

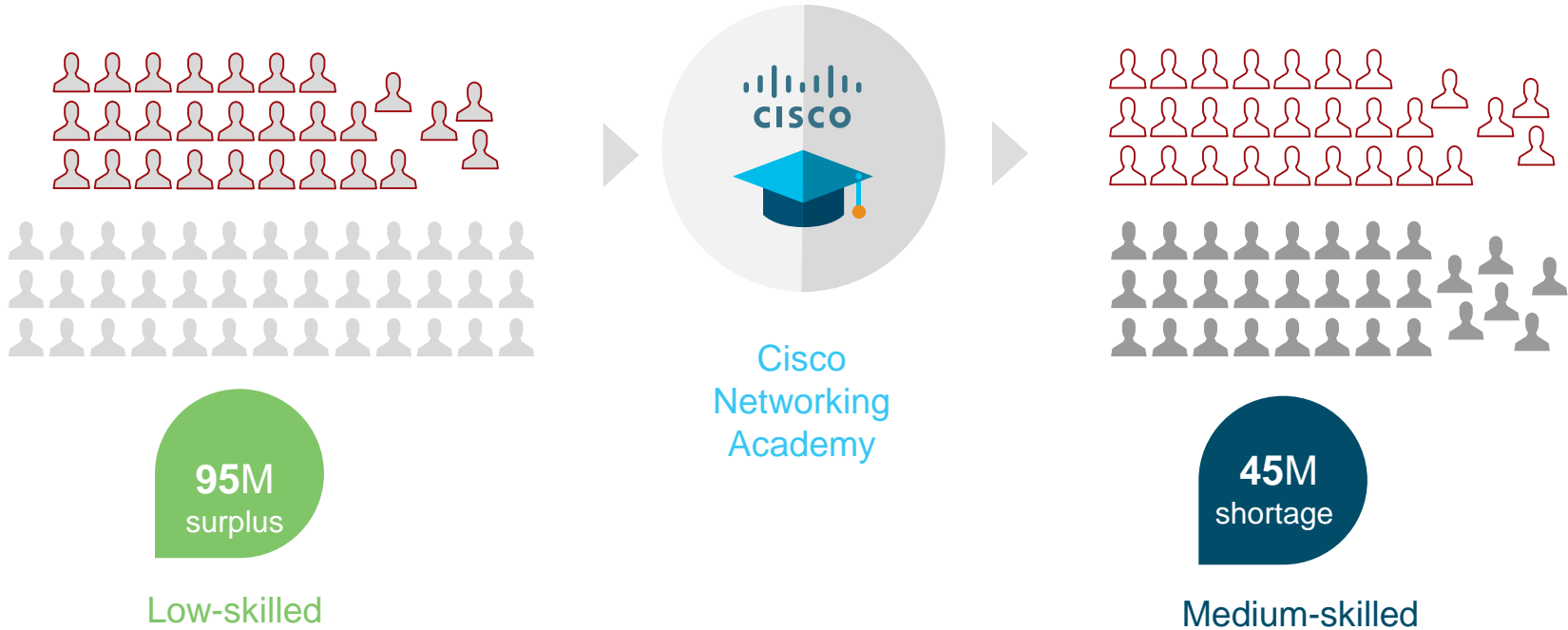
# The Learning Experience @ Cisco Networking Academy

January 2017

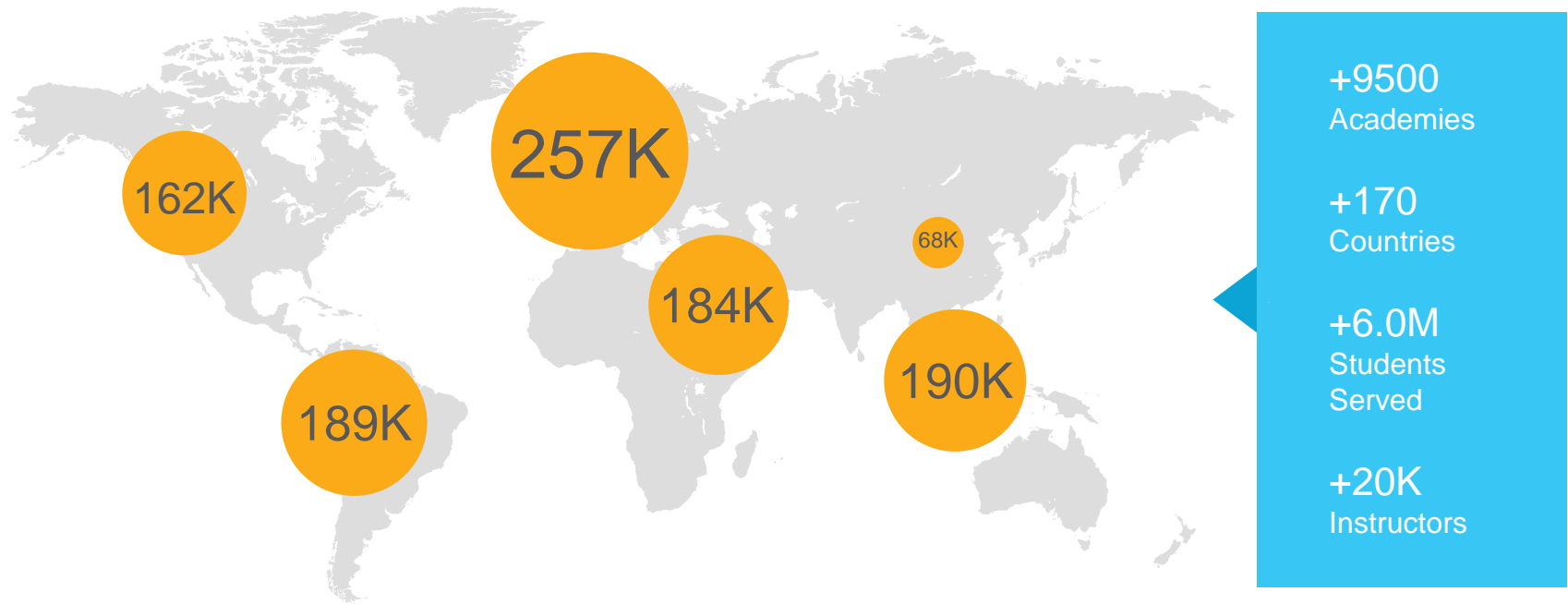


# Number of IT Skilled Workers by 2020

McKinsey Report, *Fortune Magazine*, May 2015



# Cisco: The Worldwide Leader in IT



Cisco Networking Academy 1M Currently Enrolled Globally

Preparing people for IT careers since 1997

“ The Cisco Networking Academy curriculum helped start my career as a young student, enhance my skills as a professional and provide new growth opportunities as an instructor. My success was driven by the fact that each course has a unique balance of written, multimedia, and interactive content to suit any kind of learner.”



**Stephen Lynch,**  
Former Networking Academy  
student and instructor  
Consulting Systems Engineer,  
Cloud Solutions

# LET'S BUILD TOMORROW TODAY





# Networking Academy Learning Experience

Dynamic assessments  
and rich feedback  
support personalized  
instruction





# Networking Academy Learning Experience

Develop teamwork skills while doing simulated and hands-on activities



- COMMUNICATE
- COLLABORATE
- PROBLEM SOLVE



# The Skills-to-Jobs Learning Experience

## What Students Learn

- Networking
- Security and Cybersecurity
- IoT
- Programming
- Linux and General IT

## How Students Learn

- Learning by doing
- Problem-solving
- Project-based learning
- Initiative and leadership
- Real-world experiences

## How Students Think

- Customer-centric mindset
- Critical thinking
- Personal and social responsibility
- Business context



Courses in  
20+ Languages



Hands-On



Flexible Delivery



Supports Personalized  
Instruction



Simulations



Hackathons

# Becoming a T-Shaped Professional

Developing  
the Depth  
and Breadth  
of Today's  
Professional

21<sup>st</sup> Century Digital Skills

Many Disciplines

Many Systems

Deep in at  
Least One  
Discipline

Deep in at  
Least One  
System



# Becoming a T-Shaped Professional



Exposure

Observe or Listen  
to an Expert



Education

Engage in an  
Instructional Environment



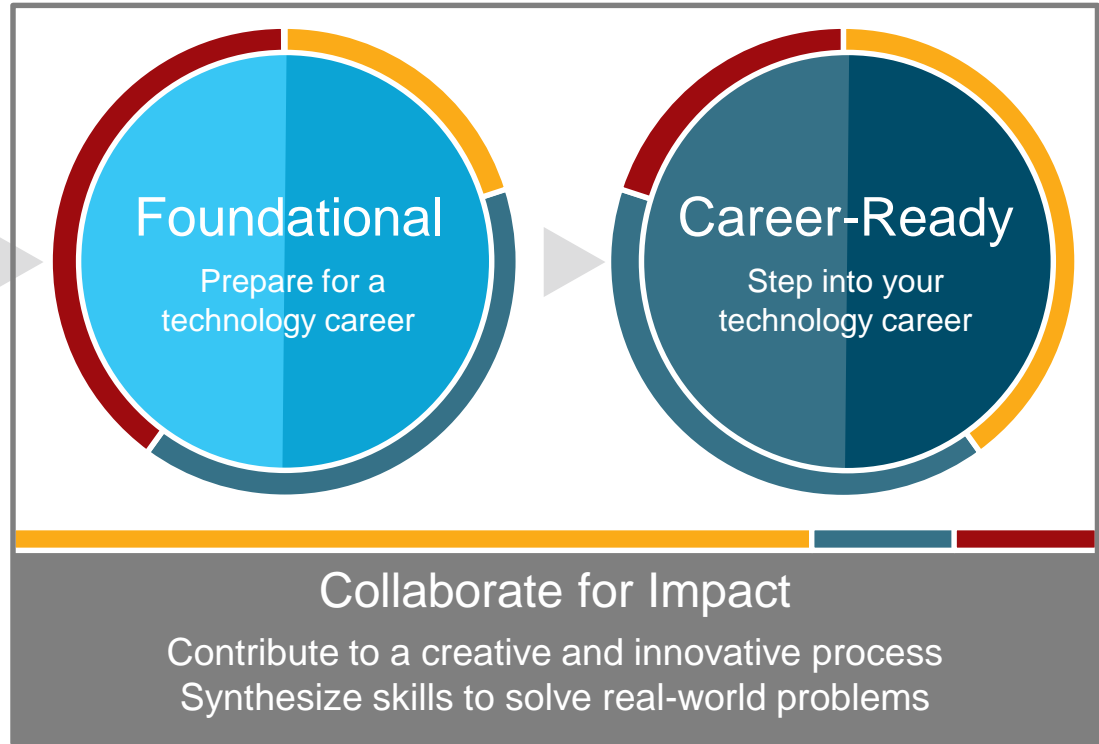
Experience

Learn by  
Doing

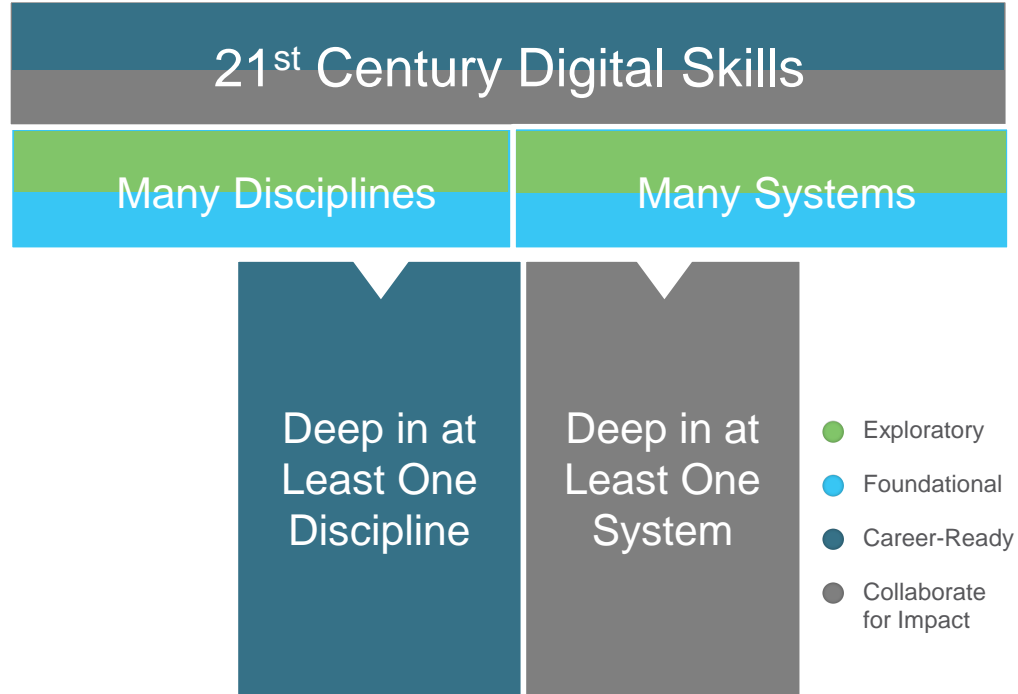
# Our Portfolio Builds Interest and Competency



Exposure



# The Networking Academy Learning Portfolio Approach



# The Networking Academy Learning Portfolio




Certification-aligned

\* Available within 12 months

	Exploratory	Foundational	Career-Ready
Networking	Packet Tracer Know How	Networking Essentials Mobility Fundamentals	CCENT Routing and Switching (2) ✓ CCNA Routing and Switching (2) ✓ CCNP Routing and Switching (3) ✓
Security	Introduction to Cybersecurity	Cybersecurity Essentials	CCNA Security ✓ CCNA Cyber Ops* ✓
IoT	Introduction to IoT	IoT Fundamentals : Connecting Things* Big Data and Analytics* Hackathon Playbook*	
OS & IT	NDG Linux Unhatched	NDG Linux Essentials ✓ IT Essentials ✓	NDG Linux I ✓ NDG Linux II
Programming		Programming Essentials in C, C++ Python* ✓	Programming in C, C++ * ✓
Business	Be Your Own Boss	Entrepreneurship	
Digital Literacy	Get Connected		

# The Networking Academy Learning Portfolio

 Certification-aligned  
 \* Available within 12 months

Collaborate for Impact

Hackathons

Regional IT Competitions

Packet Tracer

Internships

NetRiders Competition

Exploratory

Foundational




Career-Ready



Networking

Packet Tracer Know How

Networking Essentials  
 Mobility Fundamentals


CCENT Routing and Switching (2)   
 CCNA Routing and Switching (2)   
 CCNP Routing and Switching (3) 



Security

Introduction to Cybersecurity

Cybersecurity Essentials

CCNA Security   
 CCNA Cyber Ops\* 



IoT

Introduction to IoT

IoT Fundamentals : Connecting Things\*  
 Big Data and Analytics\*  
 Hackathon Playbook\*



OS & IT


NDG Linux Unhatched


NDG Linux Essentials   
 IT Essentials 

NDG Linux I   
 NDG Linux II



Programming

Programming Essentials in C, C++   
 Python\*

Programming in C, C++ \* 



Business

Be Your Own Boss

Entrepreneurship



Digital Literacy

Get Connected



# Flexible Pathways for The New Global Problem Solvers

Learning Progressions | Flexibility to Adapt | Increase Employability | New Technologies

# Networking Professional

As major industries migrate their infrastructure to take full advantage of IoT, the role and skills required of a networking professional are evolving and more vital than ever because the network connects everything.

Sample Titles: [Networking Technician](#), [Network Analyst](#), [Network Administrator](#), [Network Engineer](#)

## Typical Workplace

- Office
- Customer site
- Home

## Company Size and Type

- Medium to large enterprises
- Network service providers
- Tech support centers

## Personality Type

- Problem-solver
- Always learning
- Like working with others

## Strengths

- Strong balance of technical, teamwork and communication skills

## Education Level

- 2-year college to 4-year college

## Certifications

- CCENT, CCNA R&S, CCNP R&S



Learn more at:

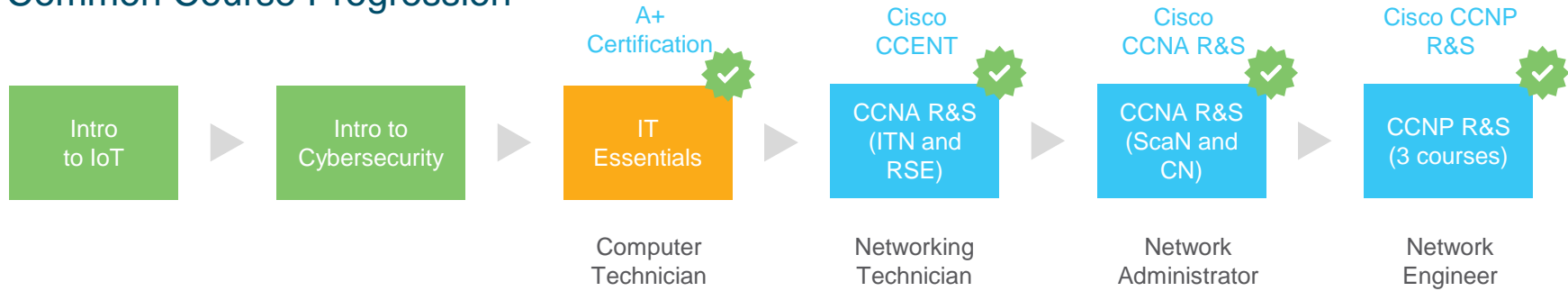
[NetAcad.com](https://www.netacad.com)

[NetAcad Group LinkedIn](#)

[NetAcadAdvantage](#)


# Networking Professional

## Common Course Progression



## Complementary Learning Activities

### Expand Your Knowledge

- Networking Essentials (possible alternate to IT Essentials)
- Cybersecurity Essentials
- NDG Linux Essentials
- CPA: Programming Essentials in C++ 
- Career and Networking Technology Webinars

- IoT Fundamentals
- Connecting Things\*
- Big Data and Analytics\*
- Hackathon Playbook\*

### Collaborate for Impact

- [Cisco NetRiders Competition](#)
- [NetAcad Advantage](#)
- Regional IT Competitions
- [Hackathons](#)
- [Internships](#)



Certification

\* Available within 12 months



# Security Professional

As more people and things are connected to the network, security professionals are in high demand to develop and implement security infrastructure, recognize threats and vulnerabilities to networks, and mitigate security threats.

Sample Titles: Security Administrator, Security Engineer, Cyber Operations Specialist

## Typical Workplace

- Office working in teams

## Company Size and Type

- Enterprise
- Service Provider  
(Medium Business if also have CCNA R&S cert)

## Personality Type

- Creative investigator
- Always learning
- Likes working with others

## Strengths

- Strong balance of technical, teamwork and communication skills

## Education Level

- 2-year college to 4-year college

## Certifications

- CCNA Security



Learn more at:

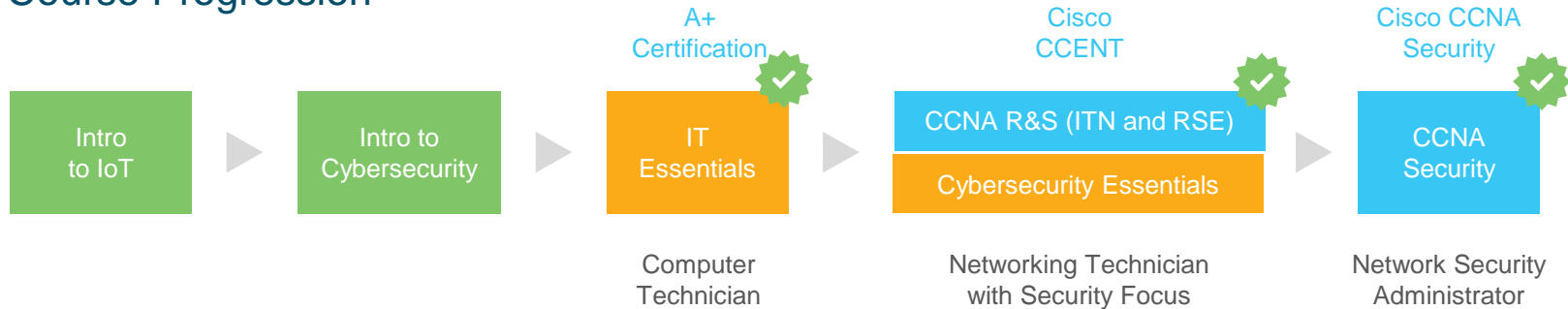
[NetAcad.com](https://www.netacad.com)

[NetAcad Group LinkedIn](#)

[NetAcadAdvantage](#)

# Network Security Administrator

## Course Progression



## Complementary Learning Activities

### Expand Your Knowledge

- Networking Essentials (possible alternate to IT Essentials)
- CPA: Programming Essentials in C++
- NDG Linux Essentials
- Networking and Security Technology Webinars
- IoT Fundamentals
- Connecting Things\*
- Big Data and Analytics\*
- Hackathon Playbook\*

- **CCNA R&S:** (CCNA R&S Certification)
- Scaling Networks
- Connecting Networks

### Collaborate for Impact

- [Cisco NetRiders Competition](#)
- [Regional IT Competitions](#)
- [Internships](#)
- [NetAcad Advantage](#)
- [Hackathons](#)



Certification-aligned

\* Available within 12 months



# Emerging Skills needed in the new Digital Economy

Digital Transformation | IoT Foundation | Big Data and Analytics | Digital Competency



## Digitization

moving a company, city or country's entire operations, processes, and businesses onto a single digital operating model – transforming processes and business models



## Digital Transformation

transformative outcomes achieved when organizations fully leverage the changes and opportunities of digital technologies and their impact across society



## Digital Disruption

the change that occurs when new digital technologies and business models impact a company's value proposition and market position

# Creating a Digital Workforce

## The Need

### Growing Skills Shortage

**63%** of CEOs see lack of skills as a serious concern

## The Opportunity

### Massive Youth Unemployment

**75M** Unemployed Youth

Our R&D team researches, develops and tests the skills and educational approaches that best prepare students for digital careers

Our initial focus is foundational skills in IoT, Data Analytics and general Digital Competency

## Personality Type

- Creative thinker
- Problem-solver
- Curious
- Desire to become the above

## Strengths

- Think from a business outcomes perspective
- Solve problems in diverse teams

## Education Level

- Secondary vocational program
- 2-year college to 4-year college
- Bootcamp



# IoT Foundation



“ If you think that the internet has changed your life, think again. The IoT is about to change it all over again!”

–Brendan O’Brien,  
Chief Architect and Co-Founder, Aria Systems

## Career Opportunities

The installation and operation type job families will continue to merge with networking job families. Knowledge in these areas will remain a great fit for entry level technology careers and career growth into more advanced roles.

## Foundation for:

Field Technician, IoT Operations, IoT Security Operations



Decide courses based on student starting point and learning goal:

### Exploratory

- Intro to IoT
- Intro to Cybersecurity

### Essential Skills

- Python\*
- Networking Essentials
- NDG Linux Essentials
- IT Essentials

### IoT Fundamentals

- Connecting Things\*
- Big Data and Analytics\*
- Hackathon Playbook\*

### Networking

- CCENT certification

# Big Data and Analytics



“ In God we trust.  
All others must bring data.”

–W. Edwards Deming

## Career Opportunities

Connected IoT devices produce, lots and lots of data. Thus there is a growing need for expertise in managing storing, manipulating and analyzing and presenting data in a format useful for decisions by people and devices.

## Foundation for:

Data Developers, Business Data Analysts



Decide courses based on student starting point and learning goal:

### Exploratory

- Intro to IoT
- Intro to Cybersecurity

### Essential Skills

- Python\*
- Linux Essentials
- Networking Essentials

### IoT Fundamentals

- Connecting Things\*
- Big Data and Analytics\*
- Hackathon Playbook\*

# Digital Competency



“There is no room for complacency in a fast-moving digital world.”

—Neelie Kroes,  
EU commissioner for Digital Agenda

## Career Opportunities

All organizations today recognize IT as critical to business success. Breadth in foundational technology skills is a great differentiator and increases a student's employability.

These offerings help students discover the importance of digital skills and the career options they would like to pursue further.



Decide courses based on student starting point and learning goal:

### New to the Web

- Get Connected

### General Audience

- Intro to IoT
- Intro to Cybersecurity

### Digital Literacy

- Python\*
- Networking Essentials

### Makers and Tinkerers

- IoT Fundamentals\*
- Packet Tracer 7





“If I didn’t have an opportunity for a business challenge with a positive impact for society... I wouldn’t be here today.”

Chuck Robbins  
CEO, Cisco

# What Can You Do Next?



Sign-up to  
become  
an Academy



Start an  
Exploratory  
Program



Start a  
Cert-Aligned  
Program

Sample Job Titles

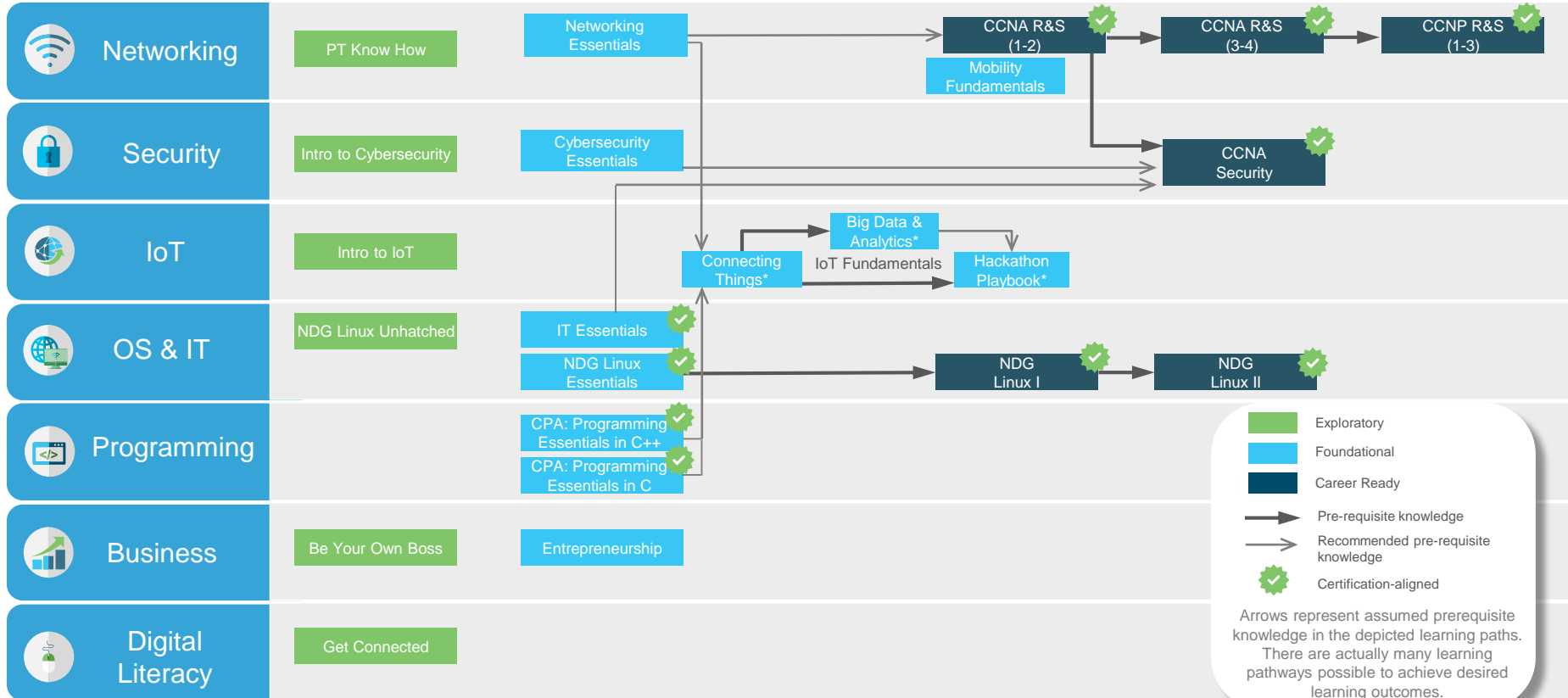
- Technical Support
- IT Field Service Technician
- Help Desk Technician

- Mobile Application Support
- Network Support Technician
- Network Analyst

- Network Technician
- Support Engineer
- Network Administrator

- Entry-Level Network Engineer
- Linux Administrator
- Cyber Ops Analyst

- Level II Network Engineer
- Network Designer



\* Available within 12 months

# Exploratory

# Introduction to IoT

## Course Overview

The Introduction to IoT (Internet of Things) course introduces learners to the technologies that support IoT, and the career and social opportunities created by the growing number of networked connections between people, processes, data, and things.

## Benefits

For students seeking an overview of trends, technologies, and career opportunities in the Internet of Things.

## Learning Components

- 5 modules of interactive content featuring IoT experts
- Activities, videos, and simulations to enhance the learning experience
- Pre-test, module quizzes, and a final exam



## Features

**Target Audience:** General audience

**Prerequisites:** None

**Instructor Training Required:** No

**Languages:** Arabic, Chinese-S, Chinese-T, English, French, German, Italian, Japanese, Korean, Portuguese-BR, Russian, Spanish

**Course Delivery:** Instructor-led or Self-paced

**Estimated Time to Complete:** 20 hours

**Recommended Next Course:** IT Essentials or IoT Fundamentals: Connecting Things\*

# Introduction to Cybersecurity

## Course Overview

The Introduction to Cybersecurity course explores cyber trends, threats and staying safe in cyberspace, and protecting personal and company data.

## Benefits

Learn how to protect your personal data and privacy online and in social media, and why more and more IT jobs require cybersecurity awareness and understanding.

## Learning Components

- 5 modules
- Interactive and instructional content
- 8 Activities and 7 lab exercises that reinforce learning
- 4 quizzes and 1 final exam
- Links to related resources



## Features

**Target Audience:** Secondary and 2-Year college students, general audience

**Prerequisites:** None

**Instructor Training Required:** No

**Languages:** Chinese-S, English, French, German, Italian, Japanese

**Course Delivery:** Instructor-led or Self-paced

**Estimated Time to Complete:** 15 hours

# Get Connected

## Course Overview

Get Connected students are introduced to the Internet and experiment with various social networking sites. Talking characters and devices make this course a user-friendly environment for an audience new to IT.

## Benefits

Get Connected teaches basic communication and collaboration technologies, essential skills for career advancement in today's global workforce.

## Learning Components

- 5 chapters
- Illustrations and narrations guide students through topics
- Videos and activities
- Quizzes



## Features

**Target Audience:** Secondary and general audience new to IT

**Prerequisites:** None

**Instructor Training Required:** No

**Languages:** Chinese-S, English, French, German, Italian, Portuguese-BR, Spanish

**Course Delivery:** Instructor-led or Self-paced

**Estimated Time to Complete:** 30 hours

**Recommended Next Course:** IT Essentials

# NDG Linux Unhatched

## Course Overview

Aligned to the Linux exam objectives found on the CompTIA A+ 220-902 exam, this course teaches basic installation and configuration of Linux software and introduces the Linux command line.

## Benefits

NDG Linux Unhatched eases learners into acquiring Linux knowledge with a free online learning course.

## Learning Components

- 1 Module
- 20 Pages
- Built-in Linux machine with activities
- 1 Assessment



## Features

**Target Audience:** Secondary and general audience new to IT

**Prerequisites:** None

**Instructor Training Required:** No

**Course Delivery:** Self-paced

**Estimated Time to Complete:** 6-8 hours

**Recommended Next Course:** NDG Linux Essentials



# Packet Tracer Know How

## Course Overview

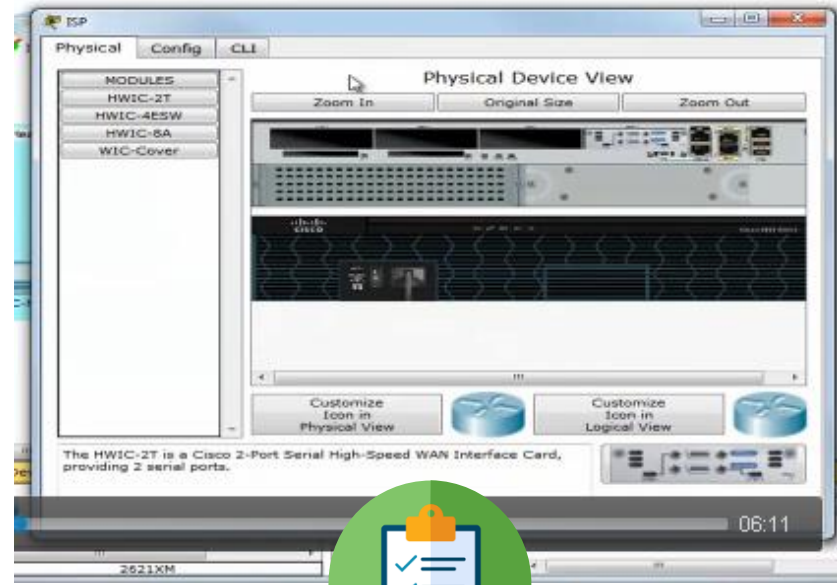
The Packet Tracer Know How series is designed for new users of Packet Tracer for self-study and familiarization with the tool used in many Networking Academy courses. Packet Tracer courses are available for the desktop and for mobile (Android and iOS).

## Benefits

The Packet Tracer Know How series introduces tips and best practices to help instructors and students use Cisco Packet Tracer as an effective and engaging learning and assessment tool.

## Learning Components

- Files and demos
- Video Recordings
- Hands-on learning activity
- Quiz



## Features

**Target Audience:** General audience

**Prerequisites:** None

**Instructor Training Required:** No

**Languages:** English, French

**Course Delivery:** Instructor-led or Self-paced

**Estimated Time to Complete:** 1 hour

# Be Your Own Boss

## Course Overview

The Be Your Own Boss or Technopreneur series provides the guidelines, insights, and advice needed to launch successful tech ventures.

The series features video presentations by entrepreneurs from around the world who share lessons learned along their journeys to success.

## Benefits

Technology students interested in developing the entrepreneurial skills and habits needed to launch and grow a successful technology business.

## Learning Components

- 8 modules
- Technopreneurs sharing personal success stories in video format
- Quizzes and surveys for each module



## Features

**Target Audience:** General audience

**Prerequisites:** None

**Instructor Training Required:** No

**Languages:** English

**Course Delivery:** Instructor-led or Self-paced

**Estimated Time to Complete:** 8 hours

**Recommended Next Course:** Entrepreneurship

# Foundational

# IT Essentials

## Course Overview

IT Essentials covers fundamental computer and career skills for entry-level IT jobs. Students apply skills and procedures to install, configure, and troubleshoot computers, mobile devices, and software.

## Benefits

For students seeking career-oriented, entry-level hardware and software skills to prepare for technical support roles, this course aligns with the CompTIA A+ certification.

This course also serves as a foundation for CCNA-level courses.

## Learning Components

- 14 chapters
- 99 hands-on labs and 29 interactive activities
- Cisco Packet Tracer, virtual laptop, and virtual desktop learning tools
- 14 chapter exams, 1 checkpoint exam, 1 skills review exam, 1 practice final exam, 1 final exam, 1 skills-based assessment, and 2 practice exams for CompTIA A+ certification



## Features

**Target Audience:** Secondary and 2-year college vocational students

**Prerequisites:** None

**Instructor Training Required:** Yes

**Languages:** Arabic, Chinese-S, Chinese-T, Croatian, English, French, German, Hebrew, Hungarian, Italian, Japanese, Polish, Portuguese-BR, Romanian, Russian, Spanish, Turkish, Ukrainian

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** CCNA R&S Introduction to Networks

# Networking Essentials

## Course Overview

Networking Essentials teaches networking based on environments students may encounter in their daily lives including small office and home office (SOHO) networking. This course provides hands-on learning using real equipment and Packet Tracer simulation activities.

## Benefits

This course teaches the skills needed to obtain entry-level SOHO network installer jobs. It also helps students develop some of the skills needed to become network technicians, cable installers, and help desk technicians.

Networking Essentials prepares students for continuing with the CCNA R&S curriculum. Students studying other non-IT fields would also find this course a useful introduction to IT and networking.

## Learning Components

- 9 chapters
- 21 hands-on labs
- 17 Cisco Packet Tracer files
- 1 hands on skill assessment
- 9 chapter exams, 1 checkpoint exam, 1 practice final exam, 1 final exam



## Features

**Target Audience:** Secondary and 2-year college vocational students, college and university students studying non-IT fields

**Prerequisites:** None

**Instructor Training Required:** Yes

**Languages:** English

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** CCNA R&S Introduction to Networks, Introduction to IoT

# Cybersecurity Essentials

## Course Overview

Cybersecurity Essentials covers foundational knowledge and essential skills for all cybersecurity domains including information security, systems security, network security, ethics and laws, and defense and mitigation techniques used in protecting businesses.

## Benefits

This course is recommended for students planning to study any CCNA certification. It provides foundational security skills for entry-level networking and security roles.

## Learning Components

- 8 chapters
- 34 interactive activities, 10 Cisco Packet Tracer Activities, 12 hands-on labs that reinforce learning
- 8 chapter quizzes, 1 final exam
- Links to related resources



## Features

**Target Audience:** Secondary and 2-year college vocational students

**Prerequisites:** Introduction to Cybersecurity

**Instructor Training Required:** No

**Languages:** English

**Course Delivery:** Instructor-led and Self-paced

**Estimated Time to Complete:** 30 hours

**Recommended Next Course:** CCNA R&S Introduction to Networks

# NDG Linux Essentials

## Course Overview

The NDG Linux Essentials course, developed by Networking Academy partner NDG, teaches the fundamentals of the Linux operating system and command line and open source concepts.

The Linux virtual machine is embedded in the course; allowing students to experiment with Linux commands.

## Benefits

Learn Linux OS, open source programming, and IoT skills to expand IT knowledge beyond networking. Aligns with the Linux Professional Institute (LPI) Linux Essentials Professional Development Certificate.

## Learning Components

- 16 chapters
- Built-in virtual machine to experiment with Linux commands
- 13 lab exercises
- Learner-directed activities
- Chapter exams, mid-term, and final exam



Network Development Group

[www.netdevgroup.com](http://www.netdevgroup.com)

October 1, 2014

Overview

Linux Essentials Course



## Features

**Target Audience:** Secondary and 2-year college students

**Prerequisites:** None

**Instructor Training Required:** No

**Languages:** English

**Course Delivery:** Instructor-led or Self-paced

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** CCNA R&S Introduction to Networks

# CPA: Programming Essentials in C++

## Course Overview

Prepares student to accomplish coding tasks related to the basics of programming in the C++ language and the fundamental notions and techniques used in object-oriented programming.

## Benefits

Builds the skills you need for entry-level programming career opportunities and to succeed in jobs related to software development, network engineering and system administration.  
Aligns with CPA – C++ Certified Associate Programmer Certification

## Learning Components

- 8 modules of interactive instructional content
- More than 100 practice labs
- Chapter and Final exams



## Features

**Target Audience:** Secondary, 2-year and 4-year college students

**Prerequisites:** None

**Instructor Training Required:** No

**Languages:** English

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** IoT Fundamentals, CCNA R&S, NDG Linux Essentials



# CLA: Programming Essentials in C

## Course Overview

The CLA: Programming Essentials in C curriculum is designed for students who want to learn the fundamentals of programming through the C language.

## Benefits

Learn the universal concepts of computer programming, as well as the syntax, semantics and data types of the C language needed for for entry-level programming career opportunities. Aligns with CLA – C Programming Language Certified Associate Certification.

## Learning Components

- 9 modules of interactive instructional content
- More than 80 practice labs
- Chapter and Final exams



Certification  
Aligned

## Features

**Target Audience:** Secondary, 2-year and 4-year college students

**Prerequisites:** None

**Instructor Training Required:** No

**Languages:** English

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** IoT Fundamentals, CCNA R&S, NDG Linux Essentials

# Mobility Fundamentals

## Course Overview

Starting with Wireless Technology Standards, the Mobility Fundamentals series teaches students about wireless and mobility technologies in the Digital Transformation Age.

Topics covered in these instructor-developed courses include wireless LAN design and mobility applications.

## Benefits

Builds foundational wireless and mobility technology career skills for current IT Essentials or CCNA R&S students interested in expanding their skills.

## Learning Components

- Six modules of multimedia content
- Video recordings featuring Networking Academy instructors
- Activities that reinforce learning, including Cisco Packet Tracer activities
- Assessments, including module quizzes
- Certificates of completion for each module



## Features

**Target Audience:** Secondary, 2-year and 4-year college students

**Prerequisites:** CCENT knowledge

**Instructor Training Required:** No

**Languages:** English

**Course Delivery:** Instructor-led or Self-paced

**Estimated Time to Complete:** 1.5 hours per module, total 9 hours

**Complementary Courses:** CCNA R&S Introduction to Networks, CCNA R&S Routing and Switching Essentials

# Entrepreneurship

## Course Overview

Entrepreneurship supplements the IT skills gained in CCNA R&S curriculum by teaching business and financial skills, behaviors, and attitudes, to help students develop an entrepreneurial mindset.

Students learn by completing a series of interactive case studies.

## Benefits

Students seeking to supplement IT expertise with entrepreneurial thinking, business development, and financial management skills.

## Learning Components

- 7 modules
- Modules feature interactive case studies and videos that reinforce business management skills
- Quizzes for each module
- Discussion board



## Features

**Target Audience:** General audience

**Prerequisites:** None, recommend CCNA R&S RSE for labs

**Instructor Training Required:** No

**Languages:** Arabic, Chinese-S, Chinese-T, English, French, Italian, Portuguese-BR and Spanish

**Course Delivery:** Instructor-led or Self-paced

**Estimated Time to Complete:** 15 hours

**Complementary Course:** Be Your Own Boss

# Career-Ready

# CCNA Routing and Switching Curriculum

## Curriculum Overview

The 4 courses in the CCNA R&S curriculum help students develop a comprehensive understanding of how networks operate, from protocols and services to network management, with an emphasis on hands-on learning and essential career skills like problem solving and collaboration.

## Career Prep

Courses 1-2 align with the Cisco CCENT certification and courses 3-4 align with the Cisco CCNA R&S certification. Students gain the skills needed to become network administrators, technicians, or managers.

## Learning Components

- 4 courses: Introduction to Networks, Routing and Switching Essentials, Scaling Networks, Connecting Networks
- Hands-on labs and Cisco Packet Tracer network simulation activities
- Videos and activities to reinforce learning
- Quizzes and exams to measure learning outcomes

## Features



Certification  
Aligned



**Target Audience:** Students interested in pursuing an IT-related career

**Prerequisites:** None, vocational students often take IT Essentials or equivalent knowledge prior to CCNA R&S

**Languages:** Arabic, Chinese-S, English, French, Japanese, Portuguese-BR, Russian, Spanish (courses 1 and 2 also available in German, Hungarian, and Turkish; course 1 available in Romanian)

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 280 hours

**Recommended Next Course:** CCNA Security or CCNP R&S

# CCNA R&S: Introduction to Networks

## Course Overview

The first course in the Cisco CCNA Routing and Switching curriculum teaches students about the architecture, structure, functions and components of the Internet and other computer networks.

Students achieve a basic understanding of how networks operate.

## Benefits

By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP

## Learning Components

- 11 chapters
- 36 hands-on labs and 1 hands-on skills assessment
- Pre-test, 11 chapter quizzes, 1 sectional quizzes, 11 chapter exams, and 1 final exam
- 2 Cisco Packet Tracer skills-based assessments



 Certification  
Aligned

## Features

**Target Audience:** Secondary vocational students, 2-year and 4-year college students in Networking or Engineering programs

**Prerequisites:** None

**Instructor Training Required:** Yes

**Languages:** Arabic, Chinese-S, Chinese-T, Croatian, English, French, German, Hungarian, Japanese, Polish, Portuguese-BR, Romanian, Russian, Spanish, Turkish

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** CCNA R&S Routing and Switching Essentials

# CCNA R&S: Routing and Switching Essentials

## Course Overview

The second course in the CCNA Routing and Switching curriculum describes the architecture, components, and operations of routers and switches in a small network.

Students learn how to configure a router and a switch for basic functionality

## Benefits

Students are ready to prepare for CCENT certification, skilled to apply for entry-level network technician jobs and able to move on to advanced certifications.

## Learning Components

- 10 chapters
- 29 hands-on labs and 1 hands-on skills assessment
- Pre-test, 10 chapter quizzes, 10 chapter exams, and 1 final exam
- 2 Cisco Packet Tracer skills-based assessments



 Certification Aligned

## Features

**Target Audience:** Secondary vocational students, 2-year and 4-year college students in Networking or Engineering

**Prerequisites:** CCNA R&S: Introduction to Networks

**Instructor Training Required:** Yes

**Languages:** Arabic, Chinese-S, Chinese-T, English, French, German, Hungarian, Japanese, Polish, Portuguese-BR, Russian, Spanish, Turkish

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** CCNA R&S Scaling Networks or CCNA Security

# CCNA R&S: Scaling Networks

## Course Overview

The third course in the CCNA Routing and Switching curriculum describes the architecture, components, and operations of routers and switches in large, complex networks.

## Benefits

Students learn how to configure and troubleshoot routers and switches for advanced functionality and resolve common issues with protocols in both IPv4 and IPv6 networks.

## Learning Components

- 11 chapters
- 33 hands-on labs and 1 hands-on skills assessment
- Pre-test, 11 chapter quizzes, 2 sectional quizzes, 11 chapter exams, and 1 final exam
- 2 Cisco Packet Tracer skills-based assessments



 Certification  
Aligned

## Features

**Target Audience:** 2-year and 4-year college students in Networking or Engineering programs

**Prerequisites:** None

**Instructor Training Required:** Yes

**Languages:** Arabic, Chinese-S, English, French, Hungarian, Japanese, Portuguese-BR, Russian, Spanish

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** CCNA R&S Connecting Networks



# CCNA R&S: Connecting Networks

## Course Overview

The fourth and final course in the CCNA Routing and Switching curriculum covers the WAN technologies and network services employed by converged applications in a complex network

## Benefits

By the end of the course, students learn how to configure and troubleshoot network devices and implement virtual private networks and are ready to prepare for the CCNA R&S certification.

## Learning Components

- 9 chapters
- 12 hands-on labs and 1 hands-on skills assessment
- Pre-test, 9 chapter quizzes, 2 sectional quizzes, 9 chapter exams, and 1 final exam
- 2 Cisco Packet Tracer skills-based assessments



 Certification  
Aligned

## Features

**Target Audience:** 2-year and 4-year college students in Networking or Engineering

**Prerequisites:** CCNA R&S: Scaling Networks

**Instructor Training Required:** Yes

**Languages:** Arabic, Chinese-S, English, French, Japanese, Polish, Portuguese-BR, Russian, Spanish

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** CCNA Security or CCNP R&S ROUTE

# CCNP Routing and Switching Curriculum

## Curriculum Overview

The three CCNP Routing and Switching courses provide a comprehensive overview of enterprise-level networking concepts, including advanced routing, switching, and troubleshooting.

The curriculum integrates industry-relevant instructional approaches to help students prepare for career opportunities.

## Career Prep

College students seeking hands-on practical experience, Cisco CCNP R&S certification, and career skills in advanced routing, switching, and troubleshooting.

## Learning Components

- 3 courses: CCNP R&S ROUTE: Implementing IP Routing, CCNP R&S SWITCH: Implementing IP Switched Networks, and CCNP R&S TSHOOT: Troubleshooting and Maintaining IP Networks
- Hands-on labs
- Cisco Press textbooks
- Chapter exams and final exams

## Features



**Target Audience:** 4-year college students in Networking or Engineering programs

**Prerequisites:** CCNA R&S courses 1-4

**Instructor Training Required:** Yes

**Languages:** English

**Course Delivery:** Instructor-led, textbook-based

**Estimated Time to Complete:** 210 hours



Certification  
Aligned

# CCNA Security

## Course Overview

CCNA Security introduces the core security concepts and skills needed to troubleshoot and monitor computer networks and help ensure the integrity of devices and data.

It emphasizes the practical application of the skills needed to design, implement, and manage network security systems.

## Benefits

CCNA R&S students interested building security and data protection expertise for the Cisco CCNA Security career certification and jobs as network security specialists.

## Learning Components

- 11 chapters, quizzes, and chapter exams
- 13 Cisco Packet Tracer activities and one Packet Tracer Practice Skills Based Assessment (SBA)
- 16 hands-on labs
- One each: pre-test, certification practice exam, practice final, final exam and skills-based assessment



 Certification Aligned

## Features

**Target Audience:** 2-year and 4-year college students in Networking or Engineering programs

**Prerequisites:** CCNA R&S: ITN and RSE (CCENT)

**Instructor Training Required:** Yes

**Languages:** English

**Course Delivery:** Instructor-led

**Estimated Time to Complete:** 70 hours

**Recommended Next Course:** CCNP R&S ROUTE

# NDG Linux

## Curriculum Overview

The NDG Linux curriculum, developed by Networking Academy partner NDG, is a 2-course series for aspiring Linux system administrators.

Students develop proficiency in performing maintenance tasks on the command line, installing and configuring a computer running Linux, and configuring basic networking, using virtual machines running Linux.

## Career Prep

NDG Linux curriculum prepares you for careers in cloud computing, cybersecurity, information systems, networking, programming, software development, big data, and more.

Aligned with two certifications: Linux Professional Institute LPIC-1 Certification and CompTIA Linux+ powered by LPI Certification.

## Learning Components

- 2 semester -long courses: NDG Linux I, NDG Linux II
- More rigorous than Linux Essentials
- Built-in virtual machine to experiment with Linux commands
- Hands-on labs and activities
- Chapter, midterm and final exams

## Features

**Target Audience:** 2-year and 4-year college students

**Prerequisites:** None, but NDG Linux Essentials or equivalent knowledge recommended

**Instructor Training Required:** No

**Languages:** English

**Course Delivery:** Instructor-led and Self-paced

**Fee:** \$39.95 US per learner, per course

**Estimated Time to Complete:** 140 hours



# Collaborate for Impact

# Packet Tracer

## Curriculum Overview

Packet Tracer is an innovative simulation and visualization tool used for lectures, labs, games, homework, assessments, and competitions. It is embedded in these courses:

- CCNA Routing and Switching
- CCNA Security
- IT Essentials
- Intro to the Internet of Things
- Mobility Fundamentals

## Career Prep

The Packet Tracer simulation-based learning environment promotes the development of essential career skills ranging from teamwork and critical thinking to creative problem solving.

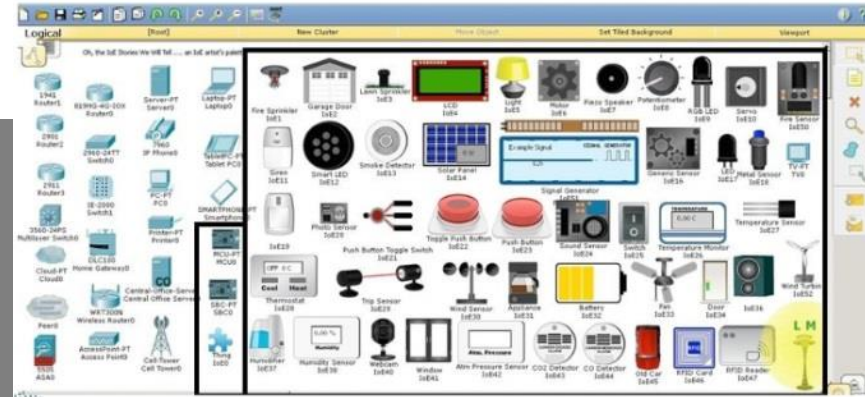
## Learning Components

- Cisco Packet Tracer (PT)
- PT Mobile Android
- PT Mobile iOS
- PT Games

## Features

As an integral part of the Networking Academy learning experience, Packet Tracer provides

- Simulation
- Visualization
- Authoring
- Assessment
- Collaboration capabilities and facilitates the teaching and learning of complex technology concepts.



# Cisco NetRiders Competition

## Curriculum Overview

NetRiders competitions provide students with hands-on practice and experience in a competitive environment. It is a chance to test their technical and soft skills and recognize their weaknesses, showcase their knowledge, and deepen their networking and teamwork skills all while they build friendships across the world.

## Career Prep

The Cisco NetRiders competitions are an amazing opportunity to apply your skills across all you've learned thus far as you work in a team to solve a complex simulated real-world problem. Thus competitions are great way to better understand how your strengths contribute to solutions and better describe your unique strengths with potential employers.

## Learning Components

- CCNA R&S
- CCENT
- IT Essentials

## Benefits



- Recognition for outstanding achievement
- Hands-on practice and experience in a competitive environment
- Career opportunities and internships through increased visibility
- Exposure to career role models
- Opportunities to engage with students around the world
- Top achievers may win prizes, including a week-long trip to Cisco San Jose, California campus with other top achievers from around the world





# Course Learning Components

Course	Portfolio Category	Developed By	Instructor Training Required	Learning Objectives	Practice Activities	Online Assessment	Feedback Survey	Scope and Sequence	Full Learning and Assess. Portfolio	Instructor/ Student Lab Manuals	Course Completion	Instructor PPT	Marketing Collateral
Be Your Own Boss	Exploratory	Cisco	No	✓	✓	✓	✓				1	✓	✓
Packet Tracer Know How	Exploratory	Community	No	✓	✓	✓	✓				1		
Get Connected	Exploratory	Cisco	No	✓	✓	✓	✓	✓			1		✓
Intro to Cybersecurity	Exploratory	Cisco	No	✓	✓	✓	✓	✓		✓	1	✓	✓
Intro to IoT	Exploratory	Cisco	No	✓	✓	✓	✓				1		✓
NDG Linux Unhatched	Exploratory	Cisco	No	✓	✓	✓	✓	✓			2		✓

# Course Learning Components

Course	Portfolio Category	Developed By	Instructor Training Required	Learning Objectives	Practice Activities	Online Assessment	Feedback Survey	Scope and Sequence	Full Learning and Assess. Portfolio	Instructor/ Student Lab Manuals	Course Completion	Instructor PPT	Marketing Collateral
Entrepreneurship	Foundational	Cisco	No	✓	✓	✓	✓				1		✓
IT Essentials	Foundational	Cisco	Yes	✓	✓	✓	✓	✓	✓	✓	1, 2	✓	✓
Networking Essentials	Foundational	Cisco	Yes	✓	✓	✓	✓	✓		✓	1	✓	✓
Cybersecurity Essentials	Foundational	Cisco	No	✓	✓	✓	✓	✓	✓	✓	1	✓	✓
NDG Linux Essentials	Foundational	Partner	No	✓	✓	✓	✓	✓			2		✓
CPA: Programming Essentials in C++	Foundational	Partner	No	✓	✓	✓	✓	✓			2		✓
CLA: Programming Essentials in C	Foundational	Partner	No	✓	✓	✓	✓	✓			2		✓
Mobility Fundamentals	Foundational	Community	No	✓	✓	✓	✓				1	✓	✓

1 = Certificate of Completion with Time Stamp

2 = Completion Letter with Time Stamp

3 = CEO Letter

# Course Learning Components, continued

Course	Portfolio Category	Developed By	Instructor Training Required	Learning Objectives	Practice Activities	Online Assessment	Feedback Survey	Scope and Sequence	Full Learning and Assess. Portfolio	Instructor/ Student Lab Manuals	Course Completion	Instructor PPT	Marketing Collateral
CCNA Routing and Switching	Career-Ready	Cisco	Yes	✓	✓	✓	✓	✓	✓	✓	1, 3	✓	✓
CCNA Security	Career-Ready	Cisco	Yes	✓	✓	✓	✓	✓	✓	✓	1, 3	✓	✓
CCNP Routing and Switching	Career-Ready	Cisco	Yes	✓	✓	✓	✓			✓	1, 3	✓	✓
NDG Linux I and II	Career-Ready	Partner	No	✓	✓	✓	✓	✓			2		✓

# Course Languages

Course	Arabic	Chinese	Chinese	Croatian	ENG	FR	German	Hebrew	Hungarian	Italian	Japanese	Korean	Port-BR	Polish	Romanian	Russian	Spanish	Turkish	Ukrainian
Be Your Own Boss					✓														
Packet Tracer Know How					✓	✓													
Get Connected		✓			✓	✓	✓			✓			✓				✓		
Intro to Cybersecurity		✓			✓	✓	✓			✓	✓								
Intro to IoT	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓			✓	✓		
NDG Linux Unhatched					✓														

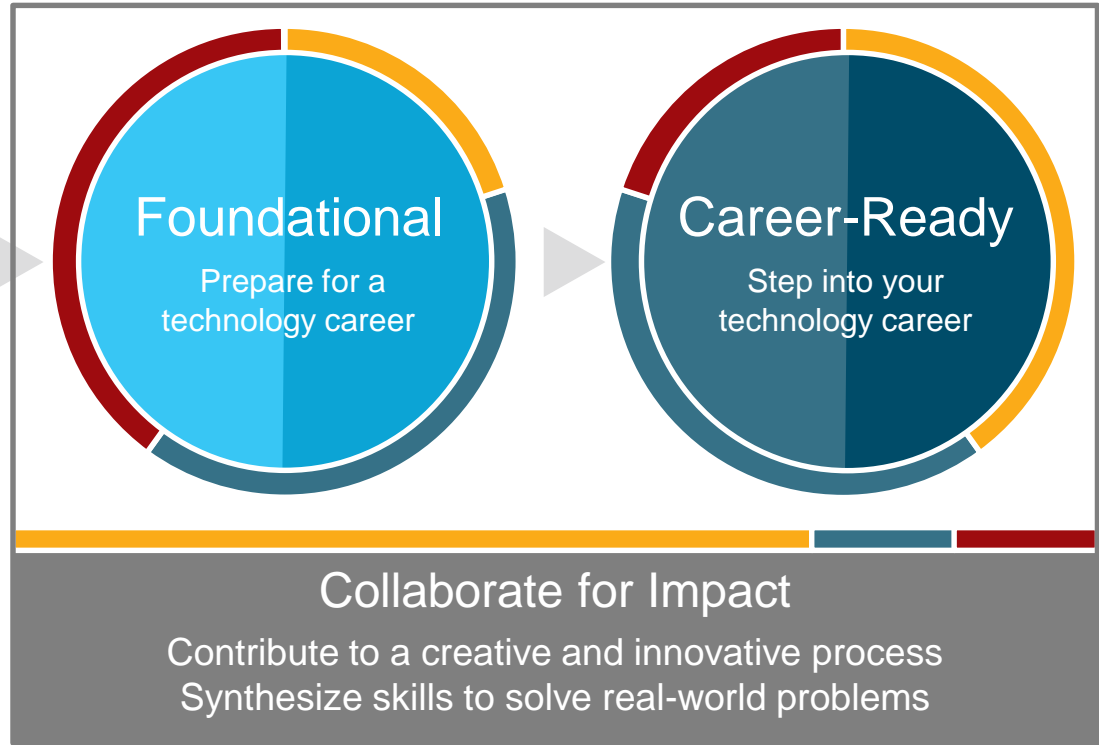
# Course Languages

Course	Arabic	Chin-S	Chin-T	Croatian	ENG	FR	German	Hebrew	Hung.	Italian	Japan.	Korean	Polish	Port-BR	Romanian	Russian	Spanish	Turkish	Ukrainian
Entrepreneurship	✓	✓	✓		✓	✓				✓				✓			✓		
IT Essentials	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Networking Essentials					✓														
Cybersecurity Essentials					✓														
NDG Linux Essentials					✓					✓									
CPA: Programming Essentials in C++					✓														
CLA: Programming Essentials in C					✓														
Mobility Fundamentals					✓														

# Course Languages

Course	Arabic	Chin-S	Chin-T	Croatian	ENG	FR	German	Hebrew	Hung.	Italian	Japan.	Korean	Polish	Port-BR	Romanian	Russian	Spanish	Turkish	Ukrainian
CCNA R&S: ITN	✓	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓	✓	✓	✓	✓	
CCNA R&S: RSE	✓	✓	✓		✓	✓	✓		✓		✓		✓	✓		✓	✓	✓	
CCNA R&S: ScaN	✓	✓			✓	✓			✓		✓			✓		✓	✓		
CCNA R&S: CN	✓	✓			✓	✓			✓		✓			✓		✓	✓		
CCNA Security					✓														
CCNP Routing and Switching					✓														
NDG Linux I and II					✓														

# Our Portfolio Builds Interest and Competency



Exposure



Education



Experience

## Collaborate for Impact

Contribute to a creative and innovative process  
Synthesize skills to solve real-world problems

# The Networking Academy Learning Portfolio



Certification-aligned

Collaborate for Impact

Hackathons

Regional IT Competitions

Packet Tracer

Internships

NetRiders Competition

Exploratory

Foundational

Career-Ready



Networking

Packet Tracer Know How

Networking Essentials  
Mobility Fundamentals

CCNA/CCENT Routing and Switching (2)   
CCNA Routing and Switching (2)   
CCNP Routing and Switching (3)



Security

Introduction to Cybersecurity

Cybersecurity Essentials

CCNA Security



IoT

Introduction to IoT



OS & IT

NDG Linux Unhatched

NDG Linux Essentials   
IT Essentials

NDG Linux I   
NDG Linux II



Programming

Programming Essentials in C, C++



Business

Be Your Own Boss

Entrepreneurship



Digital Literacy

Get Connected