

# **Huawei ICT Academy Courses Brief**

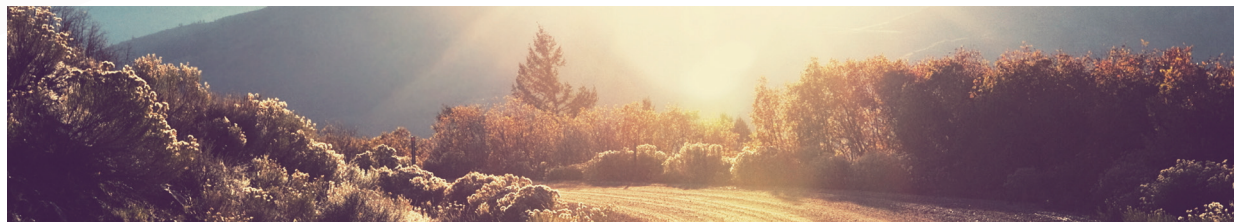
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## Course Authorization

Based on years industry experience, Huawei has developed an industry-recognized ICT talent position model and launched Huawei Certification covering all ICT fields. Huawei also licenses courses composed of the latest industry knowledge and cases to higher education institutions to strengthen students' engineering practice capabilities and employment competitiveness.

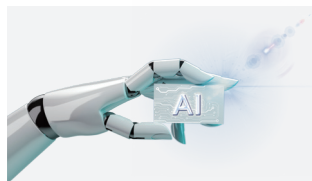
## Applicable Subjects

Computer Science, Computer Engineering, Information Systems, Information Technology, Software Engineering, Cyber Security, Data Science, Electronic Engineering, Network Engineering, Communication Engineering.



## Directions of Authorized Course

### AI



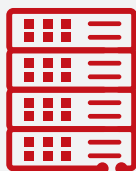
Huawei AI certified course involves deep learning theories and algorithms, and helps develop capabilities for programming with TensorFlow, including the use of HUAWEI CLOUD enterprise intelligence (EI).

### Storage



Huawei Storage certified course aims to prepare engineers with capabilities of collaborating in the design, deployment, operation, and management of Huawei storage systems.

### Datacom



Huawei Datacom certified course aims to train engineers have a basic knowledge in the general technologies involved in small-sized enterprise networks and possess the basic network design, implementation, O&M and network automation abilities.

# HCIA-AI

## Course Overview

To train students to be capable of using AI, machine learning, deep learning and other technologies to achieve the design, development and innovation of AI products and solutions, and help them to be certified as HCIA-AI engineers.



## Target Audience

2-year and 4-year college students in Computer or Math, or students interested in AI.

## Prerequisites

None.

## Benefits

By the end of the course, students will master the basic principles of AI, general open-source AI frameworks, and programming knowledge, and have the ability to design, develop, and innovate AI products and solutions using technologies such as AI, machine learning, and deep learning.

## Experimental Implementation

- Mode one

PC

- Mode two

Huawei Cloud

Note: No shared lab environment. Each student needs independent PC and personal account of Huawei Cloud service.

### Notice:

Since Huawei products' service strategies vary from different regions, the provision of course experiment devices and lab environment to ICT Academy of different country need to be confirmed with local Huawei ICT Academy liaison.

## Authorized Resources

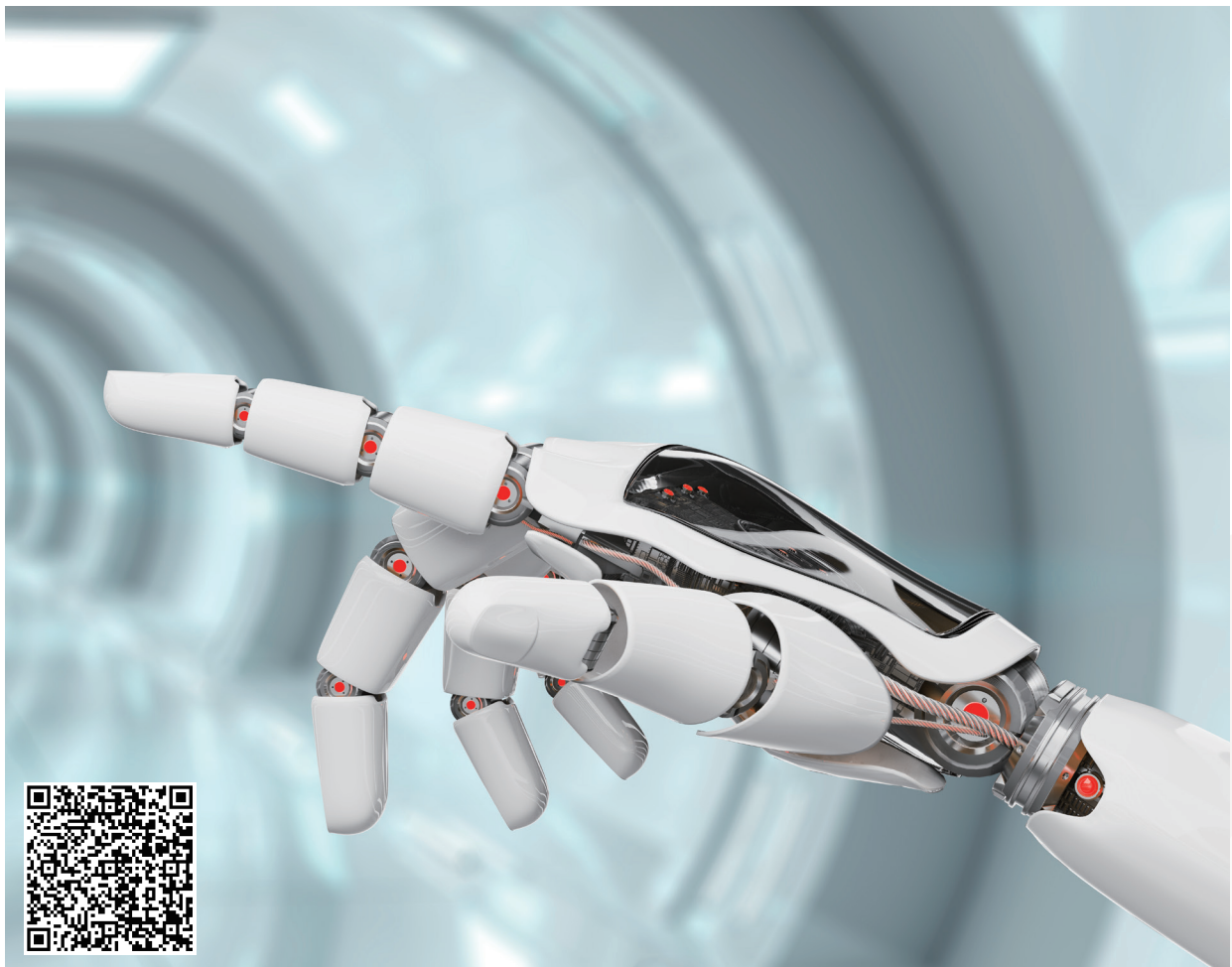
|                            |                   |                     |                |                             |
|----------------------------|-------------------|---------------------|----------------|-----------------------------|
| Training Materials Package | Textbook(PPT,PDF) | Lab Guide(Word,PDF) | Syllabus       | Lab Environment Setup Guide |
|                            | Exam Outline      | Mock Exam           | Equipment List |                             |
| MOOC                       |                   |                     |                |                             |
| "TALENT ONLINE" Platform   |                   |                     |                |                             |

## HCIA-AI

### Syllabus

| No.   | Main Teaching Content                                     | Theory Credit Hrs | Experiment Credit Hrs |
|-------|---|-------------------|-----------------------|
| 1     | AI Overview   | 2                 | 0                     |
| 2     | Machine Learning Overview                                 | 4                 | 3                     |
| 3     | Deep Learning Overview                                    | 4                 | 3                     |
| 4     | Mainstream Development Framework for AI                   | 2                 | 3                     |
| 5     | Huawei AI Development Framework MindSpore                 | 2                 | 0                     |
| 6     | Atlas AI Computing Platform                               | 2                 | 0                     |
| 7     | Huawei Open AI Platform for Smart Devices                 | 1                 | 0                     |
| 8     | HUAWEI CLOUD Enterprise Intelligence Application Platform | 1                 | 3                     |
| Total |   | 18                | 12                    |

Note: 1 credit hour equals 45 minutes.



## HCIA-Storage

### Course Overview

To train students to be capable of collaborating in the design, deployment, operation, and management of Huawei storage systems, and help them to be certified as HCIA-Storage engineers.



### Target Audience

2-year and 4-year college students in Networking, Computer, Engineering, or students interested in Storage.

### Prerequisites

None.

### Benefits

By the end of the course, students are able to build SAN and NAS storage networks, and also have the ability to operate and manage Huawei.

### Experimental Implementation

- Mode one

Simulator: eStor

- Mode two

Hands-on Labs:

| No.   | Device  | Qty |
|---|---------|-----|
| 1   | Server  | 2   |
| 2   | Switch  | 1   |
| 3   | Storage | 1   |
| Note: One set of equipment can support 4 experimenters at one time. |         |     |

#### Notice:

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### Authorized Resources

|                            |                   |                     |                |                             |
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| MOOC                       |                   |                     |                |                             |
| "TALENT ONLINE" Platform   |                   |                     |                |                             |



## HCIA-Storage

### Syllabus

| No.          | Main Teaching Content  | Theory Credit Hrs | Experiment Credit Hrs |
|--------------|--|-------------------|-----------------------|
| 1            | Cutting-Edge Storage Technologies and Development Trends       | 2                 | 0                     |
| 2            | Storage application technologies for AI, big data, and storage | 2                 | 0                     |
| 3            | ICT architecture   | 2                 | 0                     |
| 4            | Introduction to the Storage Ecosystem                          | 2                 | 0                     |
| 5            | Introduction to Common Storage Protocols                       | 2                 | 2                     |
| 6            | Storage Networking Technology                                  | 2                 | 4                     |
| 7            | Storage Reliability Technologies                               | 8                 | 4                     |
| 8            | Advanced Storage Technologies                                  | 4                 | 4                     |
| 9            | Service Continuity Technology and Application                  | 2                 | 0                     |
| 10           | Data Center Storage O&M Management                             | 2                 | 4                     |
| <b>Total</b> |  | <b>30</b>         | <b>18</b>             |

Note: 1 credit hour equals 45 minutes.



## HCIA-Datacom

### Course Overview

To train students to be capable of planning, design, deployment, O&M, and optimization of small- and medium-sized campus networks, and help them to be certified as HCIA-Datacom engineers.



### Target Audience

2-year and 4-year college students in Networking or Engineering, or students interested in Data Communication.

### Prerequisites

None.

### Benefits

By the end of the course, students will have a basic understanding of data communication knowledge, including Routing and Switching principles, WLAN principles, network security, network management and O&M, SDN and programming automation.

### Experimental Implementation

- Mode one

Simulator

- Mode two

Hands-on Labs:

| No. | Device | Qty |
|-----|--------|-----|
| 1   | Router | 3   |
| 2   | Switch | 4   |
| 3   | AP     | 2   |

Note: One set of equipment can support 4 experimenters at one time.

### Notice:

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### Authorized Resources

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| MOOC                       |                   |                     |                |                             |
| "TALENT ONLINE" Platform   |                   |                     |                |                             |

## HCIA-Datacom

### Syllabus

| No.          | Main Teaching Content                                   | Theory Credit Hrs | Experiment Credit Hrs |
|--------------|---|-------------------|-----------------------|
| 1            | Data Communication Network                              | 1                 | 0                     |
| 2            | OSI and TCP/IP reference model                          | 3                 | 0                     |
| 3            | Be familiar with the lab platform and Huawei VRP system | 2                 | 2                     |
| 4            | Network Layer Protocol and IP Addressing                | 4                 | 0                     |
| 5            | IP Routing Basics                                       | 3                 | 1                     |
| 6            | OSPF Basics   | 4                 | 2                     |
| 7            | Ethernet Switching Basics                               | 3                 | 1                     |
| 8            | VLAN Principles   | 2                 | 1                     |
| 9            | spanning tree   | 2                 | 1                     |
| 10           | Ethernet Link Aggregation and Switch Stacking           | 1                 | 1                     |
| 11           | Implements communication between VLANs                  | 2                 | 1                     |
| 12           | ACL Principles and Configuration                        | 1                 | 1                     |
| 13           | AAA   | 1                 | 1                     |
| 14           | Network Address Translation                             | 1                 | 1                     |
| 15           | Network services and applications                       | 2                 | 2                     |
| 16           | WLAN Overview   | 4                 | 0                     |
| 17           | WAN technology  | 2                 | 4                     |
| 18           | Network management and O&M                              | 2                 | 0                     |
| 19           | IPv6 Basics   | 3                 | 1                     |
| 20           | Typical Campus Network Architecture and Cases           | 4                 | 3                     |
| 21           | SDN and NFV   | 4                 | 0                     |
| 22           | Programming and automation                              | 3                 | 1                     |
| <b>Total</b> |   | <b>54</b>         | <b>24</b>             |

Note: 1 credit hour equals 45 minutes.





# Huawei Certification Roadmap



It is not a mandatory but a proposal learning roadmap.



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Huawei Certification  
Facebook



Huawei ICT Academy  
Facebook





Huawei Talent Platform

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