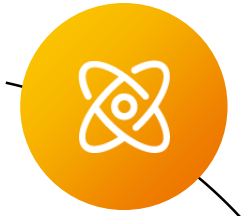
January 2025

Huawei ICT Academy Course Catalog

HUAWEI

Academy Curriculum classification

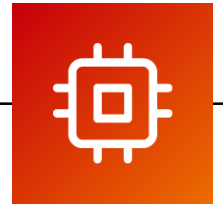
General Courses



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 per course
- Combination of hands-on practice and interactive experience

Academy Curriculum Overview Map

Click the course name > Redirect to Course Profile

Instructor training | Self-study | Certification-associated | Badge

Professional Courses

Connectivity

- Data Communication and Network
- Principles and Applications of WLAN
- 5G Network and Applications

Cloud & Computing

- Principles and Applications of Cloud Computing
- Data Storage
- Artificial Intelligence Technology and Applications
- Cloud-Tech Essentials

App Develop

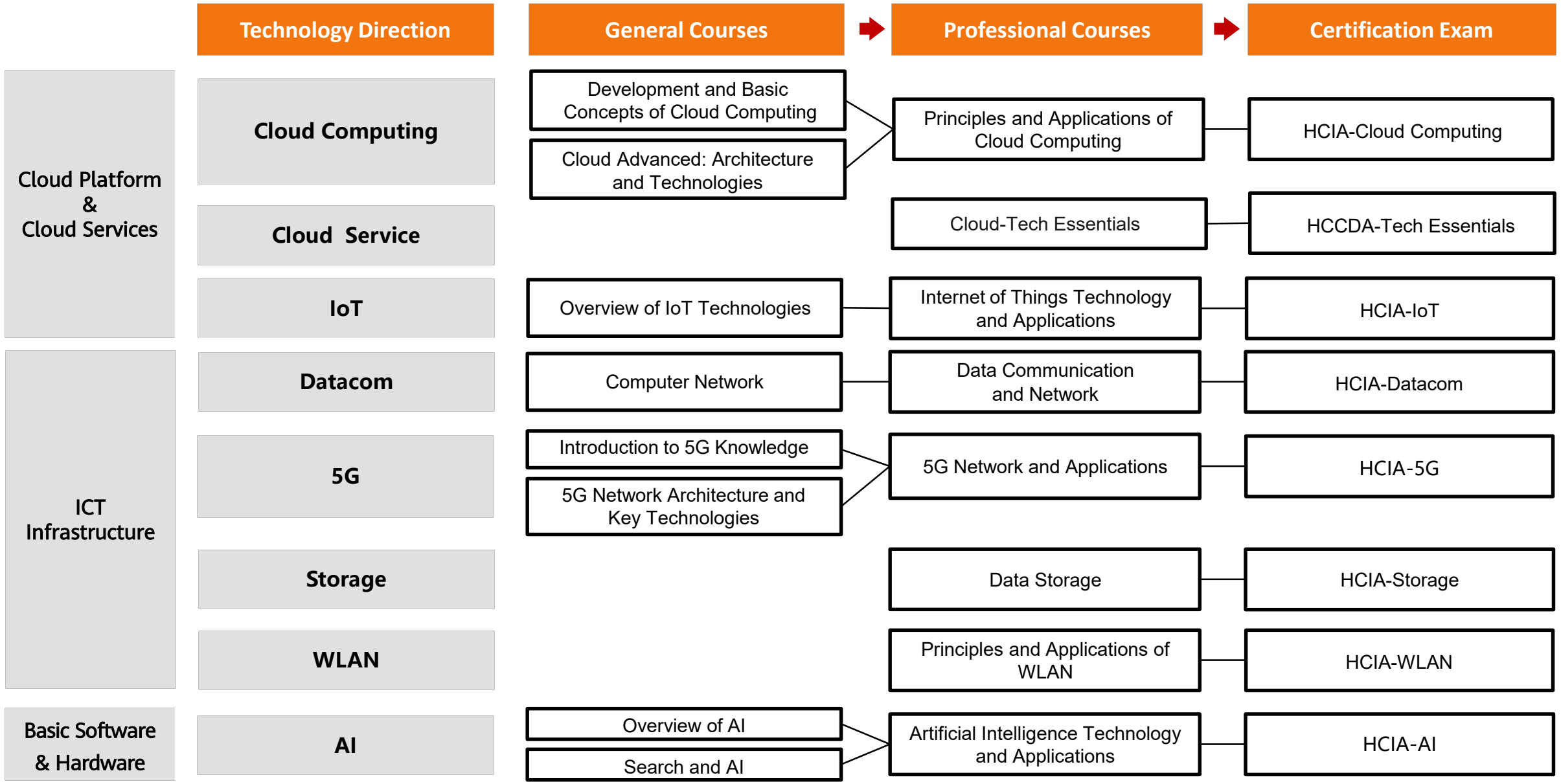
- Internet of Things Technology and Applications

- Huawei ICT Competition 2023-2024 Practice Competition Practical Course (Network Track | Cloud Track | Computing Track)

General Courses

- 5G Basics: What it's all about
- Development and Basic Concepts of Cloud Computing
- Computer Network
- 5G Network Architecture and Key Technologies
- Information Representation and Data Organization
- Overview of IoT Technologies
- Overview of AI
- Data Management and Analytics
- Digital Power
- Search and AI
- Cloud Advanced: Architecture and Technologies
- Algorithm and Program Design

Path for Study and Exam



Correspondence Reference Table of College Majors/Courses and Huawei ICT Academy Courses

No.	Subject Specialty	Basic/Core/Elective Courses	Huawei ICT Academy General Courses											Huawei ICT Academy Professional Courses							
			Computer Network	Information Representation and Data Organization	Data Management and Analytics	Search and AI	Overview of AI	Development and Basic Concepts of Cloud Computing	Cloud Advanced	Introduction to 5G	5G Network Architecture and Key Technologies	Overview of IoT Technologies	Algorithm and Program Design	Data Communication and Network	Principles and Applications of WLAN	5G Network and Applications	Data Storage	Principles and Applications of Cloud Computing	Cloud-Tech Essentials	Internet of Things Technology and Applications	Artificial Intelligence Technology and Applications
1	General Courses	Computer Basics	●	●																	
2	General Courses	Introduction to Artificial Intelligence				●	●														●
3	General Courses	Python programming																			
4	General Courses	Operating System																			
5	Computer Science and Technology	Introduction to Computing	●	●	●								●								
6	Computer Science and Technology	Principle of Computer Composition	●																		
7	Computer Science and Technology	Computer Architecture	●			●															
8	Computer Science and Technology	Computer Network	●			●								●							
9	Computer Science and Technology	Network and Computing	●			●								●							
10	Computer Science and Technology	Artificial Intelligence				●	●														●
11	Network Engineering	Principles of Computer Technology	●																		
12	Network Engineering	Computer Programming																			
13	Network Engineering	Operating System																			
14	Network Engineering	Computer Network	●			●															
15	Network Engineering	Principles of Computer Network	●			●															
16	Network Engineering	Routing and Switching Technology												●							
17	Network Engineering	Network Management												●							
18	Network Engineering	Network Engineering Design												●							
19	Network Engineering	Data Communication												●							
20	Network Engineering	Principles of Digital Communication												●							
21	IoT Engineering	Introduction to Computers	●	●	●								●								
22	IoT Engineering	Operating System																			
23	IoT Engineering	Computing Communications and Networking												●							
24	IoT Engineering	Artificial Intelligence				●	●														●
25	IoT Engineering	Introduction to IoT Engineering										●								●	
26	IoT Engineering	Embedded System										●								●	
27	IoT Engineering	IoT Communication Technology										●		●						●	
28	IoT Engineering	Cloud Computing and Virtualization						●	●									●	●		
29	IoT Engineering	Distributed Computing																●			
30	IoT Engineering	Machine Learning				●	●														●
31	IoT Engineering	Data Mining			●	●							●								
32	Big Data Management and Application	Principles of Operating System																			
33	Big Data Management and Application	Computer Network	●											●							
34	Big Data Management and Application	Computational High-level Language																			
35	Big Data Management and Application	Big Data Platform and Application																●	●		
36	Big Data Management and Application	Big Data Storage		●													●	●			
37	Big Data Management and Application	Cloud Computing						●	●								●	●	●		
38	Big Data Management and Application	Machine Learning				●	●														●
39	Big Data Management and Application	Deep Learning				●	●														
40	Big Data Management and Application	Data Collection and Processing		●	●								●								
41	Big Data Management and Application	Big Data Applications			●								●								
42	Artificial Intelligence	Machine Learning				●	●														●
43	Artificial Intelligence	Information Retrieval and Data Mining		●	●								●								
44	Artificial Intelligence	Neural Networks and Deep Learning				●	●														●
45	Artificial Intelligence	Application and Practice of Artificial Intelligence				●	●														●
46	Communication Engineering	Computer Communication and Networking	●											●							
47	Communication Engineering	Theoretical Basis of Communication Network								●	●			●	●	●					
48	Communication Engineering	Operating System																			
49	Communication Engineering	Principle and Application of Embedded System										●								●	
50	Communication Engineering	Communication Network Basics								●	●			●	●	●					
51	Communication Engineering	Principles of Wireless Communication and Mobile Networks								●	●					●					

Notes: The correspondence table between courses and college majors is only used as a reference for course selection.

Technical Direction	Course Name(English)	Version	Release Date	Course Type	Chinese	English	French	Arabic	Portuguese	Spanish	German	Japanese	Korean	Russian	Indonesian	Turkish	Kazakh
Datacom	HCIA-Datacom	V1.0	2020/4/18	Certification Course	✓	✓	✓	✓	✓	✓	✓			✓	✓		
Datacom	HCIP-Datacom-Core Technology	V1.0	2020/10/20	Certification Course	✓	✓						✓					
Datacom	HCIP-Datacom-Advanced Routing & Switching Technology	V1.0	2020/10/20	Certification Course	✓	✓											
Datacom	HCIP-Datacom-Network Automation Developer	V1.0	2020/10/20	Certification Course	✓	✓											
Datacom	Data Communication and Network	V1.0	2020/12/1	Professional Course	✓	✓	✓	✓	✓	✓	✓	✓					
Datacom	Computer Network	V1.0	2021/12/31	General Course	✓	✓	✓	✓	✓	✓							
AI	HCIA- AI	V3.5	2022/12/30	Certification Course	✓	✓	✓	✓	✓	✓	✓				✓	✓	
AI	Artificial Intelligence and applications	V2.0	2021/3/29	Professional Course	✓	✓											✓
AI	Machine Learning	V1.0	2021/3/23	Professional Course	✓												
AI	Deep Learning	V1.0	2021/12/22	Professional Course	✓												
AI	Python Program Design	V1.0	2022/1/3	Professional Course	✓												
AI	Overview of AI	V1.0	2021/8/24	General Course		✓			✓	✓							✓
AI	Search and AI	V1.0	2021/10/28	General Course	✓	✓	✓	✓	✓	✓							✓
AI	Algorithm and Program Design	V1.0	2023/1/12	General Course	✓	✓											
Cloud Computing	HCIA- Cloud Computing	V5.5	2023/9/28	Certification Course	✓	✓	✓	✓	✓	✓	✓						
Cloud Computing	Development and Basic Concepts of Cloud Computing	V1.0	2022/12/23	General Course		✓			✓	✓							
Cloud Computing	Cloud Advanced: Architecture and Technologies	V1.0	2022/12/21	General Course		✓				✓							
Cloud Computing	Principles and Applications of Cloud Computing	V4.0	2021/11/29	Professional Course	✓	✓											
Security	HCIA-Security	V4.0	2022/5/31	Certification Course	✓	✓	✓	✓	✓	✓	✓						
5G	HCIA-5G	V2.0	2021/6/8	Certification Course	✓	✓	✓	✓	✓	✓	✓						
5G	5G Basics: What it's all about	V1.0	2022/05/17	General Course		✓			✓	✓							
5G	5G Network Architecture and Key Technologies	V1.0	2022/12/21	General Course		✓			✓								
5G	5G Network and Applications	V2.0	2021/11/29	Professional Course	✓	✓											
Cloud Service	HCIA- Cloud Service	V3.5	2021/9/30	Certification Course	✓	✓	✓	✓	✓	✓	✓				✓		
Cloud Service	Cloud-Tech Essentials	V1.0	2024/9/20	Certification Course		✓											
Cloud Service	Cloud Service Management and Application	V3.0	2022/1/3	Professional Course	✓												
WLAN	HCIA- WLAN	V3.0	2020/12/30	Certification Course	✓	✓								✓			
WLAN	Principles and Applications of WLAN	V3.0	2021/11/29	Professional Course	✓	✓											
Big Data	HCIA- Big Data	V3.5	2022/9/30	Certification Course	✓	✓											
Big Data	Big Data Technology and Application	V1.0	2022/1/3	Professional Course	✓												
Big Data	Information Representation and Data Organization	V1.0	2021/12/21	General Course	✓	✓	✓	✓	✓	✓							
IoT	HCIA- IoT	V3.0	2022/10/31	Certification Course	✓	✓											
IoT	Overview of IoT Technologies	V1.0	2022/12/21	General Course		✓				✓							
IoT	Internet of Things and Applications	V2.5	2021/11/29	Professional Course	✓	✓											
Storage	HCIA-Storage	V5.0	2022/9/30	Certification Course	✓	✓	✓	✓	✓	✓	✓						
Storage	HCIP-Storage	V5.5	2023/12/28	Certification Course	✓	✓											
Storage	Data Storage	V4.5	2020/12/1	Professional Course	✓	✓											
OpenGauss	HCIA-OpenGauss	V1.0	2021/9/30	Certification Course	✓	✓											
OpenGauss	HCIP-OpenGauss	V1.0	2023/11/30	Certification Course	✓	✓											
OpenGuass	Data Management and Analytics	V1.0	2021/12/21	General Course	✓	✓	✓	✓	✓	✓							
Access	HCIA-Access	V2.5	2021/1/29	Certification Course	✓	✓											
LTE	HCIA-LTE	V1.0	2018/10/26	Certification Course	✓	✓											
Collaboration	HCIA-Collaboration	V4.0	2024/6/28	Certification Course	✓	✓											
GaussDB	HCIA-GaussDB(for MySQL)	V1.5	2020/7/30	Certification Course	✓												
Harmony OS	HCIA-HarmonyOS Application Developer	V2.5	2024/9/30	Certification Course	✓												
Harmony OS	HCIA-HarmonyOS Device Developer	V2.0	2023/2/10	Certification Course	✓												
Harmony OS	Introduction to HarmonyOS Mobile Application Development	V1.0	2021/11/16	General Course	✓												
Harmony OS	HarmonyOS Mobile Application Development	V1.0	2021/11/16	Professional Course	✓												
openEuler	HCIA-openEuler	V1.0	2020/11/19	Certification Course	✓	✓											
openEuler	HCIP-openEuler	V1.0	2023/7/14	Certification Course	✓	✓											
openEuler	openEuler Operating System Basics	V1.0	2023/3/14	General Course	✓												
openEuler	openEuler Operating System	V1.0	2021/11/29	Professional Course	✓												
MDC	HCIA-MDC Application Developer	V1.0	2021/11/3	Certification Course	✓												
Digital Power	HCIA-Data Center Facility	V2.0	2021/1/5	Certification Course	✓	✓											
Digital Power	Digital Power	V1.0	2022/12/21	General Course		✓											
Transmission	HCIA-Transmission	V2.5	2021/11/30	Certification Course	✓	✓											
Computing	HCIA-Kunpeng Application Developer	V2.0	2023/3/31	Certification Course	✓												
Computing	HCIA-Computing	V3.0	2024/6/28	Certification Course	✓	✓											
Intelligent Vision	HCIA-Intelligent Vision	V2.0	2022/10/17	Certification Course	✓	✓											

Blue ✓: Released **Red ✓: To be released**

Huawei ICT Competition 2023–2024 Practice Competition Practical Course

Map

Network Track GO
Cloud Track GO
Computing Track GO

Course Profile

Overview:

The *Huawei ICT Competition 2023–2024 Practice Competition Practical Course* contains four modules and covers three tracks: Network, Cloud, and Computing. Using real exam questions, this course provides an authentic competition environment and a detailed analysis of key exam topics to help participants excel in the upcoming competition.

Highlights:

Through this course, you will become familiar with the exam format and difficulty, understand the exam structure, focus on key topics, and assess your learning progress. You will have the chance to enhance your technical application skills in preparation for the upcoming Huawei ICT Competition.

Target Audience:

Student participants of the Huawei ICT Competition – Practice Competition

Relevant majors:

Electronics and Information Engineering, Software Engineering, Artificial Intelligence, Computer Science, and related fields

Course Outline:

- Exam Outline and Analysis
- Preliminary Stage Past Exam Questions
- National Stage Past Exam Questions
- Regional Stage Past Exam Questions
- Global Final Past Exam Questions
- Learning Space

ICT Academy ▸ General Course ▸ General Technology

Digital Power

Enroll Now | Map | Badge

Course Profile

Overview
This course explains the role that ICT can play in transitioning to a world less dependent on fossil fuels.

Highlights
Taught by the highly engaging telecom engineer Mike MacDonald, this course explains why transitioning to a world mostly powered by renewables is challenging. But it is also very feasible. Students learn why the transition is urgent, the vital role of power storage, how cars of the future will differ from today's, and how data centers and base stations are becoming ever more energy-efficient.

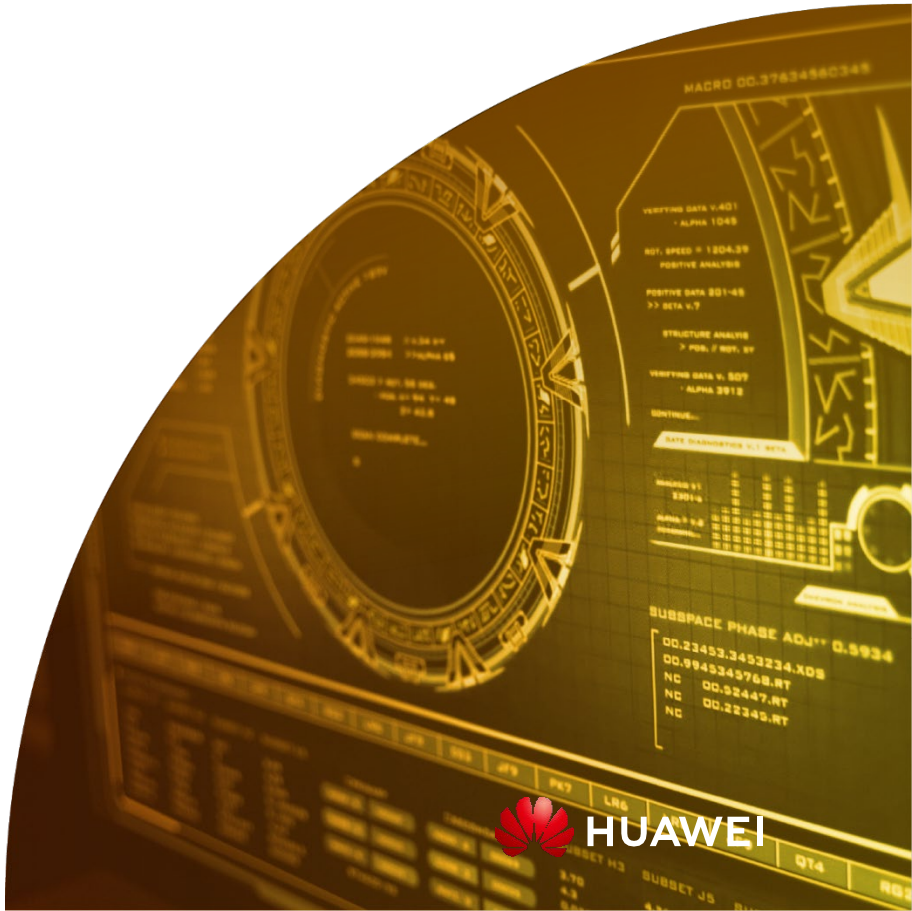
Target Audience
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

Duration
7 chapters, 4-7 minutes each.

Recommended Follow-up Course
None

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate



Course Outline
- The need for a new grid
- Greener generation
- Storage, importance and how
- Low-carbon transportation
- Green base station sites
- Energy-efficient data centers
- Living with a smart grid

Course Structure
- 7 course modules
- 1 Final Exam

Algorithm and Program Design

Enroll Now | Map | Badge

Course Profile

Overview

《Algorithm and Program Design》is a basic course for all majors. The main goal is to train students to master the knowledge of basic algorithms systematically and flexibly apply basic algorithms.

Highlights

This course complies with the requirements of "Select cases, explain the profound in simple terms, and focus on capability development". This course uses cases to explain common algorithms and highlight the core position and guiding role of algorithms in solving actual problems.

Target Audience

Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors

All majors

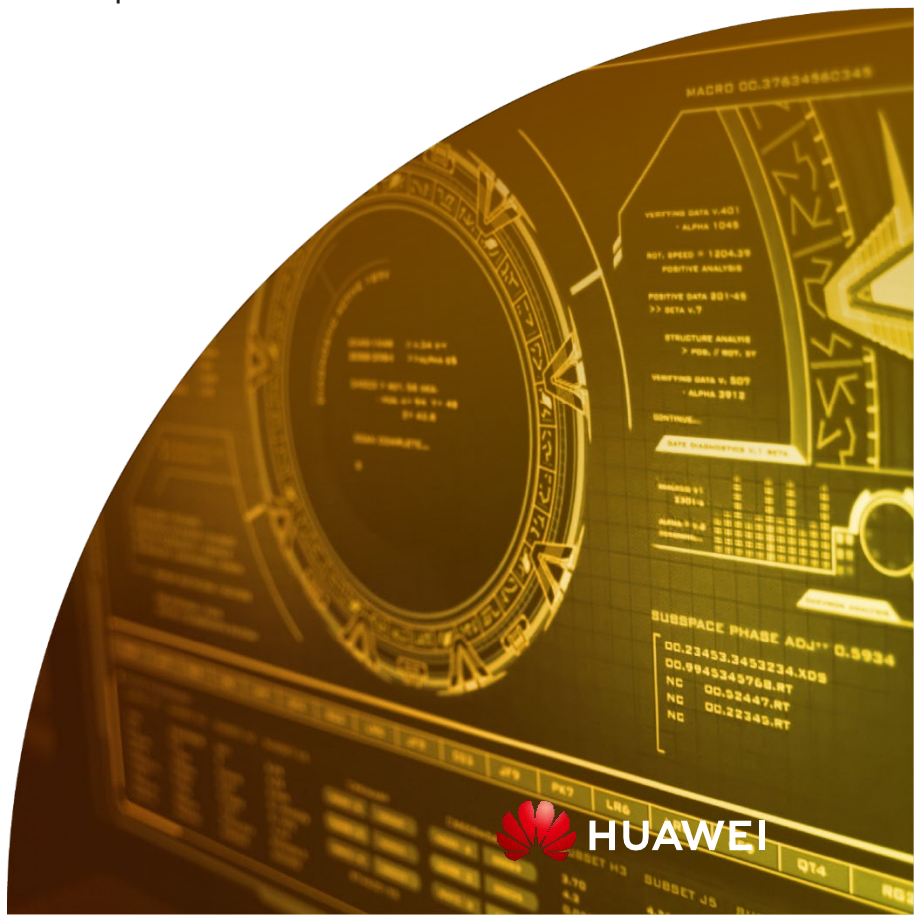
Duration

6 chapters

Recommended Follow-up Course

None

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate



Course Outline

- Maximum common divisor
- Iteration
- Dichotomy
- Recursion
- Search and Rollback
- Monte Carlo algorithm

Course Structure

- 6 course modules
- 1 course satisfaction survey

5G Basics: What it's all about

Enroll Now | Map | Badge

Course Profile

Overview
This introduction to 5G equips students with basic tech knowledge and a solid perspective on what 5G is, where it comes from, and what it can do. No tech background required.

Highlights
Taught by the highly-entertaining telecom engineer Mike MacDonald, this information-packed course discusses not only 5G but also the wireless network technologies that have preceded it. Students get a technical overview of 5G, a historical perspective, as well as learning why 5G is safe for environment and humans.

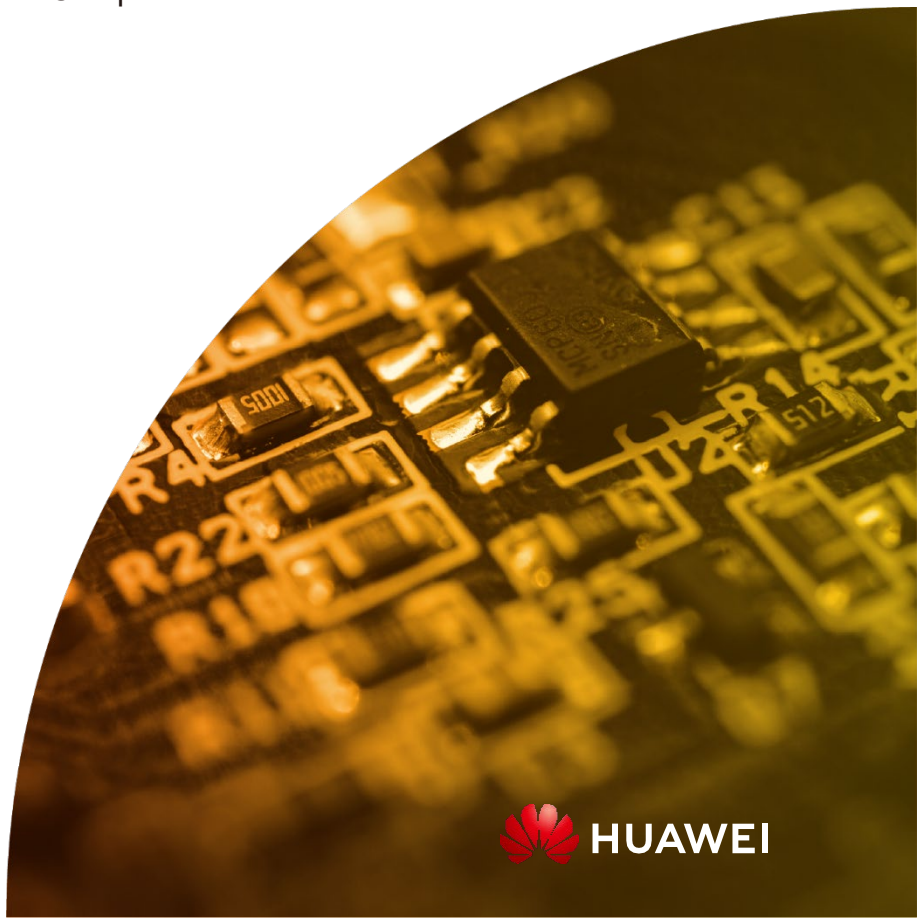
Target Audience
Secondary school and college students with no tech background, early-career non-tech professionals joining a tech company, general public.

Applicable Majors
All majors

Duration
7 chapters, 4-7 minutes each.

Recommended Follow-up Course
5G Network and Applications

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate



5G

Course Outline
- History of wireless, 1G-5G
- 5G, ahead of future needs
- How global standards made 5G a reality
- The importance of spectrum
- The techs that make up 5G
- Cloudification
- 5G safety for people and environment

Course Structure
- 7 chapters
- 1 final exam
- 1 course satisfaction survey

5G Network Architecture and Key Technologies

Enroll Now | Map | Badge

Course Profile

Overview
This course introduces the 5G network new architecture and key technologies.

Highlights
By learning this course, trainees can understand 5G business scenarios ,key capabilities， key technologies used in 5G and new 5G network architecture.

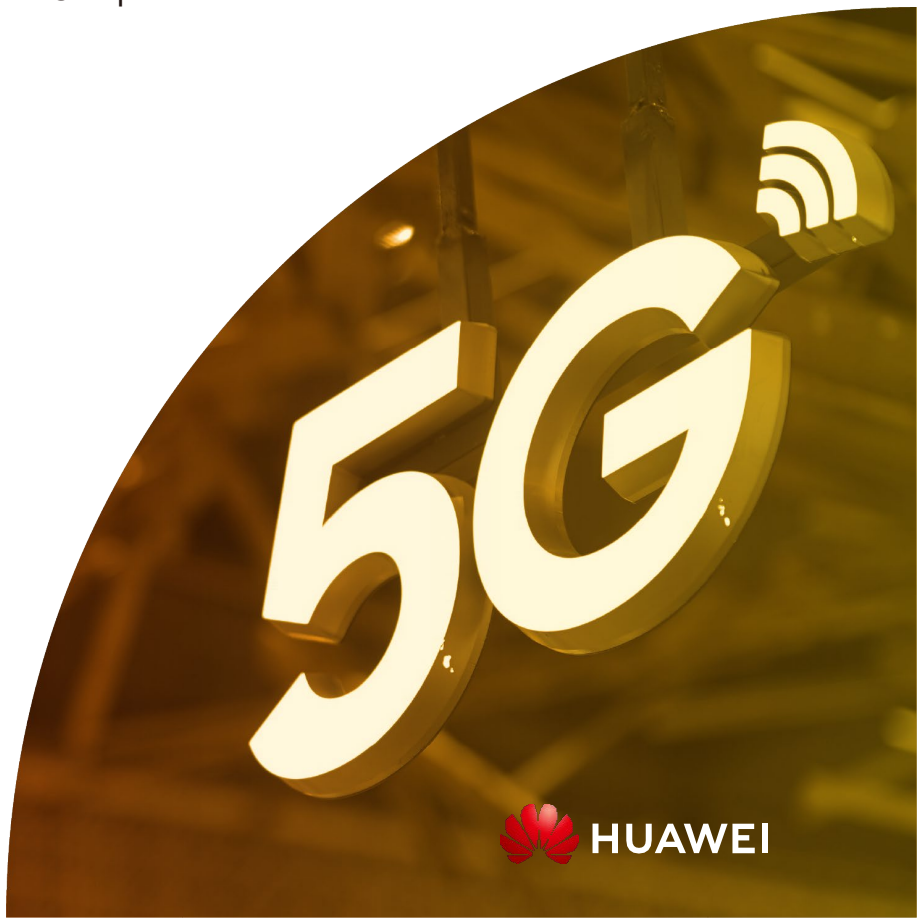
Target Audience
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

Duration
2 chapters, 20 minutes each.

Recommended Follow-up Course
5G Network and Applications

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate



5G

Course Outline
- 5G Key Capabilities and Network Architecture
- 5G New Air Interface

Course Structure
- 2 chapters
- 1 final exam
- 1 Acronym and Abbreviation

ICT Academy ▸ Professional Course ▸ 5G

5G Network and Applications

Sign up today | Map | Badge

If you are already a student, contact your academy.

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.
- **After completing this course, students can directly take the HCIA- 5G certification exam.**

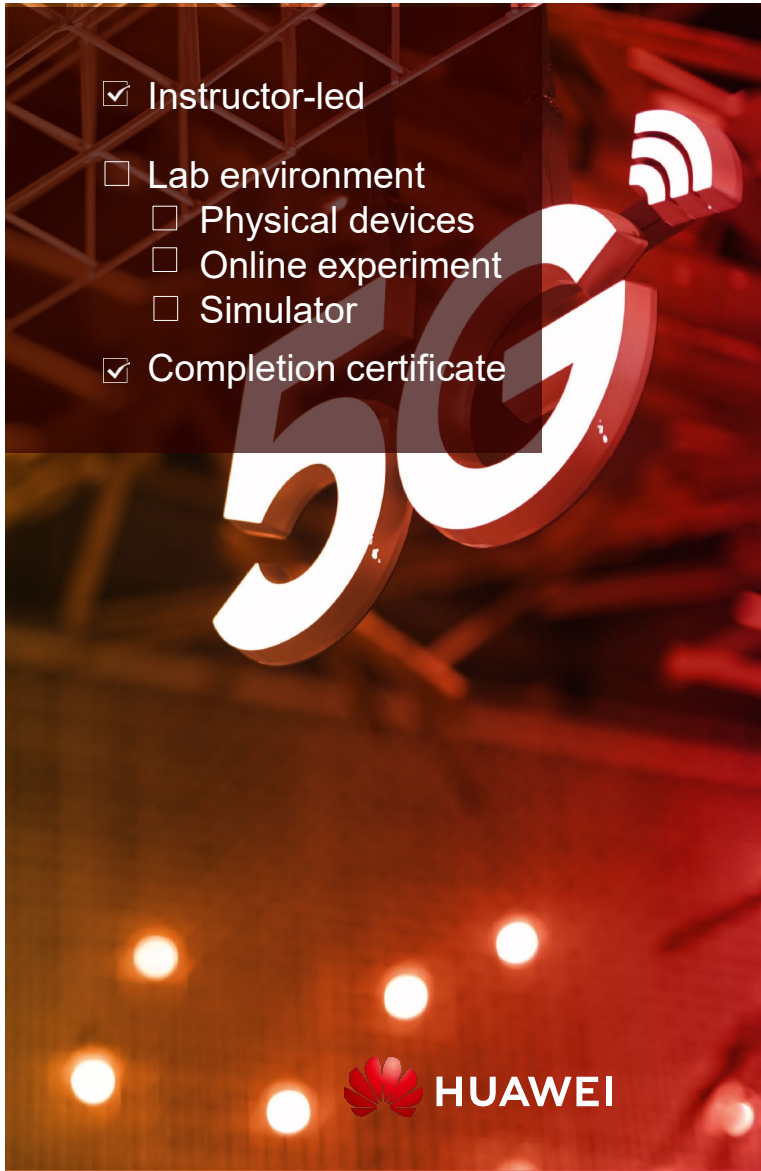
Target Audience
Secondary vocational college student, higher vocational college student, undergraduate

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



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

Course Structure
- 56 course modules
- 4 quizzes
- 1 final exam
- 1 course satisfaction survey

ICT Academy ▸ General Course ▸ General Technology

Computer Network

Enroll Now | Map | Badge

Course Profile

Overview

Computer Network is aimed at students in all 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

Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors

All majors

Duration

1–2 lessons

Recommended Follow-up Course

Data Communication and Network Technology

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate

Course Outline

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

Course Structure

- 15 course modules
- 2 experimental modules
- 1 final exam
- 1 course satisfaction survey

ICT Academy ▸ Professional Course ▸ Data Communication

Data Communication and Network

Sign up today | Map | Badge

If you are already a student, contact your academy.

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.
- **After completing this course, students can directly take the HCIA-Datacom certification exam.**

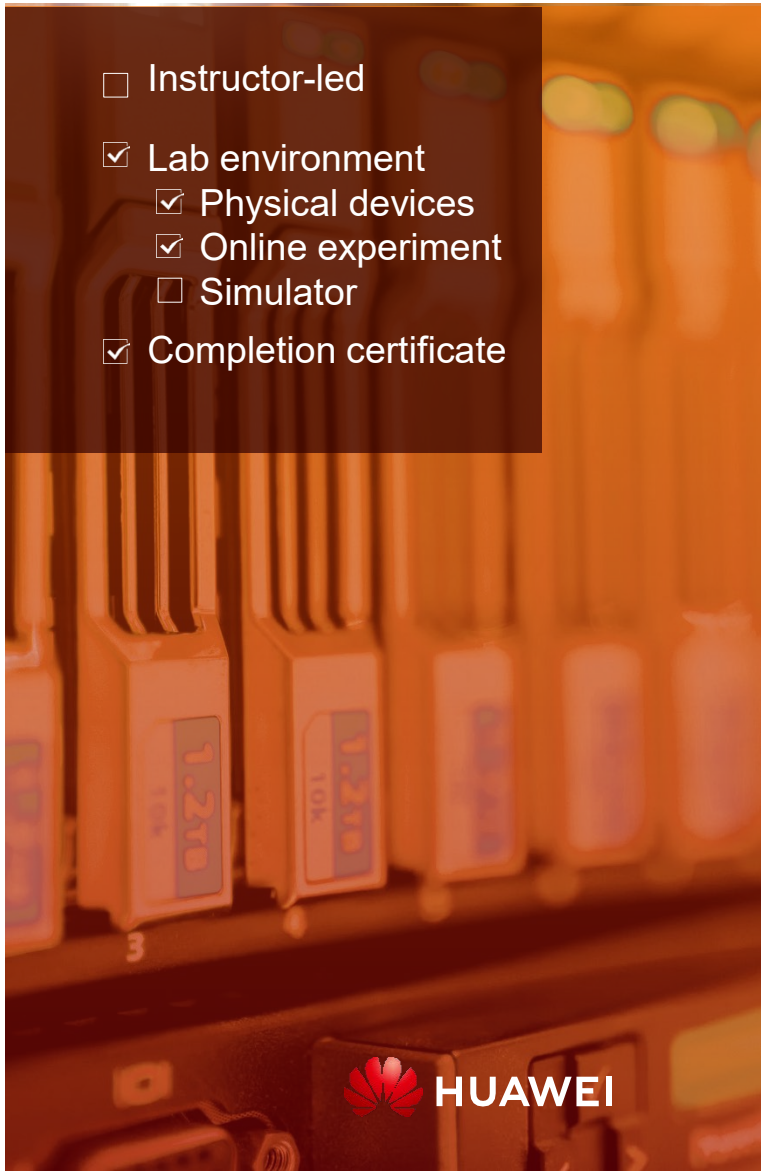
Target Audience
Secondary vocational college student, higher vocational college student, undergraduate

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

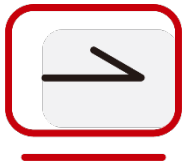
Applicable Majors
Majors related to information sciences and computers

Required Knowledge
Routing and switching basics, computer application fundamentals

Recommended Follow-up Courses
HCIP-Datacom-Carrier IP Bearer
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



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

Course Structure
- 173 course modules
- 37 experimental modules
- 22 quizzes
- 1 final exam
- 1 course satisfaction survey

ICT Academy ▸ General Course ▸ General Technology

Overview of AI

Enroll Now | Map | Badge

Course Profile

Overview
Overview of AI is aimed at students in all 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
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

Duration
1 – 2 lessons

Recommended Follow-up Course
Artificial Intelligence Technology and Applications

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate

AI

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

Course Structure
- 7 course modules
- 1 final exam
- 1 course satisfaction survey

Search and AI

Enroll Now | Map | Badge

Course Profile

Overview
Search and Artificial Intelligence is aimed at students in all 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
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

Duration
1 – 2 lessons

Recommended Follow-up Course
Artificial Intelligence Technology and Applications

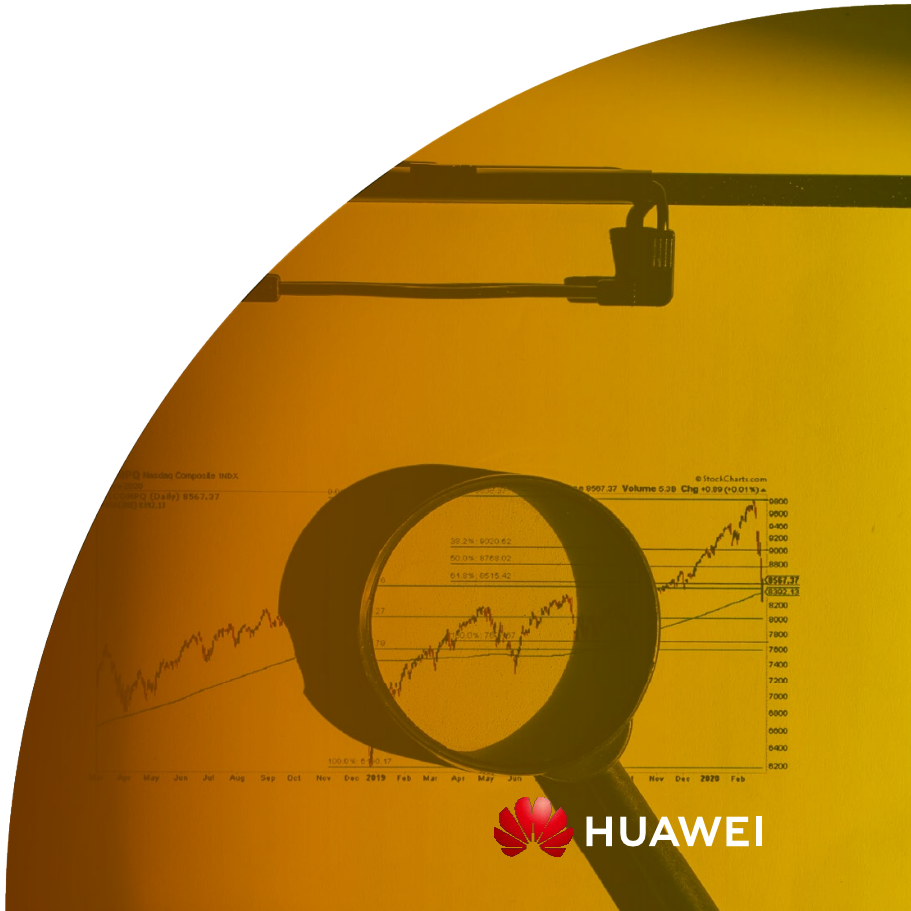
- ☑ Self-study
- ☑ Lab environment
  - ☐ Physical devices
  - ☑ Online experiment
  - ☐ Simulator
- ☑ Completion certificate

Course Outline

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

Course Structure

- 13 course modules
- 2 experimental modules
- 1 final exam
- 1 course satisfaction survey



ICT Academy ▸ Professional Course ▸ Artificial Intelligence

Artificial Intelligence Technology and Applications

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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.
- **After completing this course, students can directly take the HCIA-AI certification exam.**

Target Audience
Secondary vocational college student, higher vocational college student, undergraduate

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

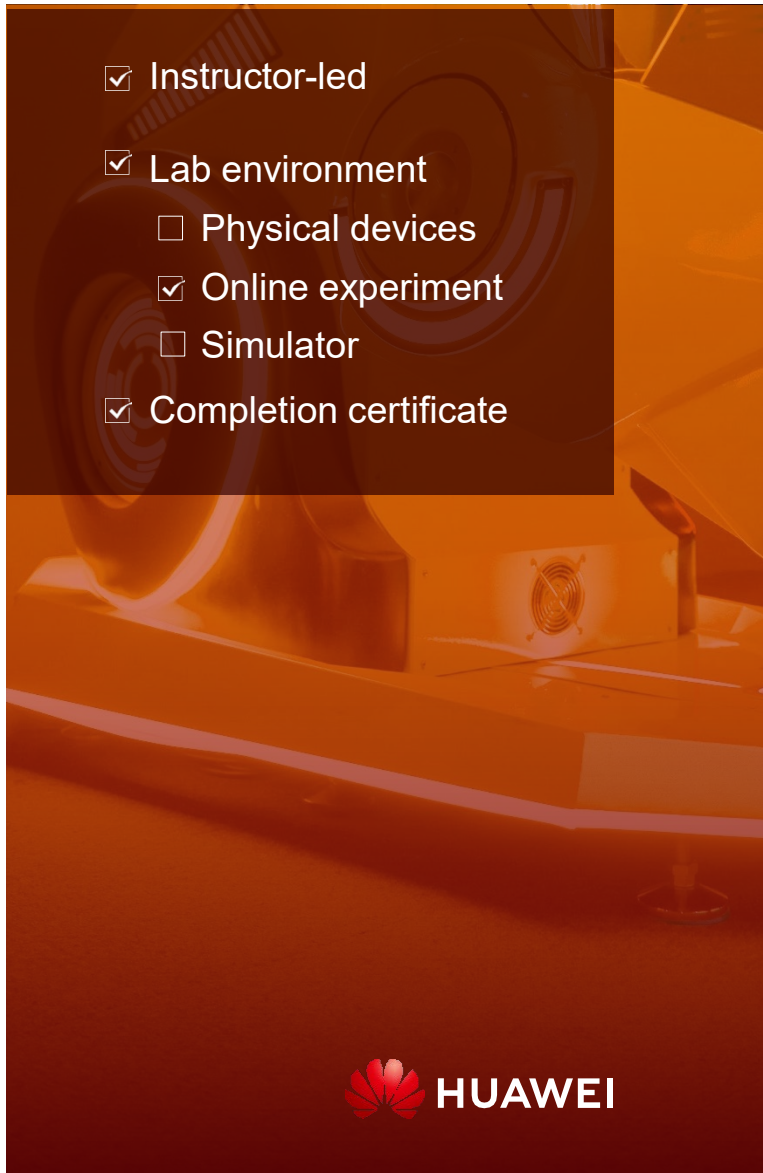
Applicable Majors
Majors related to AI and computers

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

Recommended Follow-up Courses
HCIP-AI-EI Developer

Course Outline
- Artificial intelligence overview
- Python programming basics
- Machine learning overview
- Deep learning overview
- AI development framework
- Introduction to Huawei AI platforms
- Cutting-edge AI applications
- Quantum computing and machine learning

Course Structure
- 28 course modules
- 20 experimental modules
- 1 AI final exam lab
- 1 final exam



ICT Academy ▸ General Course ▸ General Technology

Development and Basic Concepts of Cloud Computing

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Course Profile

Overview
Development and Basic Concepts of Cloud Computing is aimed at students in all 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
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

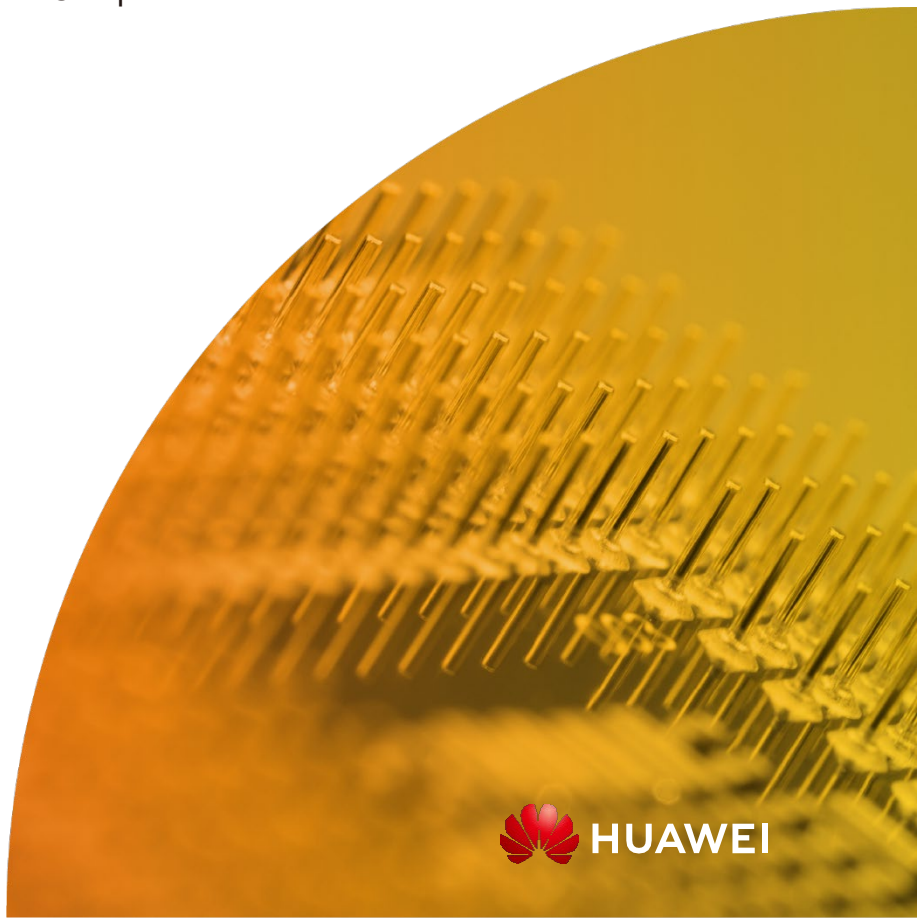
Duration
1 – 2 lessons

Recommended Follow-up Course
Principles and Applications of Cloud Computing

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate

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

Course Structure
- 18 course modules
- 8 quizzes
- 1 final exam
- 1 course satisfaction survey



Cloud Advanced: Architecture and Technologies

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Course Profile

Overview
This course introduces basic knowledge of cloud data centers and virtualization technology and some of cloud services provided Huawei.

Highlights
By learning this course, trainees can learn about the architecture of cloud, from data centers to cloud services and key technology of cloud, virtualization.

Target Audience
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

Duration
1 – 2 lessons

Recommended Follow-up Course
Principles and Applications of Cloud Computing

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate

Course Outline
- Introduction to Cloud Data center
- Introduction to Compute Virtualization
- Cloud service

Course Structure
- 5 course modules
- 3 quizzes
- 1 final exam
- 1 Abbreviation and Terms

ICT Academy ▸ Professional Course ▸ Cloud Computing

Principles and Applications of Cloud Computing

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If you are already a student, contact your academy.

Course Profile

Overview
Principles and Applications of 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.
- **After completing this course, students can directly take the HCIA- Cloud Computing certification exam.**

Target Audience
Secondary vocational college student, higher vocational college student, undergraduate

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

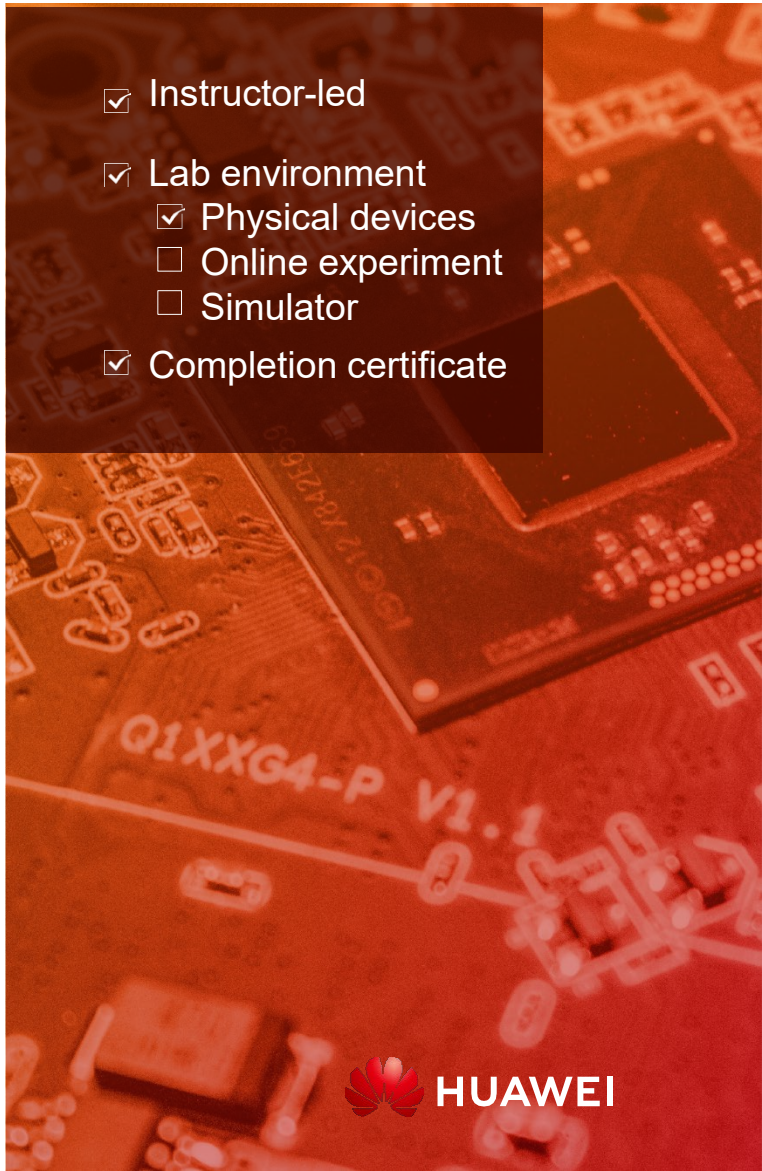
Applicable Majors
Majors related to cloud computing

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

Course Structure
- 28 course modules
- 3 experimental modules
- 6 quizzes
- 1 final exam



ICT Academy ▸ Professional Course ▸ Cloud Service

Cloud-Tech Essentials

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Course Profile

Overview
Cloud-Tech Essential focus on compute, storage, networking, database, security, and deployment services of Cloud.

Highlights
This course includes the introduction to HUAWEI CLOUD, computing cloud services, network cloud services, and storage cloud services, and provides lab operations for corresponding hours.

Career Guidance
- After learning this course, students can master the usage of cloud service components. Lays a solid foundation for learning advanced services and deploying more complex architectures.
- **After completing this course, students can directly take the HCCDA-Tech Essentials certification exam.**

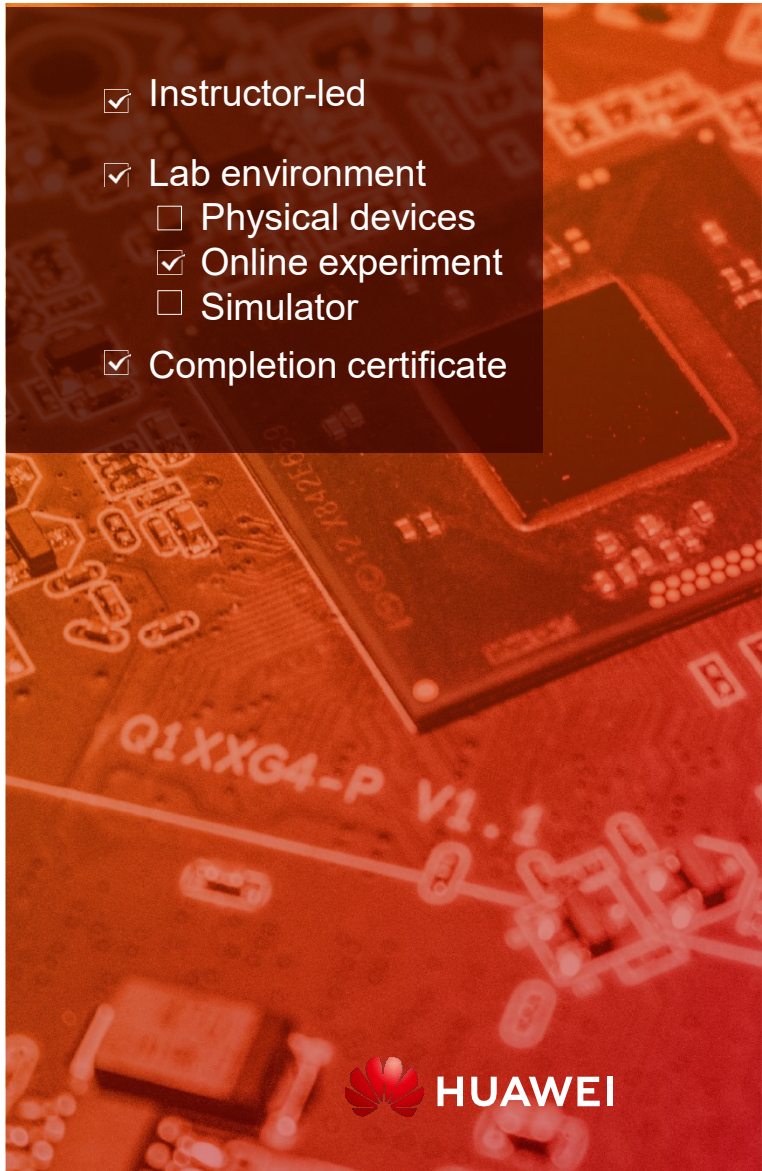
Target Audience
Secondary vocational college student, higher vocational college student, undergraduate

Duration
32 lessons

Applicable Majors
Majors related to computers

Required Knowledge
IT fundamentals

Recommended Follow-up Course
HCCDA-Tech Essentials



Course Outline
- Infrastructure and Computing Capabilities
- Storage and Networking
- Security and Deployment
- Database and Data Governance
- Distributed Deployment and Scalability
- Cloud Native and Digital Transformation

Course Structure
- 15 course modules
- 6 experimental modules
- 1 final exam
- 1 course satisfaction survey

ICT Academy ▸ General Course ▸ General Technology

Information Representation and Data Organization

Enroll Now | Map | Badge

Course Profile

Overview
Information Representation and Data Organization is aimed at students in all 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
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

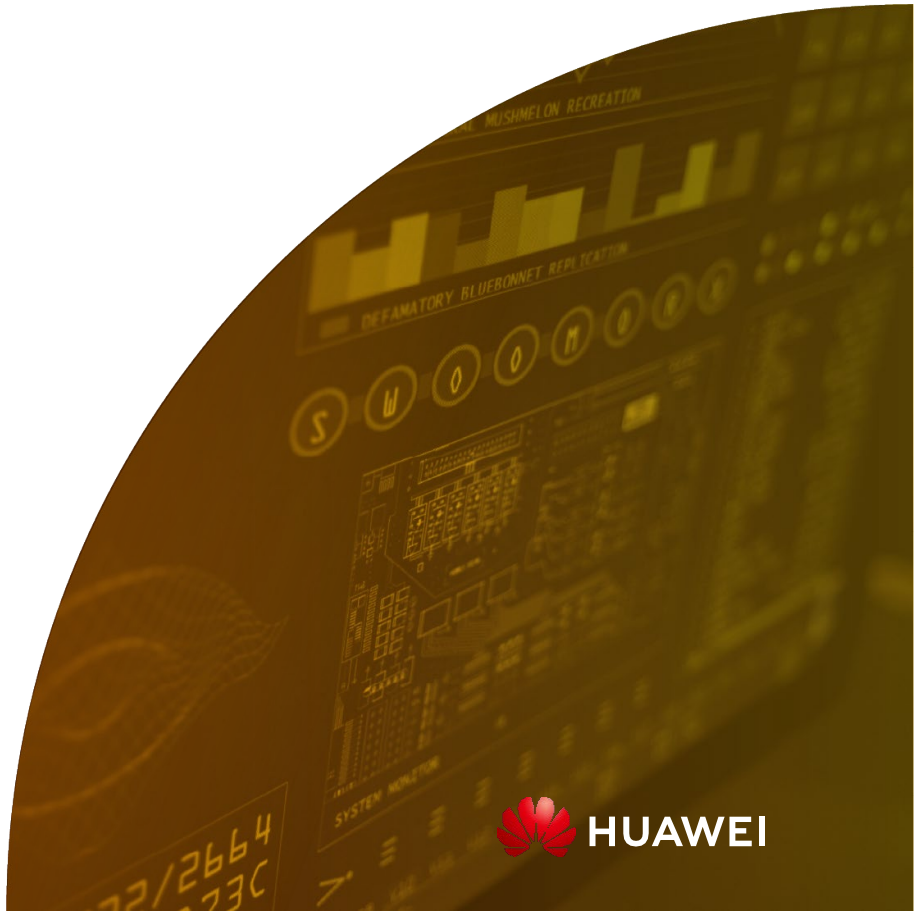
Duration
1 – 2 lessons

Recommended Follow-up Courses
HCIA-Big Data

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate

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

Course Structure
- 8 course modules
- 1 final exam
- 1 course satisfaction survey



ICT Academy ▸ General Course ▸ General Technology

Data Management and Analytics

Enroll Now | Map | Badge

Course Profile

Overview
Data Management and Analytics is aimed at students in all 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
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

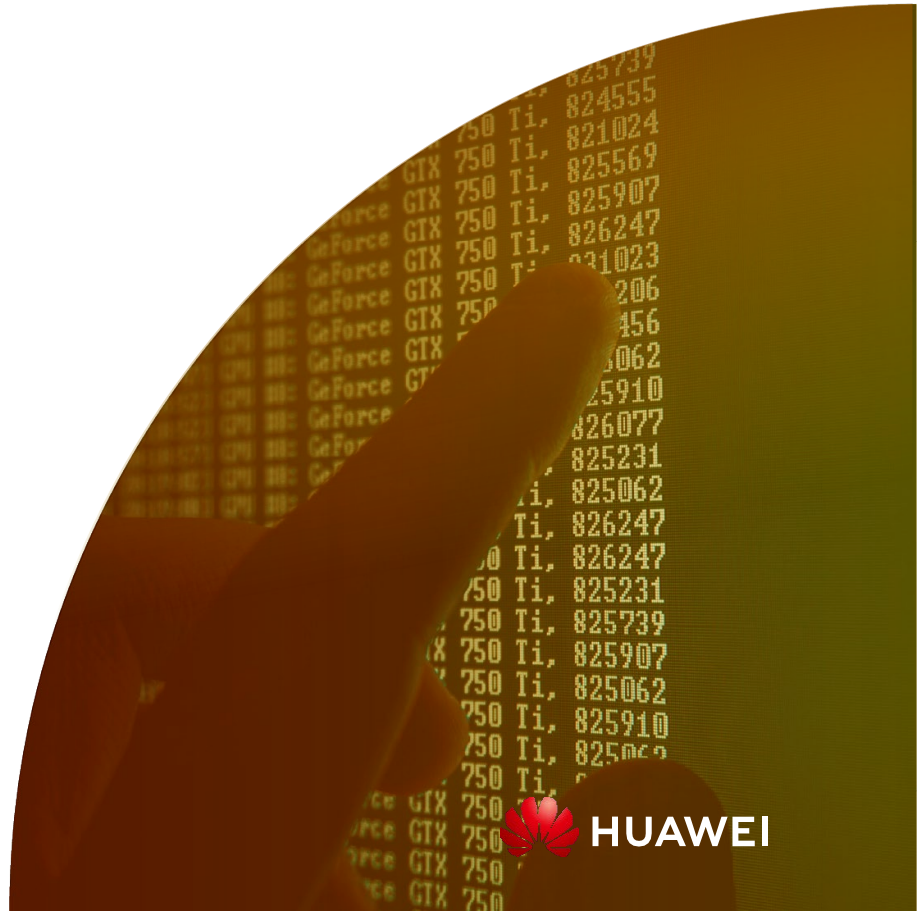
Duration
1 – 2 lessons

Recommended Follow-up Course
HCIA-openGauss

- [x] Self-study
- [x] Lab environment
  - [x] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate

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

Course Structure
- 9 course modules
- 1 experimental modules
- 1 Final Exam
- 1 course satisfaction survey



ICT Academy ▸ Professional Course ▸ Storage

Data Storage

Sign up today | Map | Badge

If you are already a student, contact your academy.

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.
- **After completing this course, students can directly take the HCIA-Data Storage certification exam.**

Target Audience
Secondary vocational college student, higher vocational college student, undergraduate

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

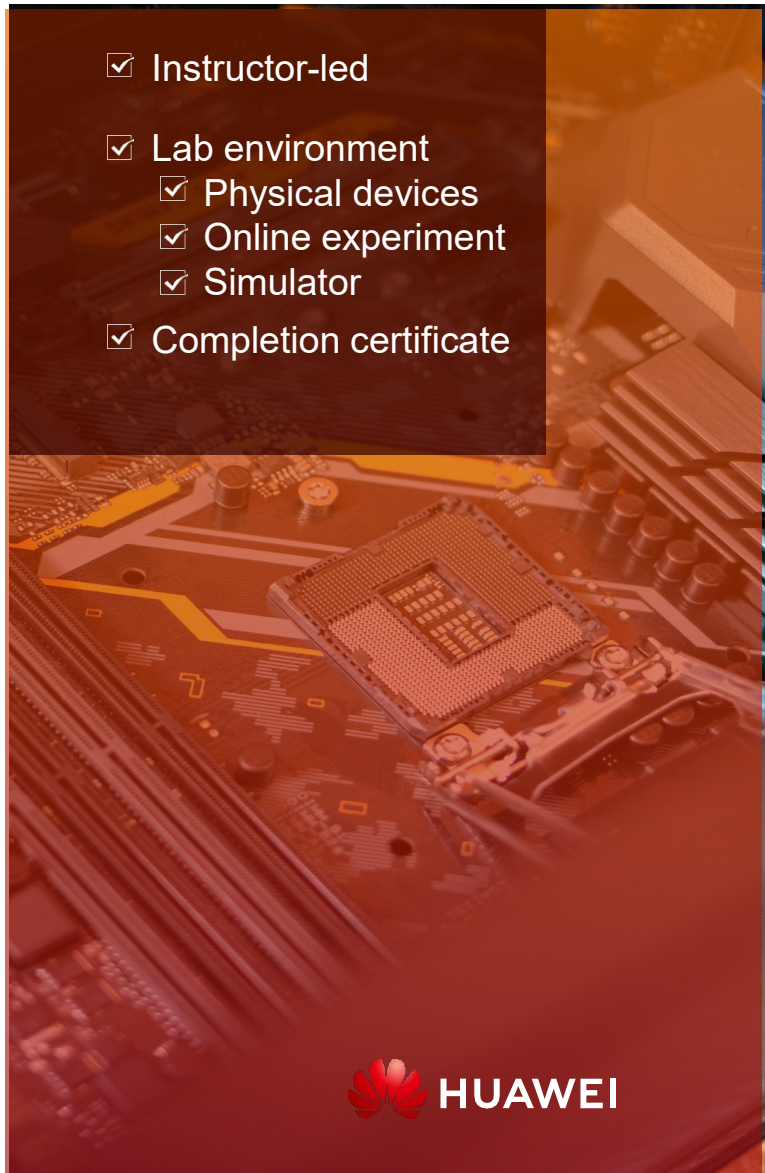
Applicable Majors
Majors related to information sciences and computers

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

Recommended Follow-up Courses
HCIP-Storage

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

Course Structure
- 40 course modules
- 7 experimental modules
- 5 quizzes
- 1 final exam
- 1 course satisfaction survey



ICT Academy ▸ Professional Course ▸ WLAN

Principles and Applications of WLAN

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Course Profile

Overview
Principles and Applications of 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.
- **After completing this course, students can directly take HCIA-WLAN certification exam.**

Target Audience
Secondary vocational college student, higher vocational college student, undergraduate

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

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

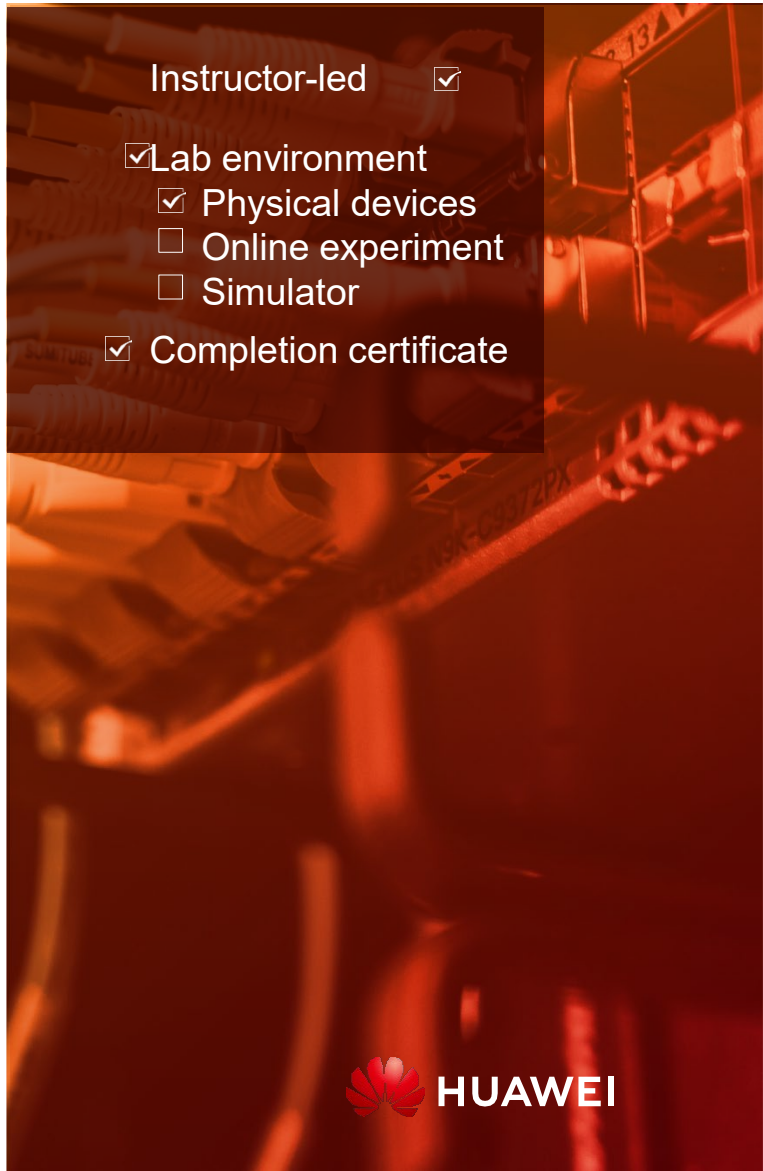
Required Knowledge
PC operating system, computer, as well as routing and switching fundamentals

Recommended Follow-up Courses
HCIP-WLAN
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

Course Structure
- 41 course modules
- 12 experimental modules
- 4 quizzes
- 1 final exam



Overview of IoT Technologies

Enroll Now | Map | Badge

Course Profile

Overview
This course introduces IoT overview, NB-IOT and IOT gateway. By learning this course, can help learner have a deeper understanding about IOT.

Highlights
This course focuses on the development and evolution of IOT , the concept and feature of NB-IOT , the solution of IOT gateway . Upon completing this course, students will be able to define the IoT as well as understanding its history and features.

Target Audience
Secondary specialized school student, Junior college student, Undergraduate, General audience

Applicable Majors
All majors

Duration
1 – 2 lessons

Recommended Follow-up Course
Internet of Things Technology and Application

- [x] Self-study
- [ ] Lab environment
  - [ ] Physical devices
  - [ ] Online experiment
  - [ ] Simulator
- [x] Completion certificate

Course Outline
- Getting to Know
- Narrowband Wireless Network, Massive IoT Connections
- IoT Gateway, Converged Backhaul

Course Structure
- 9 course modules
- 1 Final Exam

ICT Academy ▸ Professional Course ▸ Internet of Things

Internet of Things Technology and Applications

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If you are already a student, contact your academy.

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.
- **After completing this course, students can directly take the HCIA- IoT certification exam.**

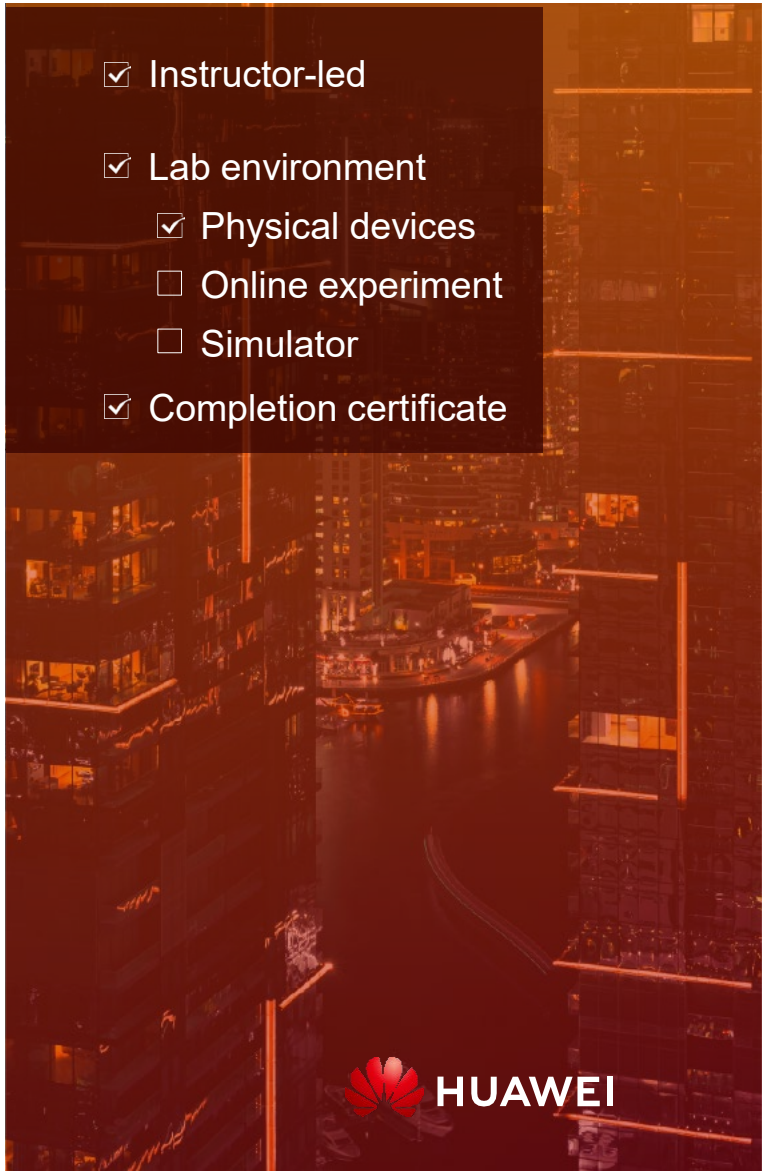
Target Audience
Secondary vocational college student, higher vocational college student, undergraduate

Duration
40 lessons (28 for theory and 12 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
- History and Overview of IOT
- IOT Industry Applications and Solutions
- IOT Today
- Data Collection Technologies
- MCU Basics
- IOT OS Overview
- IOT Communications Technologies

Course Structure
- 26 course modules
- 15 experimental modules
- 1 lab exam
- 1 final exam

Thank you.

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