience
on NetAcad.com

Skills for All:
Greenfield innovation space to build out
new teaching & learning experience

Converged experience

new NetAcad.com

- Full course portfolio available within new teaching & learning experience
- Integrated educator experience, including class management features and resource center
- Foundation for future enhancements like adaptive learning and intrinsically-motivated learning
- Entry-level, stackable offerings – more flexible options to fit into your own curriculum program

Networking Academy Curriculum Portfolio

05.18.2022

Explore

Introduction to exciting opportunities in technology.

- ▲ Get Connected
- ▲ NDG Linux Unhatched
- ▲ Introduction to Cybersecurity
- ▲ Introduction to IoT and Digital Transformation
- ▲ Getting Started with Cisco Packet Tracer
- ▲ Exploring Networking with Cisco Packet Tracer
- ▲ Exploring IoT with Cisco Packet Tracer

Career

Preparation for entry level positions.

Digital Essentials

- ★ ● IT Essentials
- ● ▲ NDG Linux Essentials
- ▲ Networking Essentials
- ▲ Cybersecurity Essentials
- ● ▲ PCAP: Programming Essentials in Python

Networking

- ▲ Networking Basics
- ▲ Networking Devices and Initial Configuration

CCNA:

- ★ ● ■ Introduction to Networks
- ★ ● ■ Switching, Routing, & Wireless Essentials
- ★ ● ■ Enterprise Networking, Security & Automation

CCNP Enterprise:

- ★ ● ■ Core Networking (ENCOR)
- ★ ● ■ Advanced Routing (ENARSI)

Programmable Infrastructure

- ● ▲ Python Essentials 1, 2
- ★ ● ■ DevNet Associate
- Workshop: Experimenting with REST APIs
- Workshop: Model-Driven Programmability

Cybersecurity

- ● ▲ Endpoint Security
- ● ▲ Network Defense
- ● ▲ Cyber Threat Management
- ● ▲ Cybersecurity Pathway
- ★ ● ■ CyberOps Associate
- ★ ■ Network Security
- ● ▲ Cloud Security

Practice

Develop skills with interactive tools & experiences

Cisco Packet Tracer | Gaming | Virtual Labs | Assessments | Physical Equipment

Complementary Offerings

Additional offerings available from Partners.

NDG

- ● ▲ NDG Linux I
- ● ▲ NDG Linux II
- NDG NETLAB+
- NDG CyberOps Lab

OPENEDG

- ● ▲ JavaScript Essentials 1 (JSE)
- ● CLA: Programming Essentials in C
- ● CLP: Advanced Programming in C
- ● CPA: Programming Essentials in C++
- ● CPP: Advanced Programming in C++

○ Aligns to Certification/Certificate

□ Instructor Training Required

△ Self-paced

☆ ASC Alignment Required

Includes courses on NetAcad.com and SkillsForAll.com

Introducing Pathways - What is a Pathway?

Selection of courses related to the topic preparing you for an entry-level job in that area

Videos from experts and professionals to add a closer look to the real world

Pathway exam to test your knowledge and earn a pathway badge

Blogs and information to help you launch your career

You are ready to go!

Cybersecurity Pathway

Skills for All with Cisco Networking Academy

ENABLING CAREERS

3.5 Million

Job openings in cybersecurity globally by 2025[1]

Aligned to Jobs

Cybersecurity Technician

Junior Cybersecurity Analyst

Tier 1 Help Desk Support

Aligned to Certification

Prepares learners for the entry-level IT Specialist Cybersecurity Certification from Certiport

1. Cybersecurity Ventures

Cybersecurity Pathway

Overview

Cyber attacks increase with every digital connection made around the world. Learn how to protect an organization and gain employable skills to start your cyber career.

Benefits

This learning pathway prepares you for an entry-level cybersecurity position, such as a Cybersecurity Technician, Junior Cybersecurity Analyst, or Tier 1 Help Desk Support role.
It's online and free!

Prepare for Careers

- ✓ Learn vital skills like threat intelligence, network security, and risk management to protect yourself and organizations from cyber attacks.
- ✓ Prepare for an entry level cybersecurity certification: IT Specialist - Cybersecurity.
- ✓ Gain access to career resources and our free job matching engine.

Pathway Details

Target Audience:
- Secondary and 2-year college vocational students
- Workers interested in reskilling to find a job in cybersecurity

Estimated Time to Completion: 160 hours

Key Skills: Threat Hunting, Risk Management, Network Firewall

Course Delivery: Self-paced

Learning Highlights:
- ✓ 6 courses
- ✓ Highly interactive learning design
- ✓ Labs and Cisco Packet Tracer activities
- ✓ Built-in knowledge checks, gamification
- ✓ Additional career resources

Achievements: Pathway digital badge from Cisco

Certification Aligned: IT Specialist Cybersecurity from Certiport

Courses

- Introduction to Cybersecurity
- Networking Basics
- Networking Devices and Initial Configuration
- Endpoint Security
- Network Defense
- Cyber Threat Management

View Pathway

Networking Academy
CISCO

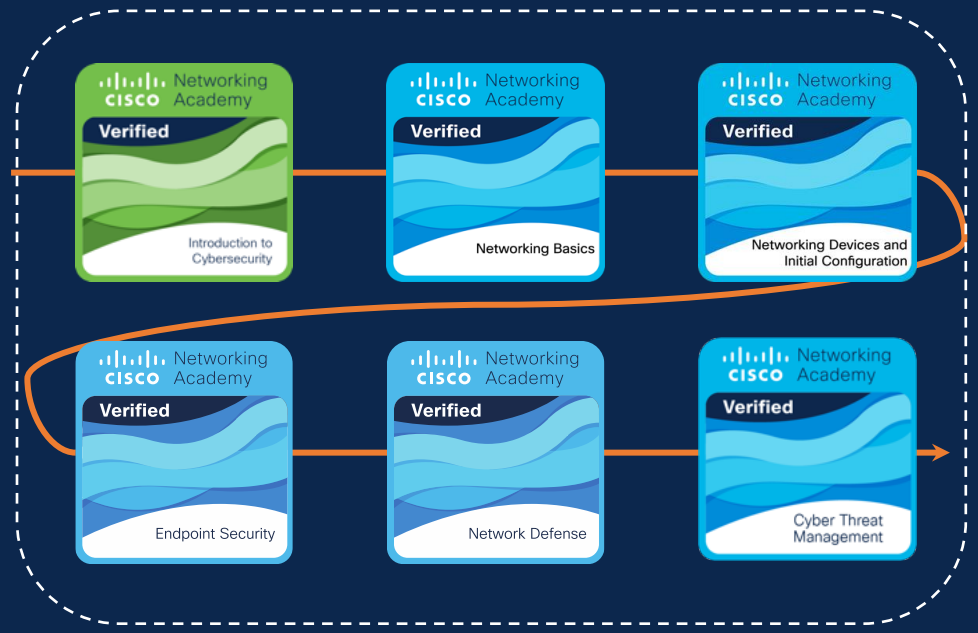
skillsforall.com

Introducing the IT Specialist Cybersecurity Certification

Early, entry-level credential

- ✓ Credible, third-party assessment
- ✓ Cost-efficient
- ✓ Early verification for learners at the entry-level
- ✓ Foundation for learners to continue on to earn associate-level certification

Learners gain verified skills along the pathway



Course Badges

Exam

Pathway Badge

Exam

Certification

Demo – Pathways and achievements

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Skills for All can lead to instructor-led course offerings

Catalog > Introduction to Cybersecurity

Introduction to Cybersecurity

This course is part of the **Career Path - Cybersecurity**

Explore the exciting field of cybersecurity and why cybersecurity is a future-proof career.

Resume Course

Modules

1. The need for cybersecurity
2. Attacks, concepts and techniques
3. Protecting your data and privacy
4. Protecting the organization
5. Will your future be in cybersecurity

6 Hours
Estimated time to complete - but finish it in your time.

7 Labs
Hands on activities to practice real world scenarios.

Beginner
Level of the course.

5 Languages
English, Español, Français, Português, українська

Catalog > Networking Basics

Networking Basics

This course is part of the **Career Path - Cybersecurity**

Start learning the basics of computer networking and discover how networks operate.

Resume Course

Modules

1. Communication in a Connected World
2. Network Components, Types, and Connections
3. Wireless and Mobile Networks
4. Build a Home Network
5. Communication Principles
6. Network Media
7. The Access Layer
8. The Internet Protocol
9. IPv4 Addressing
10. IPv6 Addressing
11. Dynamic Addressing with DHCP
12. Gateways to Other Networks
13. Address Resolution
14. Routing Between Networks
15. Transport Layer
16. Application Layer Services
17. Network Testing Utilities

25 Hours
Estimated time to complete - but finish it in your time.

13 Labs
Hands on activities to practice real world scenarios.

Beginner
Level of the course.

3 Languages
English, Español, Português

Catalog > Networking Devices and Initial Configuration

Networking Devices and Initial Configuration

This course is part of the **Career Path - Cybersecurity**

Continue learning networking essentials and build your foundational skills.

LANGUAGES AVAILABLE

English

Get Started

Modules

1. Network Design
2. Cloud and Virtualization
3. Number Systems
4. Ethernet Switching
5. Network Layer
6. IPv4 Addressing
7. Address Resolution
8. IP Addressing Services
9. Transport Layer
10. The Cisco IOS Command Line
11. Build a Small Cisco Network
12. ICMP

25 Hours
Estimated time to complete - but finish it in your time.

19 Labs
Hands on activities to practice real world scenarios.

Beginner
Level of the course.

3 Languages
English, Español, Português

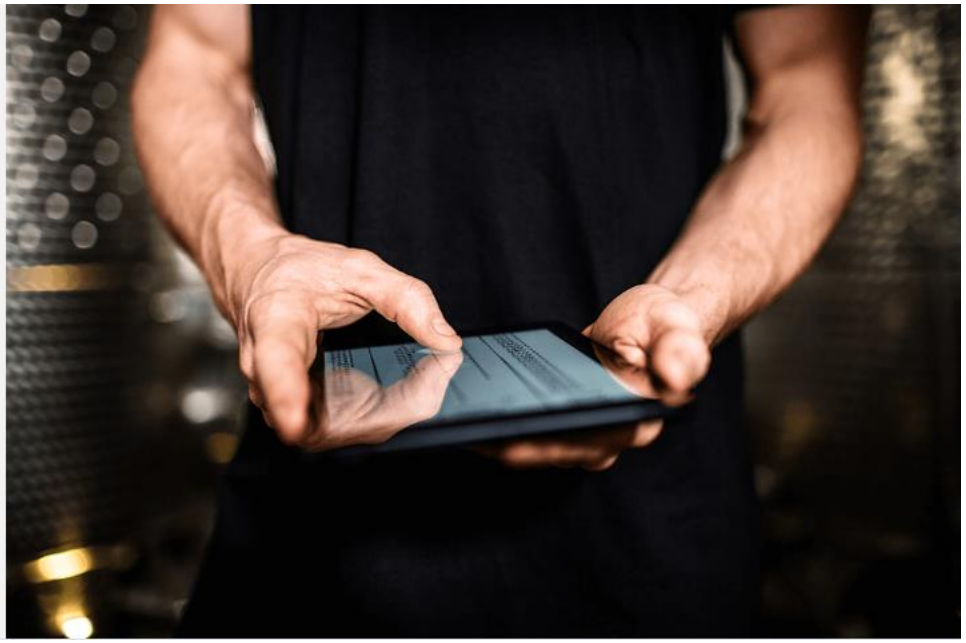
Catalog > Endpoint Security

Endpoint Security

This course is part of the **Career Path - Cybersecurity**

Learn to secure your network all the way to the edge.

Resume Course



Modules

1. Cybersecurity Threats, Vulnerabilities, and Attacks
2. Securing Networks
3. Attacking the Foundation
4. Attacking What We Do
5. Wireless Network Communication
6. Network Security
7. The Windows Operating System
8. Linux Overview
9. System and Endpoint Protection
10. Cybersecurity Principles, Practices, and Processes

40 Hours
Estimated time to complete - but finish it in your time.

31 Labs
Hands on activities to practice real world scenarios.

Intermediate
Level of the course.

3 Languages
English, Español, Português

Demo – Investigate a Threat landscape

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Catalog > Network Defense

Network Defense

This course is part of the **Career Path - Cybersecurity**

Learn how to monitor and protect your network and evaluate security alerts.

Resume Course

Modules

1. Understanding Defense
2. System and Network Defense
3. Access Control
4. Access Control Lists
5. Firewall Technologies
6. Zone-Based Policy Firewalls
7. Cloud Security
8. Cryptography
9. Technologies and Protocols
10. Network Security Data
11. Evaluating Alerts

40 Hours
Estimated time to complete - but finish it in your time.

29 Labs
Hands on activities to practice real world scenarios.

Intermediate
Level of the course.

3 Languages
English, Español, Português

Catalog > Cyber Threat Management

Cyber Threat Management

This course is part of the **Career Path - Cybersecurity**

Learn about cybersecurity governance and build your skills to manage threats.

LANGUAGES AVAILABLE

English

Get Started

Modules

1. Governance and Compliance
2. Network Security Testing
3. Threat Intelligence
4. Endpoint Vulnerability Assessment
5. Risk Management and Security Controls
6. Digital Forensics and Incident Analysis and Response

20 Hours
Estimated time to complete - but finish it in your time.

16 Labs
Hands on activities to practice real world scenarios.

Intermediate
Level of the course.

3 Languages
English, Español, Português

Data Analyst Career-Path

Skills for All with Cisco Networking Academy

ENABLING CAREERS

High Demand

Unfilled entry level data analyst positions number in the 100’s of thousands worldwide and these positions pay well

Data Science Jobs

Data analysts and scientists

AI and Machine learning specialist

Big Data specialists

Skills on demand

Data gathering, cleaning, and visualizing with the help of business intelligence tools like Tableau, spreadsheet software like Excel and programming languages such as SQL

“The world’s most valuable resource is no longer oil, but data.”

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Source: https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data

Data is driving Self-driving cars

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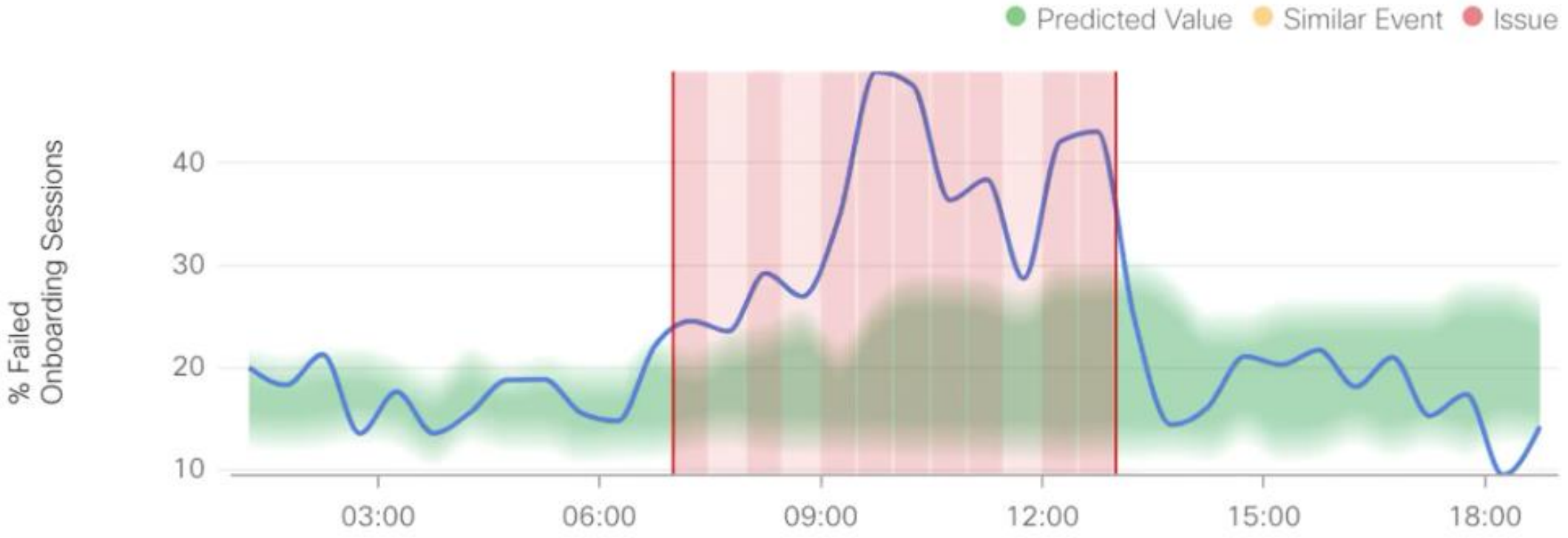
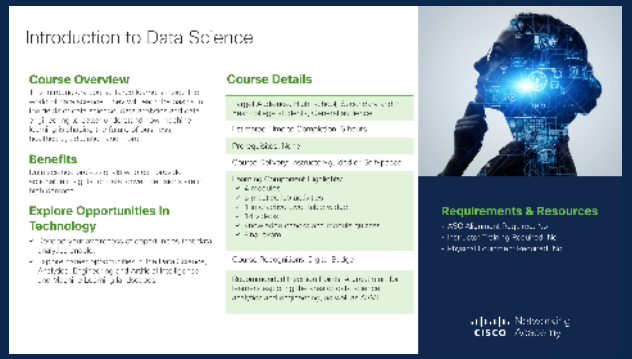
Data is driving Self-driving networks

AI/ML can prioritize alerts and save you time



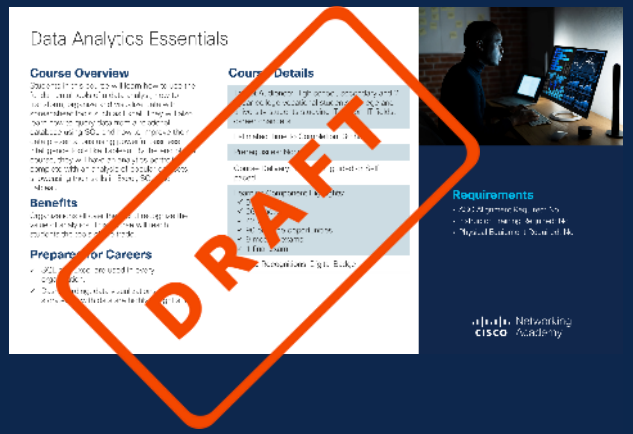
Learn more: https://www.cisco.com/c/en/us/solutions/collateral/enterprise-networks/nb-06-ai-nw-analytics-wp-cte-en.html

Data Analyst Career-Path



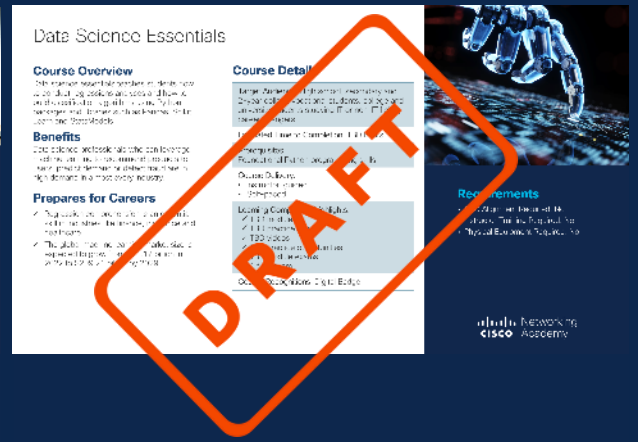
Learning Goals:

- Immersive, Gamified Experience
- Excitement About the Domain
- 360 View
- Data Analytics, Science, Engineering, AI/ML, etc.
- Understanding Job positions and Career Pathways



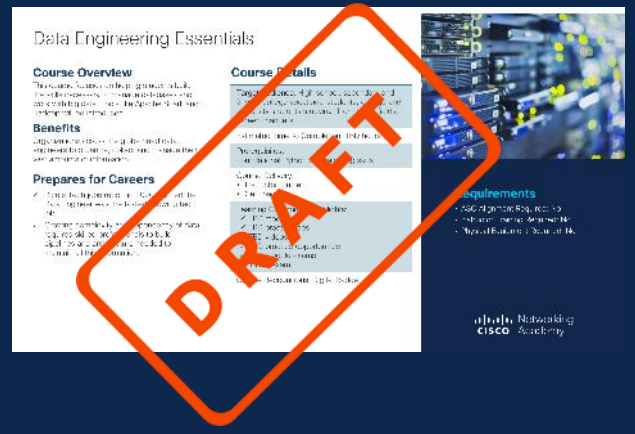
Learning Goals:

- Develop Employable Skills for "Data Analysts"
- Using Tools like Excel and SQL and Tableau to Analyze Data
- Develop Skills in Storytelling with Data



Learning Goals:

- Develop Employable Skills for "Data Scientists"
- Using Python and Data-related Modules to Collect and Analyze Data
- Exploratory Data Analytics
- Understanding Statistical Modeling
- Using Python for AI/ML applications



Learning Goals:

- Develop Employable Skills for "Data Engineers"
- Using ETL and Data Pipeline Tools
- Experience using tools like Spark, Kafka, Hadoop, etc.
- Understanding various Cloud-based Data Solutions (AWS, GCP, Azure)

Target release: This Autumn / Winter

Networking Academy

Introduction to Data Science

Course Overview

This introductory course takes learners inside the world of data science. They will learn the basics in the fields of data science, data analytics and data engineering to better understand how machine learning is shaping the future of business, healthcare, education and more.

Benefits

Data science professionals who can provide actionable insights for data-driven decisions are in high demand.

Explore Opportunities in Technology

- ✓ Develops awareness of opportunities that data analytics enable.
- ✓ Explores career opportunities in the Data Science, Analytics, Engineering and Artificial Intelligence and Machine Learning landscapes.

View Course – coming soon

Course Details

Target Audience: High-school, Secondary and 2-Year college students, General audience

Estimated Time to Completion: 6 hours

Prerequisites: None

Course Delivery: Instructor-guided or Self-paced

Learning Component Highlights:
- ✓ 4 modules
- ✓ 5 practice lab activities
- ✓ 1 interactive pivot table widget
- ✓ 14 videos
- ✓ Knowledge checks and module quizzes
- ✓ Final exam

Course Recognitions: Digital Badge

Recommended Next Course: Data Analytics Essentials

Requirements & Resources

- ASC Alignment Required: No
- Instructor Training Required: No
- Physical Equipment Required: No

Coming Soon

Networking Academy

Data Analytics Essentials

Course Overview

Learners will understand how to use the fundamental tools of a data analyst, and how to transform, organize and visualize data with spreadsheet tools such as Excel. They will learn how to query data from a relational database using SQL and how to improve their data presentations using powerful business intelligence tools like Tableau. By the end of the course, they will have an analytics portfolio complete with an analysis of popular datasets, showcasing their skills in Excel, SQL and Tableau.

Benefits

Organizations all over the world recognize the value of analytics. This course teaches the tools of the trade.

Prepares for Careers

- ✓ SQL and Excel are used in every organization.
- ✓ Dashboarding, data visualizations and storytelling with data are highly sought after.

View Course – coming soon

Course Details

Target Audience: High school, secondary and 2-year college vocational students, college and university students studying IT or non-IT fields, career changers

Estimated Time to Completion: 30 hours

Prerequisites: None

Course Delivery: Instructor-guided or Self-paced

Learning Component Highlights:
- ✓ 9 modules
- ✓ 26 practice labs
- ✓ 42 videos
- ✓ 90 practice opportunities
- ✓ 9 module exams
- ✓ 1 final exam

Course Recognitions: Digital Badge

Recommended Next Course: Python Essentials 1

Requirements

- ASC Alignment Required: No
- Instructor Training Required: No
- Physical Equipment Required: No

Target release: Early New-year

Data Science Essentials

DRAFT

Requirements

- ASC Alignment Required: No
- Instructor Training Required: No
- Physical Equipment Required: No

Networking Academy

Data Engineering Essentials

DRAFT

Requirements

- ASC Alignment Required: No
- Instructor Training Required: No
- Physical Equipment Required: No

Networking Academy

Introduction to Data Science

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Data science professionals who can provide actionable insights for data-driven decisions are in high demand.

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- ✓ Develop your awareness of opportunities that data analytics enable.
- ✓ Explore career opportunities in the Data Science, Analytics, Engineering and Artificial Intelligence and Machine Learning landscapes.

Course Details

Target Audience: High-school, Secondary and 2-Year college students, General audience

Estimated Time to Completion: 6 hours

Prerequisites: None

Course Delivery: Instructor-guided or Self-paced

Learning Component Highlights:

- ✓ 4 modules
- ✓ 5 practice lab activities
- ✓ 1 interactive pivot table widget
- ✓ 14 videos
- ✓ Knowledge checks and module quizzes
- ✓ Final exam

Course Recognitions: Digital Badge

Recommended Insertion Points: A great start for learners exploring the area of data science, analytics and engineering, as well as AI/ML.

Requirements & Resources

- ASC Alignment Required: No
- Instructor Training Required: No
- Physical Equipment Required: No

Networking Academy

Networking Academy

Module 1: Experience Analytics

Examine the basics of data analytics

Scroll down and select 'Introduction' to begin.

0. Introduction

1. What is Data?

2. Data is All Around Us

3. Business Understanding

4. Experience Analytics

Networking Academy

Module 2: Data Collection and Storage

Identify the primary components of data collection and storage.

Scroll down and select 'Introduction' to begin.

0. Introduction

1. Data is Growing Exponentially

2. Data Collection and Gathering

3. Data Collection and Gathering Summary

Networking Academy

Module 3: Artificial Intelligence and Machine Learning

Analyze the concepts of AI and ML.

Scroll down and select 'Introduction' to begin.

0. Introduction

1. AI Fact and Fiction

2. Big Data and Machine Learning

3. AI and ML Summary

Networking Academy

Module 4: Embarking on Your Career in Data Analytics

Explain the promises and challenges of Data Analytics.

0. Introduction

1. Preparing for a Career in Data Analytics

2. Taking the Next Steps

3. Embarking on Your Career in Data Analytics

Demo – Intro to Data Science

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Data Analytics Essentials

Data Analytics Essentials

DRAFT

Course Overview

Students in this course will learn how to use the fundamental tools of a data analyst, how to transform, organize and visualize data with spreadsheet tools such as Excel. They will also learn how to query data from a relational database using SQL and how to improve their data presentations using powerful business intelligence tools like Tableau. By the end of the course, they will have an analytics portfolio complete with an analysis of popular datasets, showcasing their skills in Excel, SQL and Tableau.

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- ✓ 9 modules
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- ✓ 90 practice opportunities
- ✓ 9 module exams
- ✓ 1 final exam

Course Recognitions: Digital Badge

Requirements

- ASC Alignment Required: No
- Instructor Training Required: No
- Physical Equipment Required: No

Networking Academy

Data Analytics Essentials – Course Outline

Module name	Description
1. Data Analytics Projects	Explain how data analytics projects are organized. Walks the students through creating a Github account and blog.
2. Starting the Process	Explain how data analysis aids in solving problems
3. Data Acquisition	Obtain appropriate data for analysis
4. Transforming data using Excel	Organize and transform data using Excel
5. Analyze data using Statistics	Overview of descriptive and inferential statistics with a focus on choosing the right visuals and identifying anomalies in the data
6. Introduction to structured queries	Formulate structured data queries using SQL
7. Introduction to Tableau	Create visualizations and meaningful dashboards with business intelligence software
8. Introduction to the Scientific Method	Overview of deductive and inductive reasoning. Demonstrate an awareness of the ethical issues that affect the use and analysis of data.
9. Evaluate and share a project portfolio	Create a complete and shareable portfolio showcasing your skills with Excel, SQL and Tableau

Networking Academy Instructors have options

The Instructor-guided Learner Experience on Skills for All expands course delivery options and tools for teaching. See if it might be right for you.

NetAcad.com

Choose existing self-paced courses for:

- Localized self-paced courses
- Course customizations
- Class management
- Student messaging
- Live support agent
- Other student enrollment options

SkillsForAll.com

Choose new instructor-guided courses for:

- Easy course creation
- Easier learner onboarding
- Single Sign On
- Use self-enrollment links to register students or csv upload
- Gamification
- Mobile-first
- Monitor student progress

How Skills for All helps Academies

Create a pipeline

Use Skills for All courses to create a pipeline to additional certification-aligned courses that instructors are already teaching

Reach more students

By attracting learners earlier in their learning journey

Stay relevant

By offering innovative curriculum and certification-aligned courses that prepare students to succeed in the changing landscape of IT

Save instructors' time

Without skimping on quality by leveraging engaging, ready-made online content – featuring videos, gamification, practice labs, and more - plus, metrics for academies.

What is the Instructor-Guided Learner Experience?

Your opportunity to leverage the power of the innovative online learning experience on Skills for All.

Academy instructors can open free, mobile-friendly, online courses and monitor student progress.

Guide learners through engaging content, pre-built with gamification, interactive activities, videos, practice labs, and more.

Early access – be one of our first educators and help shape the experience.

Why use SFA? Use Case: Engage new students

School Campaign

School may offer SFA courses to engage potential students or direct them to new career possibilities

Connect anywhere

Students can access from their phones anywhere with a better user experience

Higher engagement

The course content and gamification style will help them get engaged and continue to get achievements

Decide new career

This could start a new interest and maybe the start of a new career

Start with an Intro course

Follow a Career pathway

Continue with Career ready courses

Skillsforall.com

NetAcad.com

Resources for You

- Video from Laura Quintana, Vice President and General Manager, Cisco Networking Academy
- FAQ
- Instructor-Guided Resources
- Participation Criteria
- Social Media Tiles
- Email Signatures
- Webex Backgrounds
- And more

View Skills for All Communications landing page for details (login required).

Cs.co/sfanews

Networking
cisco Academy