January 2022

Huawei ICT Academy Course Catalog

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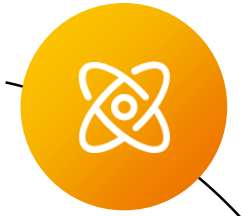
Academy Curriculum classification

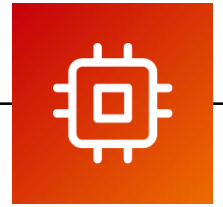
General Courses



For students who'd like to start exploring opportunities in tech

- No requirements for students' majors
- Free of charge
- Usually self-study
- 2–4 lessons/course

Professional Courses



For students who'd like to acquire the practical skills for entry-level technical positions

- Closely related to Huawei certifications that are widely recognized across industries
- Usually instructor-led and about 32-128 lessons/course
- Combination of hands-on practice and interactive experience

Academy Curriculum Overview Map

Click the course name > Redirect to Course Profile

General Courses

- Introduction to 5G
- Computer Network
- Overview of AI
- Search and AI
- Development and Basic Concepts of Cloud Computing
- Information Representation and Data Organization
- Data Management and Analytics

Professional Courses

- Data Storage
- Artificial Intelligence and Applications
- Data Communication and Network
- Principles and Applications of WLAN
- Principles and Applications of Cloud Computing
- Internet of Things and Applications
- 5G Network and Applications

ICT Academy ▸ General Course ▸ General Technology

Introduction to 5G Knowledge

Enroll Now | Map

Course Profile

Overview
Introduction to 5G Knowledge is aimed at students in non-computer majors to gain a basic understanding of the history and trends in 5G.

Highlights
Upon completing this course, students in non-computer majors will have a basic understanding of the 5G history and outlook, network challenges, and network transformations.

Target Audience
Students at universities and higher vocational colleges

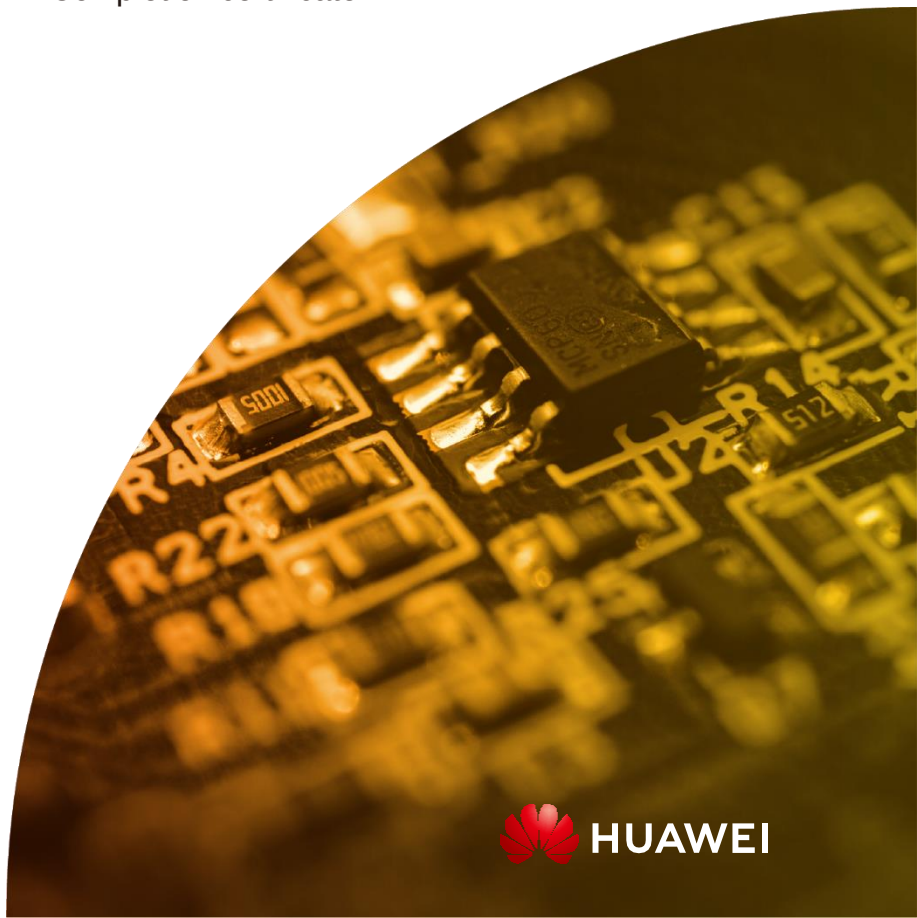
Applicable Majors
Majors not related to information sciences or computers

Duration
1–2 lessons

Related Huawei Certification
HCIA-5G

Recommended Follow-up Course
HCIA-5G

- ☐ Instructor-led
- ☐ Lab environment
  - Physical devices
  - Online experiment
  - Simulator
- ☑ Completion certificate



5G

Course Outline

- History and outlook
- Industry trends and network challenges
- 5G technology revolution

ICT Academy ▸ General Course ▸ General Technology

Computer Network

Enroll Now | Map

Course Profile

Overview

Computer Network is aimed at students in non-computer majors to learn the basic scientific concepts about computer networks, the Internet, and the Internet of Things (IoT).

Highlights

This course introduces the concept of computer network, operation of Internet services, and basics of IoT and Internet through vivid real-life examples.

Target Audience

Students at universities and higher vocational colleges

Applicable Majors

Majors not related to information sciences or computers

Duration

1–2 lessons

Related Huawei Certification

HCIA-Datacom

Recommended Follow-up Course

Data Communication and Network Technology

- ☐ Instructor-led
- Lab environment
  - Physical devices
  - ☑ Online experiment
  - Simulator
- ☑ Completion certificate

Course Outline

- Computer networks
- Internet protocols
- Network resource sharing
- IoT
- Network operating system — VRP
- Huawei switch VLAN configuration

ICT Academy ▸ General Course ▸ General Technology

Overview of AI

Enroll Now | Map

Course Profile

Overview
Overview of AI is aimed at students in non-computer majors to gain a basic understanding of the definition, working principles, and development of cloud computing.

Highlights
This course introduces the fundamentals of AI, covering the founding and history of AI, schools of thought, major technical trends, as well as controversies and prospects. This course is engaging and uses vivid real-life examples.

Target Audience
Students at universities and higher vocational colleges

Applicable Majors
Majors not related to information sciences or computers

Duration
1–2 lessons

Related Huawei Certification
HCIA-AI

Recommended Follow-up Course
HCIA-AI

- ☐ Instructor-led
- Lab environment
  - Physical devices
  - ☑ Online experiment
  - Simulator
- ☑ Completion certificate

Course Outline

- Machines that think
- Schools of thought
- Strong AI vs Weak AI
- Three major trends in AI
- AI everywhere
- Controversies
- Bright prospects

Search and AI

Enroll Now | Map

Course Profile

Overview
Search and Artificial Intelligence is aimed at students in non-computer majors to gain a basic understanding of artificial intelligence and the typical applications of search algorithms.

Highlights
This course uses game tree cases to introduce the concept of search algorithms and basics of artificial intelligence.

Target Audience
Students at universities and higher vocational colleges

Applicable Majors
Majors not related to information sciences or computers

Duration
1–2 lessons

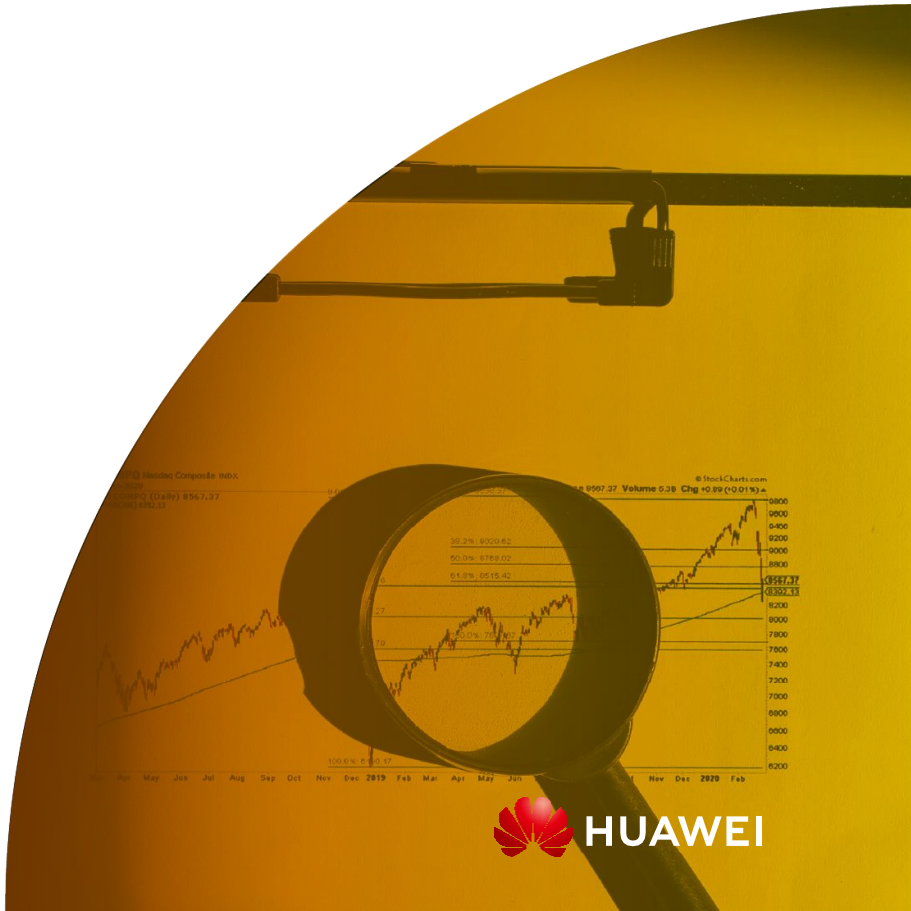
Related Huawei Certification
HCIA-AI

Recommended Follow-up Course
HCIA-AI

- ☐ Instructor-led
- Lab environment
  - Physical devices
  - ☑ Online experiment
  - Simulator
- ☑ Completion certificate

Course Outline

- Game tree and pruning
- Heuristic search
- AI and machine learning
- Typical AI applications
- AI development platforms



ICT Academy ▸ General Course ▸ General Technology

Development and Basic Concepts of Cloud Computing

Enroll Now | Map

Course Profile

Overview

Development and Basic Concepts of Cloud Computing is aimed at students in non-computer majors to gain a basic understanding of cloud computing and its architecture.

Highlights

This course focuses on the basic concepts of cloud computing, cloud architecture, and development trends. Upon completing this course, students will be able to define cloud computing as well as understanding its history, features, and deployment models.

Target Audience

Students at universities and higher vocational colleges

Applicable Majors

Majors not related to information sciences or computers

Duration

1–2 lessons

Related Huawei Certification

HCIA-Cloud

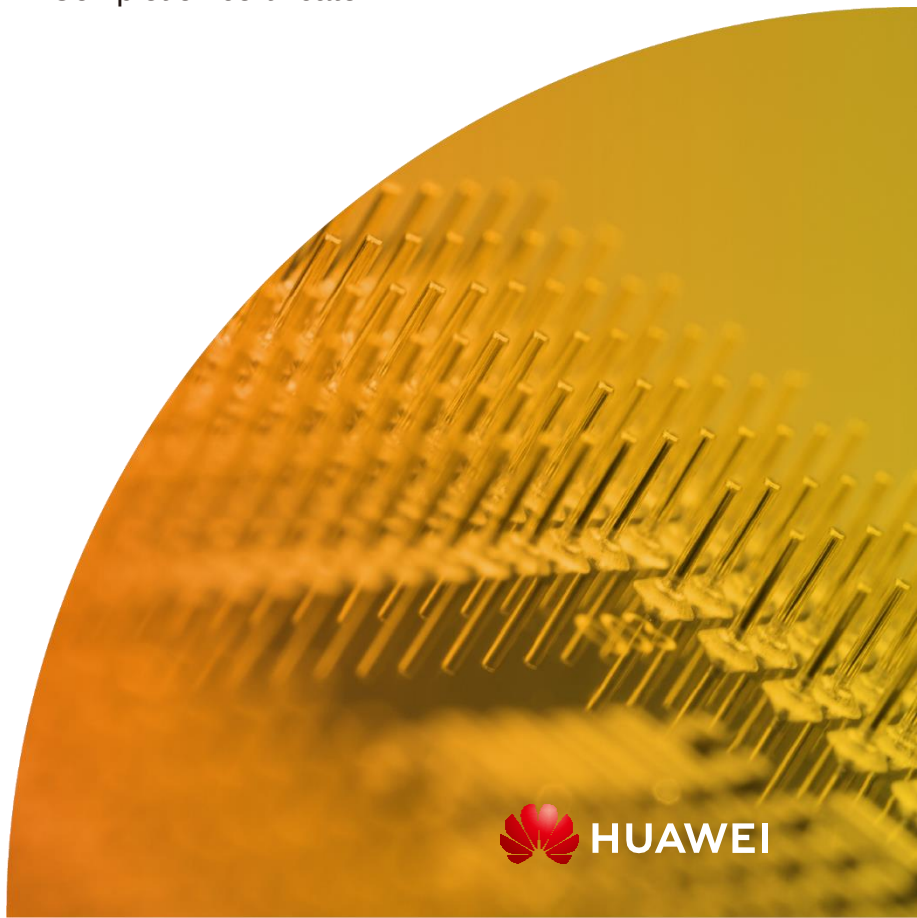
Recommended Follow-up Course

HCIA-Cloud

- ☐ Instructor-led
- Lab environment
  - Physical devices
  - ☑ Online experiment
  - Simulator
- ☑ Completion certificate

Course Outline

- Cloud — already here
- Advantages
- Definition
- History and trends
- Deployment models
- Service models
- Cloud architecture
- Cloud: enabler of new tech
- Cloud trends



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ICT Academy ▸ General Course ▸ General Technology

Information Representation and Data Organization

Enroll Now | Map

Course Profile

Overview
Information Representation and Data Organization is aimed at students in non-computer majors to gain a basic understanding on representing information and organizing data in computers.

Highlights
This course introduces the concepts of information and data, the way they are represented and organized in a computer system, along with basic knowledge presented through engaging real-life cases.

Target Audience
Students at universities and higher vocational colleges

Applicable Majors
Majors not related to information sciences or computers

Duration
1–2 lessons

Related Huawei Certification
HCIA-Big Data

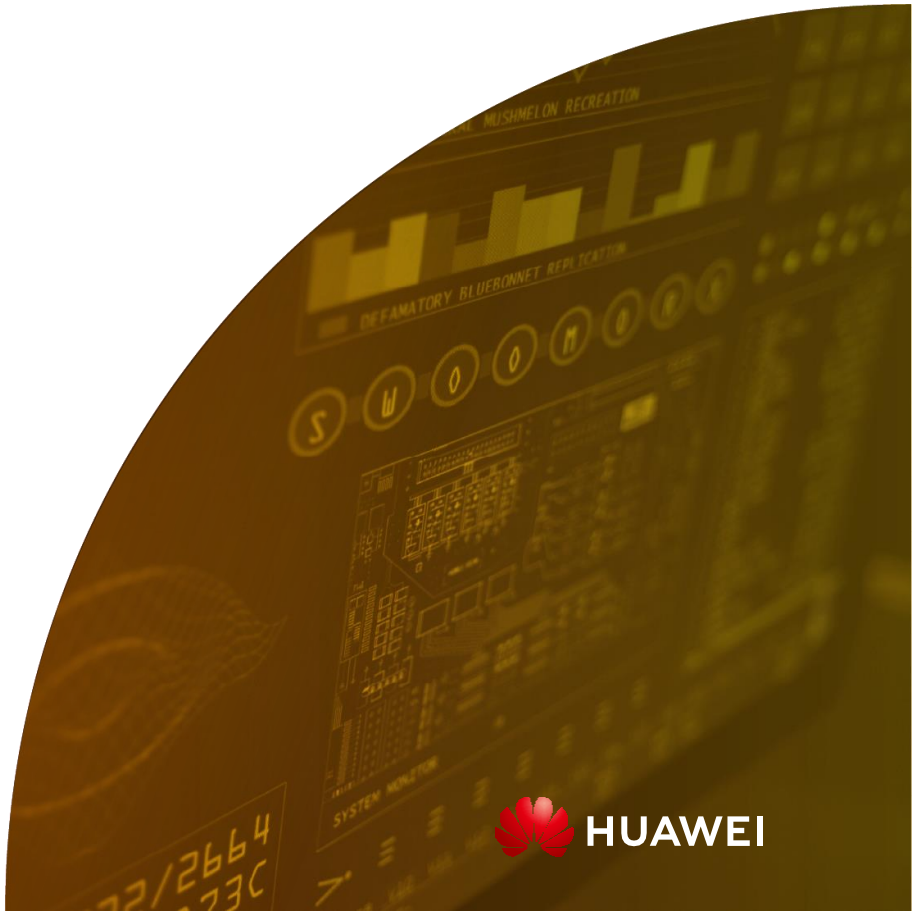
Recommended Follow-up Courses
HCIA-Big Data

HCIP-Big Data

- ☐ Instructor-led
- ☐ Lab environment
  - Physical devices
  - Online experiment
  - Simulator
- ☑ Completion certificate

Course Outline

- Information representation
- Information encryption, decryption, and compression
- Data organization and structure



Data Management and Analytics

Enroll Now | Map

Course Profile

Overview
Data Management and Analytics is aimed at students in non-computer majors to gain a basic understanding on managing and analyzing data in the digital era.

Highlights
This course introduces the functions of computer data management along with the foundations and methods for data management and analysis using real-life examples.

Target Audience
Students at universities and higher vocational colleges

Applicable Majors
Majors not related to information sciences or computers

Duration
1–2 lessons

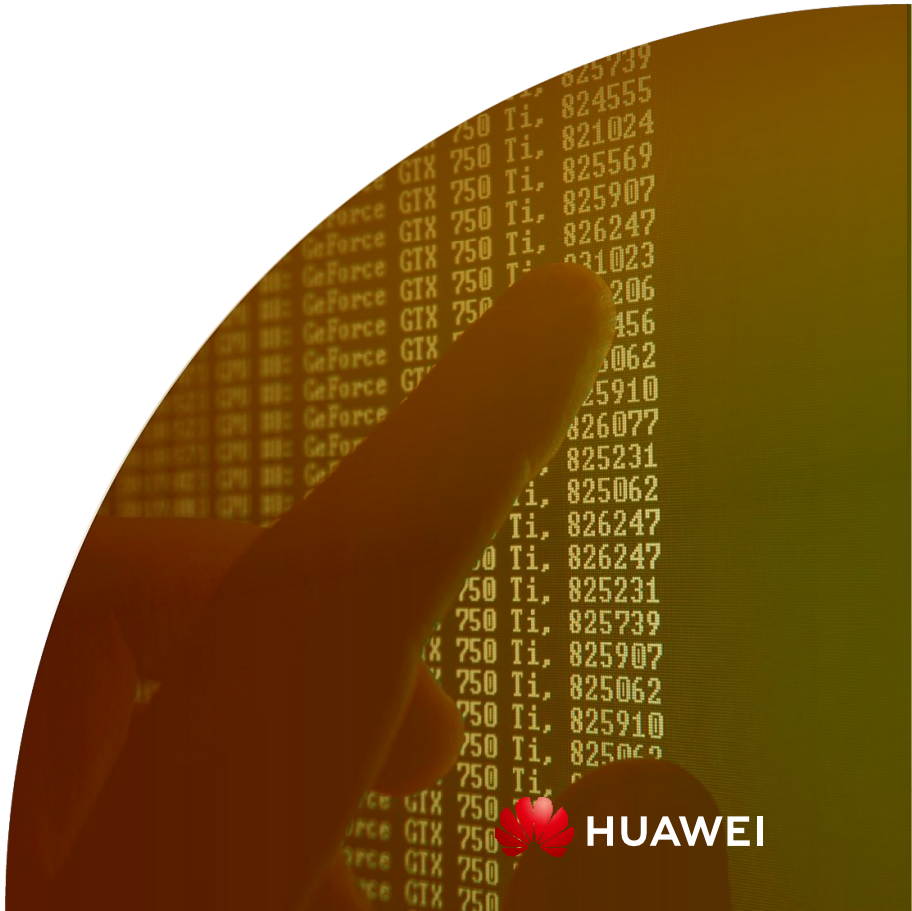
Related Huawei Certification
HCIA-openGauss

Recommended Follow-up Course
HCIA-openGauss

- ☐ Instructor-led
- Lab environment
  - Physical devices
  - ☑ Online experiment
  - Simulator
- ☑ Completion certificate

Course Outline

- Data categories
- Data modes
- Data management
- Relational models and operations



ICT Academy ▸ Professional Course ▸ Storage

Data Storage

Enroll Now | Map

Course Profile

Overview
Data Storage is intended for students in computer applications and communication engineering majors to improve their skills in the configuration, networking, and maintenance of storage products.

Highlights
Aligned with Huawei certifications, this course introduces the skills required for field work. Students learn through well-designed learning routes and lab practice to meet enterprise needs in the future.

Career Guidance
Upon completing this course, students will be able to install, deploy, and routinely manage storage platforms based on customers' requirements, laying a solid foundation for future work.

Target Audience
Students at universities and higher vocational colleges

Duration
64 lessons (32 for theory and 32 for hands-on practice)

Applicable Majors
Majors related to information sciences and computers

Required Knowledge
Operating system theory and technology, fundamentals of database and computer applications

Recommended Follow-up Courses
HCIP-Storage
HCIE-Storage

Course Outline

- Basic storage technology
- Storage and relevant notions
- Advanced storage technologies
- Storage O&M management
- Service continuity technology and applications

- ☑ Instructor-led
- Lab environment
  - ☑ Physical devices
  - ☑ Online experiment Simulator
- ☑ Completion certificate

HUAWEI

ICT Academy ▸ Professional Course ▸ Artificial Intelligence

Artificial Intelligence and Applications

Enroll Now | Map

Course Profile

Overview
Artificial Intelligence Technology and Applications is intended for students in computer majors to cultivate their ability to use algorithms such as machine learning and deep learning.

Highlights
With AI talent in high demand, we have designed this as a crash course to learn both AI theory and practical skills taught through hands-on projects. Students will complete 32 lessons of theory and 32 lessons of lab practice, covering AI, Python basics, commonly used algorithms for machine learning, and deep learning basics.

Career Guidance
After completing this course, students will be able to master the basic principles of machine learning and deep learning, laying a solid foundation for future AI project planning and solution design.

Target Audience
Students at universities and higher vocational colleges

Duration
64 lessons (32 for theory and 32 for hands-on practice)

Applicable Majors
Majors related to AI and computers

Required Knowledge
Python basics, probability theory and mathematical statistics, and programming

Recommended Follow-up Courses
HCIP-AI-Network Developer
HCIP-AI-Ascend Developer

Course Outline

- Machine learning
- Deep learning
- AI products and applications
- Comprehensive practice

☑ Instructor-led

Lab environment
- Physical devices
- ☑ Online experiment
- Simulator

☑ Completion certificate

HUAWEI

ICT Academy ▸ Professional Course ▸ Data Communication

Data Communication and Network

Enroll Now | Map

Course Profile

Overview
Data Communication and Network is intended for students in information science and computer majors to develop their skills in enterprise network construction, O&M, management, and troubleshooting.

Highlights
This course addresses the talent gap in datacom networks. It is designed as vocational training, and includes lab practice and in-class quizzes.

Career Guidance
Upon completing this course, students will be able to build an enterprise network with routers and switches, WLAN, and network security technologies, as well as perform routine network O&M and troubleshooting.

Target Audience
Students at universities and higher vocational colleges

Duration
128 lessons (56 for theory and 72 for hands-on practice)

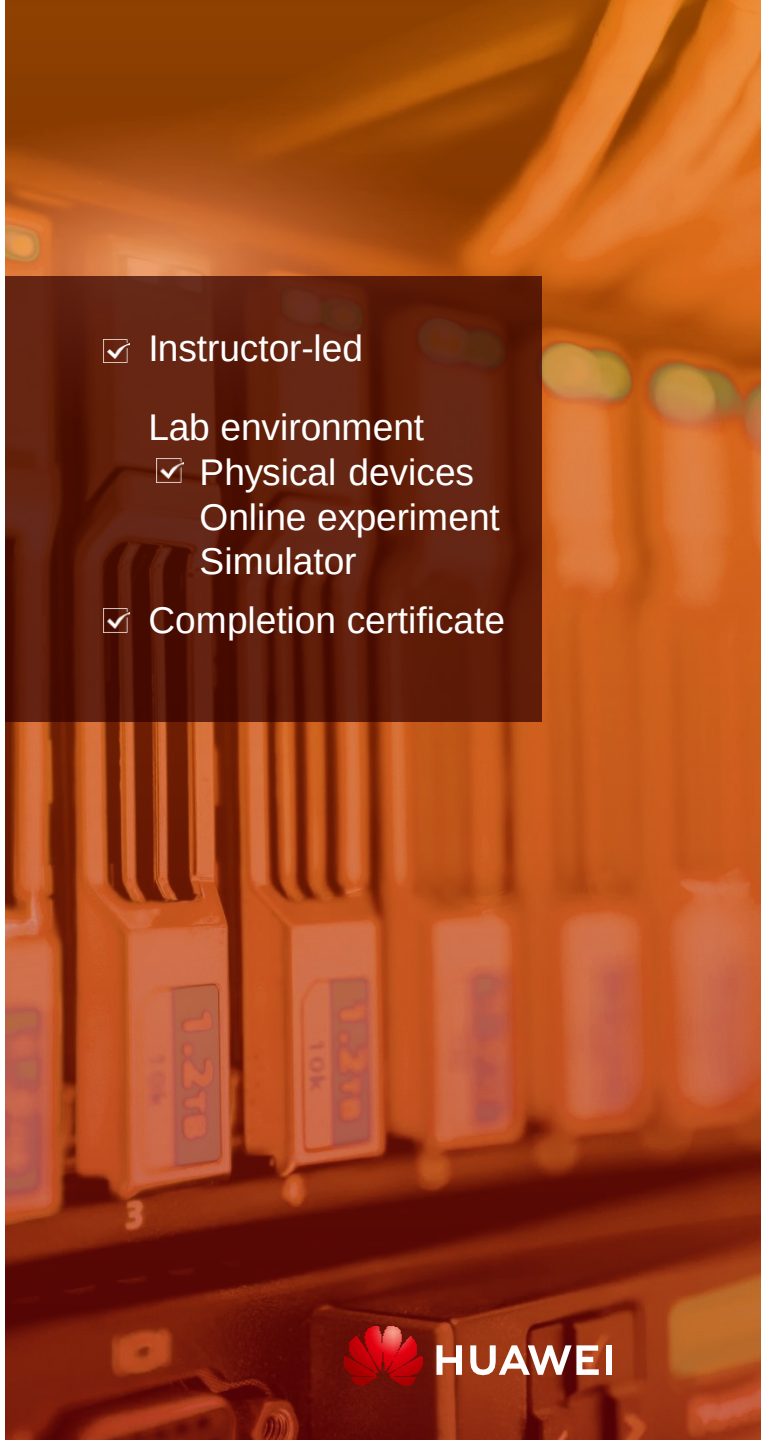
Applicable Majors
Majors related to information sciences and computers

Required Knowledge
Routing and switching basics, computer application fundamentals

Recommended Follow-up Courses
HCIP-Datacom-Advanced Routing & Switching Technology
HCIP-Datacom-Network Automation Developer
HCIP-Datacom-Campus Network Planning and Deployment
HCIP-Datacom-SD-WAN Planning and Deployment
HCIP-Datacom-Enterprise Network Solution Design
HCIP-Datacom-WAN Planning and Deployment
HCIP-Datacom-Carrier IP Bearer

Course Outline

- Ethernet switch networks
- WAN fundamentals
- Interconnected IP networks
- Data communication and network fundamentals
- WLAN fundamentals
- WAN technology
- Network security, services, and applications
- SDN and network automation fundamentals
- Typical campus network architecture and cases



- ☑ Instructor-led
- Lab environment
  - ☑ Physical devices
  - Online experiment
  - Simulator
- ☑ Completion certificate

HUAWEI

ICT Academy ▸ Professional Course ▸ WLAN

Principles and Applications of WLAN

Enroll Now | Map

Course Profile

Overview
HCIA-WLAN is intended for students in computer, information science, and communication engineering majors to cultivate their skills in WLAN planning, construction, O&M, management, and troubleshooting.

Highlights
This course addresses the talent gap in WLAN. It is designed as vocational training, founded on scientific methodologies in teaching. It includes 32 lessons of theory and 32 lessons of lab practice, covering the basics of WLAN technology, WLAN networking models, WLAN working principles, WLAN online configuration, WLAN access authentication, WLAN antenna technology, and WLAN network troubleshooting.

Career Guidance
Upon completing this course, students will be able to use WLAN planning, networking, configuration, and authentication technologies to build an enterprise-class WLAN based on actual network requirements. Moreover, they will be able to perform routine maintenance and troubleshooting on WLANs based on WLAN working principles.

Target Audience
Students at universities and higher vocational colleges

Duration
64 lessons (32 for theory and 32 for hands-on practice)

Applicable Majors
Majors related to computers, information sciences, and communication engineering

Required Knowledge
PC operating system, computer, as well as routing and switching fundamentals

Recommended Follow-up Courses
HCIP-WLAN
HCIE-WLAN
HCIP-Datacom-Advanced Routing & Switching Technology
HCIP-Datacom-Network Automation Developer
HCIP-Datacom-Campus Network Planning and Deployment
HCIP-Datacom-Enterprise Network Solution Design

WLAN

Course Outline

- WLAN overview
- WLAN working principles
- WLAN networking models
- WLAN configuration
- WLAN access authentication
- WLAN troubleshooting
- Wi-Fi 6 technology

- ☑ Instructor-led
- Lab environment
  - ☑ Physical devices
  - Online experiment
  - Simulator
- ☑ Completion certificate

HUAWEI

ICT Academy ▸ Professional Course ▸ Cloud Computing

Principles and Applications of Cloud Computing

Enroll Now | Map

Course Profile

Overview
HCIA-Cloud Computing mainly introduces virtualization-related computing, network, and storage, as well as virtualization features, helping students quickly understand cloud computing.

Highlights
This course explains cloud computing basics, how to use virtualization technology to implement the basic features of cloud computing, and the role of virtualization technology in cloud computing. It covers cloud computing, computing virtualization, basic network knowledge in cloud computing, basic storage knowledge in cloud computing, virtualization features, and cloud computing trends. Students will learn how to configure Huawei FusionCompute.

Career Guidance
Upon completing this course, students will understand the basic concepts in cloud computing, such as computing, network, storage virtualization, and virtualization features. They will also be able to perform basic cloud computing operations.

Target Audience
Students at universities and higher vocational colleges

Duration
32 lessons (16 for theory and 16 for hands-on practice)

Applicable Majors
Majors related to cloud computing

Required Knowledge
IT fundamentals, server and PC operating system, Linux, and storage

Recommended Follow-up Course
HCIP-Cloud Computing

Course Outline

- Cloud computing overview
- Compute virtualization
- Network fundamentals for cloud computing
- Storage fundamentals for cloud computing
- Virtualization features
- Cloud computing trends

- ☑ Instructor-led
- Lab environment
  - ☑ Physical devices
    Online experiment
    Simulator
- ☑ Completion certificate

HUAWEI

ICT Academy ▸ Professional Course ▸ Internet of Things

Internet of Things and Applications

Enroll Now | Map

Course Profile

Overview
Internet of Things and Applications is intended for students in computer applications and communication engineering majors to improve their skills in embedded development and IoT solution development.

Highlights
This hands-on course integrates theory and practice to equip students with the necessary skills for actual jobs and enterprise projects.

Career Guidance
Upon completing this course, students will be able to select appropriate IoT devices, networks, platforms, and applications to develop a complete IoT solution based on customers' requirements, preparing them for the job market.

Target Audience
Students at universities and higher vocational colleges

Duration
48 lessons (20 for theory and 28 for hands-on practice)

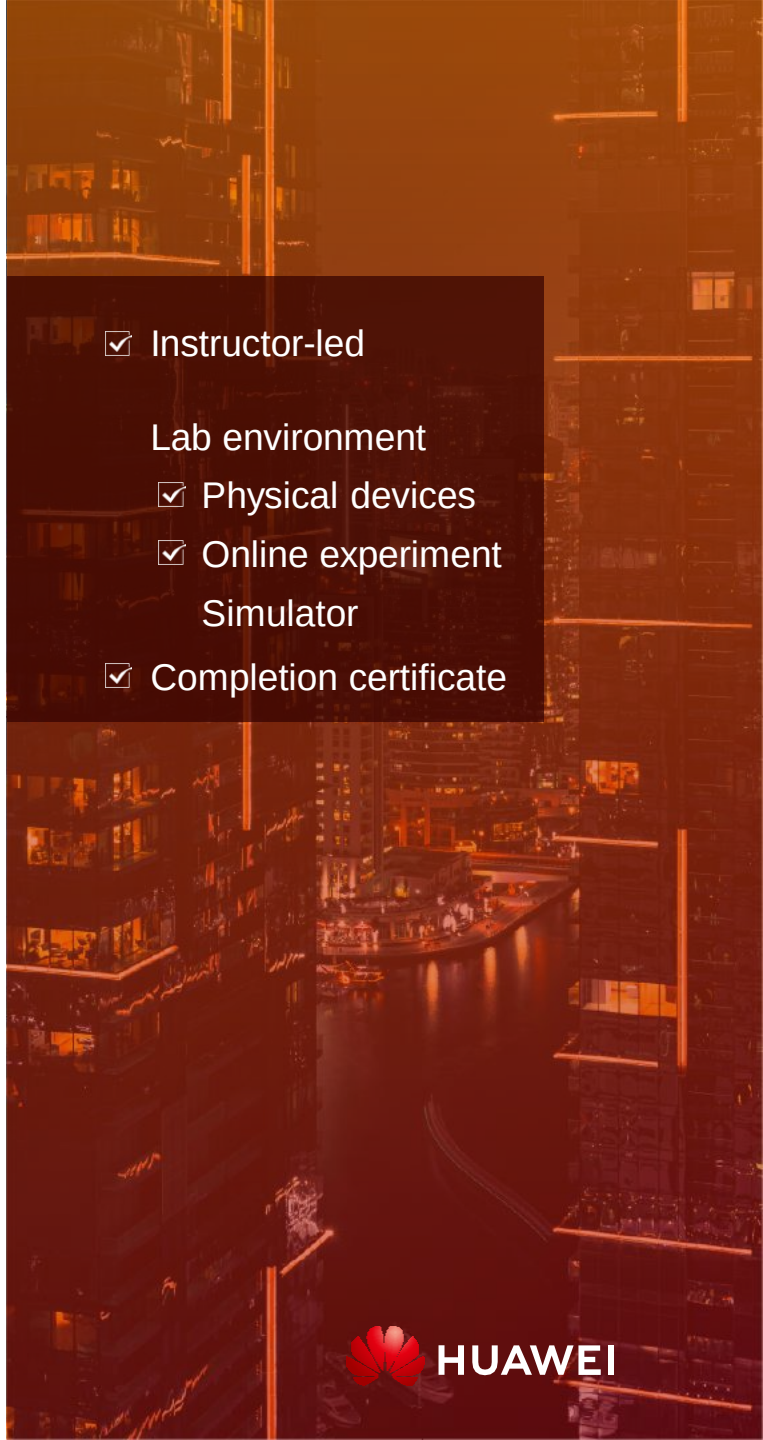
Applicable Majors
Majors related to computer applications and communication engineering

Required Knowledge
Operating system principles and technologies, basic C language, data communication, analog electronic circuits, and digital electronic circuits

Recommended Follow-up Course
HCIP-IoT Developer

Course Outline

- IoT basics and solutions for the application layer
- IoT network technology fundamentals
- IoT platform fundamentals
- Embedded development and operating systems
- Device-cloud interconnection development process



ICT Academy ▸ Professional Course ▸ 5G

5G Network and Applications

Enroll Now | Map

Course Profile

Overview
5G Network and Applications is aimed at students in information sciences and communication engineering majors to help them understand basic mobile communication networks and key 5G network technologies, cultivate their 5G service skills, and understand 5G solutions in related industries.

Highlights
This course addresses the talent gap in 5G. It is designed as vocational training. It includes 32 hours of theory, covering 5G development and evolution, 5G network architecture and key technologies, innovative 5G applications, basic 5G services and functions, and 5G industry application solutions.

Career Guidance
After completing this course, students will have the knowledge and skills required for 5G industry solution engineers and pre-sales solution engineers.

Target Audience
Students at universities and higher vocational colleges

Duration
32 lessons (all for theory)

Applicable Majors
Majors related to information sciences and communication engineering

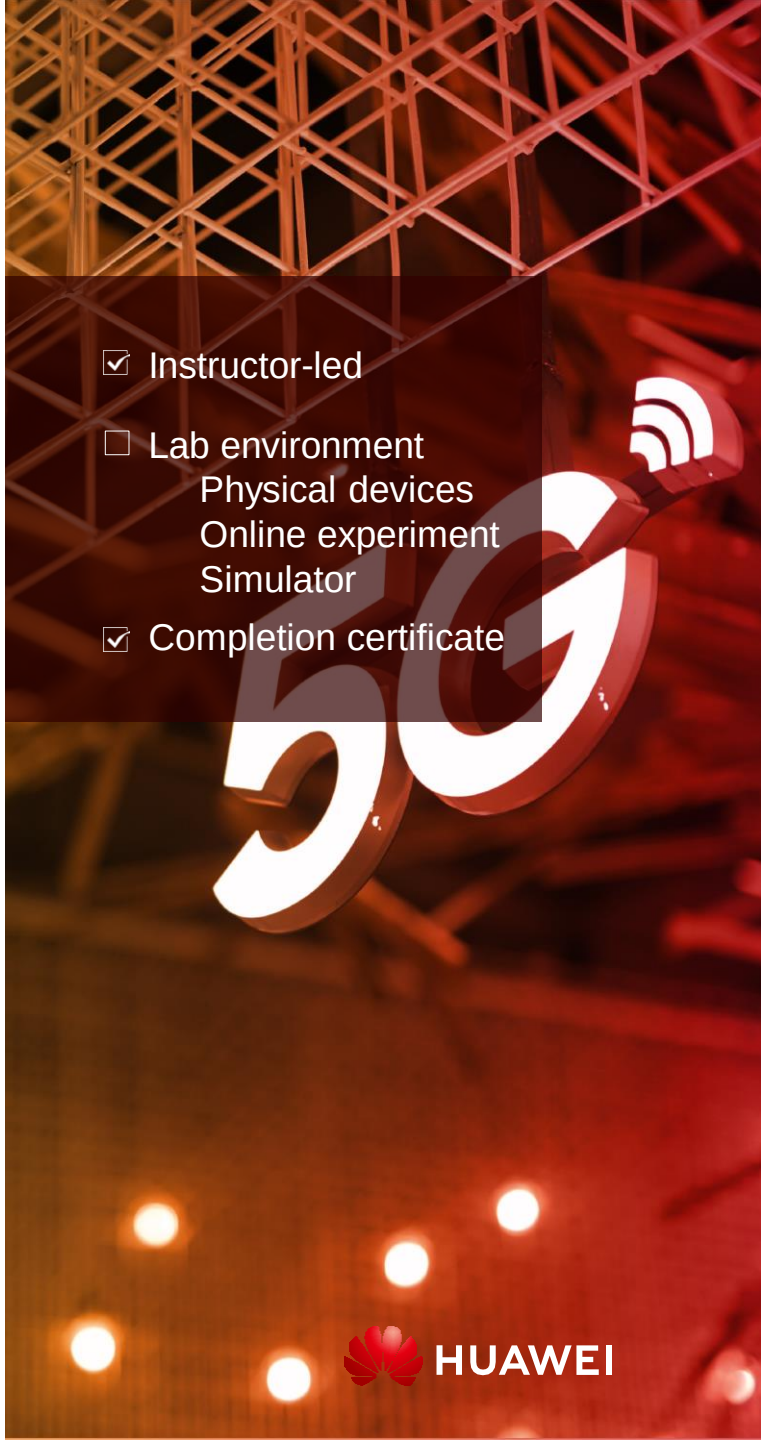
Required Knowledge
Communication principles

Recommended Follow-up Course
None

5G

Course Outline

- 5G development and evolution
- 5G network architecture and key technologies
- Innovative 5G applications
- Basic 5G services and functions
- 5G industry applications and solutions



Thank you.

把数字世界带入每个人、每个家庭、
每个组织，构建万物互联的智能世界。

Bring digital to every person, home, and organization for a fully connected, intelligent world.

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