

ICS 03.180
CCS A 18



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/Z 100-2025

**Course development guide for education about standardization
- Standardization of internet of things**

标准化教育课程建设指南 物联网标准化

Issued on: December 3, 2025

Implemented on: December 3, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4.Abbreviations	1
5 General Principles	1
5.1 Systemic	1
5.2 Practicality	2
5.3 Diversity	2
5.4 Professional Integration	2
5.5 Continuous Improvement	2
6.Course Design	2
6.1 Course Objectives	2
6.2 Ability Development	3
6.3 Design Framework	3
6.4 Basic Information	4
6.5 Course Content	5
6.6 Course Resources	8
7.1 Course Team	9
7.2 Teaching Implementation	9
7.3 Course Assessment	10
8.Course Evaluation	12
8.1 Evaluation Principles	12
8.2 Evaluation Content	12
8.3 Evaluation Method	13
9.Curriculum Improvement	13
9.1 Quality Improvement	13
14 Appendix B (Informative) Example 16 of the Standardized Internet of Things Course Syllabus References	20

Foreword

This document is a standard or guiding technical document. This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Standardization Education Standardization Working Group (SAC/SWG27). This document was drafted by: China Academy of Information and Communications Technology, Shenzhen Quality Standard Technology Co., Ltd., China Jiliang University, and Shenzhen Technology University. Tianjin Renai College, Suzhou Jianxiong Vocational and Technical College, Chongqing University of Posts and Telecommunications, Lanzhou University, Tianjin University, Hebei University, Qiqihar University. The main drafters of this document are: Chen Min, Zang Lei, Ma Junchao, Jin Yinglian, Chen Guofen, Wang Binrui, Fang Shengyu, Jia Rui, Mei Fengcheng, Han Yan, and Huang Qingqing. Wu Jieyu, Yang Lijuan, Zhang Shufang, Xiao Feng, Wang Wei, Li Ming, Zhou Xue. Guidelines for the Development of Standardized Educational Curriculum (Internet of Things Standardization)

1 Scope

This document gives guidance on building a course on the standardization of the internet of things: the reference architectures, the identification and addressing schemes, the communication profiles and the security and interoperability requirements that let devices from different makers work as one system. IoT is the field where the absence of standards is most visible to an ordinary user - the smart home that needs four apps, the sensor network that cannot be extended because the gateway speaks only one protocol. Teaching the standardization is teaching why that happens and what has been done about it, which is more useful to an engineer than teaching any single protocol. Issued on 3 December 2025 by SAMR and SAC as a guiding technical document, in force from the same day, under the technical jurisdiction of the Standardization Administration of China.

This document establishes the general principles for the development of standardized Internet of Things (IoT) courses, and provides guidelines for course design, implementation, evaluation, and improvement, as well as different types of courses. Guidance on teaching methods and examples. This document applies to the development and implementation of standardized IoT courses for IoT-related majors in general higher education, as well as vocational education and continuing education. Standardized courses in various forms, such as education, can be used as a reference.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 33745-2017 Internet of Things Terminology GB /Z 43946-2024 Guidelines for the Construction of Standardized Educational Curricula. Basic Knowledge of Standardization

3 Terms and Definitions

The terms and definitions defined in GB/T 33745-2017, as well as the following terms and definitions, apply to this document.

3.1 Internet of Things (IoT) Through sensing devices, and in accordance with agreed protocols, objects, people, systems, and information resources are connected to enable the processing of information in both the physical and virtual worlds. Intelligent service systems that process and respond accordingly.

Note. "Object" refers to a physical entity. [Source: GB/T 33745-2017, 2.1.1]

4. Abbreviations The following abbreviations apply to this document. M2M (Machine-to-Machine) communication

5 General Principles

5.1 Systemic It meets the standardized teaching needs of IoT in general higher education, while also taking into account the teaching needs of vocational education, continuing education, and other educational types. The curriculum development should consider the development trends of the Internet of Things (IoT) industry and the knowledge and skills learners will need to pursue careers in the IoT field.