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**Course development guide for education about standardization
- Automation standardization**

标准化教育课程建设指南 自动化标准化

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Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4.Abbreviations	1
5 General Principles	1
6.Course Design	2
11 Appendix A (Informative) Example 12 of the Syllabus for the Basic Course on Automation Standardization References	16

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 Institute of Instrumentation Technology and Economics, Shenzhen Technology University, Shenyang University of Technology, and China Metrology. Universities, Chongqing University of Posts and Telecommunications, Beijing Institute of Printing, Dongguan University of Technology, Lanzhou University, Qiqihar University, Guangdong Open University, Shenzhen Quality Standard Technology Co., Ltd., Beijing Institute of Technology, Tianjin University, Beijing Haiying Science and Technology Information Institute, Shenzhen Institute of Standards and Technology, Shenzhen Panyue Liang Innovation Technology Co., Ltd., Xiangtan University. The main drafters of this document are. Lu Tielin, Ding Lu, Chen Guofen, Zhang Xiaoling, Shang Yujia, Wang Binrui, Zhou Shouqin, Han Yan, Zhang Zhaoyun, and Wei Min. Wei Mei, Wang Lina, Wang Shuo, Liu Xiaojing, Yue Lei, Yang Lijuan, Zhou Xue, Zhang Yunyun, Kong Lingqin, Yi Guosheng, Li Xiaohan, Huang Manxue, Liu Hongwei, Liu Yi Liu Jingang and Zhang Xueqin. Guidelines for the Development of Standardized Educational Curriculum. Automation and Standardization

1 Scope

This document gives guidance on building a course on automation standardization: the models and interfaces by which industrial control systems are described, connected and

integrated, from the field device up to the enterprise system. Automation is where standardization stops being paperwork and becomes the reason two pieces of equipment can be wired together at all. A fieldbus profile, a device description, an information model - each of them is a standard doing work that no amount of engineering effort can substitute for. Teaching them as a system is what separates an integrator from a wirer. Issued on 3 December 2025 by SAMR and SAC as a guiding technical document, in force from the same day. It reads alongside GB/Z 167 on system control diagrams, which is the drawing convention the same discipline uses.

This document provides guidance on the design, production, implementation, evaluation, and improvement of standardized automation courses, and offers suggestions for... Examples of similar teaching methods. This document applies to the development and implementation of standardized automation courses in general higher education automation-related majors, as well as vocational education and continuing education. Standardized automation courses in 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 36642 Online courses for information technology learning, education and training

GB/T 42411.1 Online Curriculum System for Information Technology Learning, Education and Training - Part

1.Framework and Basic Requirements 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 /Z 43946-2024, as well as the following terms and definitions, apply to this document.

3.1 Automation Transform processes, procedures, or devices into automatic operations.
[Source: GB/T 15312-2008, 3.2]

4.Abbreviations The following abbreviations apply to this document. TSN. Time-Sensitive Networking

5.1 Systemic It meets the automated and standardized teaching needs of general higher education, while also taking into account the teaching needs of vocational education, continuing education, and other types of education. The study aims to identify and address

the development trends in industrial automation, as well as the knowledge and skills required for future work in this field. Yes. Curriculum development comprehensively considers all aspects, including curriculum system, teaching content, teaching methods, and evaluation standards, and integrates learning resources to form a complete curriculum. A unified system in which all aspects are closely linked.

5.2 Practicality Guided by the practical needs of automation standardization, and combined with the development of standardization in the field of industrial automation, practical teaching activities are designed to cultivate... Learners' innovative thinking and problem-solving abilities enable them to apply theoretical knowledge to automated and standardized practices.