

## Research on talent training standards and curriculum development of jewelry design and craft major in higher vocational colleges

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**Abstract:** China's jewelry consumption has entered a period of prosperity. The production contradiction of jewelry industry changes from the backward processing technology and the lack of market cognition to the contradiction of professional talents at the high-tech level. In order to further strengthen the professional and technical abilities and professional development capabilities of jewelry design and craft professionals in higher vocational colleges, it is proposed that the international standards for professional certification should be based on the demand of the jewelry industry chain and be higher than the technical requirements of the industry. We will develop standards for highly skilled and high-quality applied talents for sustainable development, establish a highly integrated model for the training of highly qualified applied talents that includes teaching, learning, doing, certification, business applications and competitions, and establish a curriculum system for the integration of academic credentials, which efforts to provide the jewelry industry with sustainable development of high skills, high-quality applied talents.

### 1. Talent training standards

#### 1.1 Talent training goals

In order to improve the professional skills and comprehensive quality competitiveness of jewellery design and craft professional training, we propose that the jewellery design and craft professional training target is “sustainable high-skilled and high-quality applied talents”. “High-skills” refers to the application of skill-based talents in jewelry design and crafts based on the needs of the industry chain and the international-level qualifications as professional technical standards. “High quality” means broadening the professional caliber of students on the basis of ensuring that students have high professional skills, and learning through the adjacent professional qualification certification courses, and passing the test, can obtain industry qualification certification in addition to this profession. Effectively broaden students' industry knowledge and skill categories, strengthen students' development and promotion space in future positions, support students' sustainable development in the industry, and enhance students' professional migration ability. Based on the training of “high-skilled” and “high-quality” talents, it is possible to achieve the goal of “cultivating talents with a wide range of professional foundations and high technical skills” to adapt to the sustainable development of industry needs.

#### 1.2 Talent training specifications

In order to improve the quality of personnel training, strengthen students' career development and career migration capabilities, and provide a strong talent guarantee for the sustainable development of the jewelry industry. Jewelry design and craftsmanship promotes the training of talents through the implementation of the teaching methods of “teaching, learning, doing, certification, business application, competition”. Analyze and refine professional core skills in the jewellery industry chain demand and international certification requirements, build higher than industry technical

requirements, use international certification technical standards as teaching standards, and test talent training results through commercial applications and professional competitions. Therefore, the qualifications for jewellery design and craftsmanship are as follows: 1. Cultivate students with a professional basic ability level that can better support professional skills and development; 2. Train students to meet international certification standards and obtain the corresponding professional skills level. 3) Cultivate students with comprehensive professional knowledge of this major and adjacent majors, and obtain corresponding industry qualification certification to achieve a better level of vocational migration ability. In summary, through the “teaching, learning, and doing” to build and cultivate students' professional knowledge system and basic ability, “certification” guarantees students' professional level and professional quality. “Business application, competition” enables students to have professional sense of accomplishment. Strengthen the recognition of the industry, at the same time, generate a strong interest in professional development, and achieve the goal of high-skilled and high-quality applied talents for the sustainable development of jewelry design and crafts.

## **2. Course construction**

### **2.1 Curriculum Construction Objectives**

Breaking the subject curriculum system, fully embodying the logical main line of work tasks in the curriculum system, linking the curriculum setting with the work tasks, the curriculum content is in direct contact with the professional certification ability of the job, and the teaching situation is in direct connection with the work situation and the professional certification teaching environment. Adhere to the guiding ideology of facing the industry, relying on the industry, service industry, and serving the regional social and economic development.

Taking the talent cultivation mode of deep chemical engineering as a breakthrough, the international certification technology standard “integration of teaching and research” is the focus of construction, focusing on the curriculum system construction and curriculum content reform of jewelry design and technology. The construction of the course follows the following principles: First, analyze the characteristics and requirements of talent demand in the jewelry industry, promote the connection between professional construction and industrial chain demand; second, analyze the economic development, industrial upgrading and technological progress of the jewelry industry, and promote the content of the professional group curriculum and international The certification standards are docked; the third is to analyze the knowledge, skills and professional qualities required for relevant professional positions, and to promote the docking of diplomas and professional qualification certificates; the fourth is to analyze the characteristics and requirements of regional social and economic development, and promote the connection between vocational education and lifelong learning.

### **2.2 Course construction content**

Jewelry design and craftsmanship is based on a jewellery design, jewelry processing and manufacturing work chain. Among them, the professional core skills corresponding to jewelry design positions are: jewelry hand-painting, jewelry design and jewelry processing and manufacturing. The course of jewellery design and crafts is based on the analysis of the skill needs of the jewelry design post group and the jewelry processing and manufacturing post group, and builds the curriculum system.

“High-skilled, high-quality” proposes the concept and procedure of international-level vocational qualification certification teaching design, strengthens the integration of curriculum content in the basic learning field and professional learning field, and builds a professional compulsory course + industry certification integration course, that is, the “integration of course certificate” course . At the same time, real-time introduction of new knowledge, new technologies, new standards, new equipment, new processes, new achievements and internationally accepted qualification standards for

skilled talents in industry enterprises, and dynamic update of teaching content. Starting from social surveys and professional position (group) analysis, the core occupational ability, special ability and ability elements required for specific job positions (groups) are decomposed and refined; according to the international certification technical standards of each individual core skill, Comprehensively refine these ability factors to design specific professional core courses and practical courses, to achieve the professional standards of professional compulsory courses and professional certification courses, to achieve the teaching effect of the combination of professional core courses and certification courses. Through the study of the “Certificate of Unity” course in the professional compulsory course, the professional core skill level is upgraded, and the corresponding domestic/international industry qualification certification is obtained, achieving the goal of professional technology training high skill level. Please refer to Table 1 for the professional skills and corresponding course library, as well as the “Classification of Courses and Certificates” course for the construction of qualifications.

Table 1 List of jewellery design and craft courses

Industry chain positions	job skills	skill categories	curriculum	“integration of courses”	qualification
Jewelry design post group	Jewelry hand drawn	Professional core skills	Professional basic courses: sketching, watercolor painting basic techniques, gouache basic techniques, history of Chinese and foreign jewellery development, international famous jewelry appreciation, jade culture and so on.	Fine jewelry hand-painted (primary) - (advanced), Jewelry perspective principle hand-painted	GIC jewelry designer (hand drawn) qualification certificate IGI Jewelry Designer Certification GIA Jewelry Designer Certification
			Professional compulsory courses: high-end jewelry hand-painted (primary) - (advanced), jewelry perspective principle hand-painted.	Jcad jewelry computer drawing	GIC Computer Jewelry Designer Qualification Certificate IGI CAD Design Certification
			Professional compulsory	Contemporary jewelry creative design	HRD Antwerp jewelry creative design hand-painted certificate
	Jewelry design	Professional core skills	Professional basic courses: design introduction, design basis, graphic design, design inspiration search.		
			Professional compulsory		

			courses: contemporary jewelry creative design, fashion jewelry creative design, national jewelry creative design, jcad jewelry computer drawing.		
Jewelry processing and manufacturing group	Jewelry manufacturing	Professional core skills	Professional foundation courses: gemological foundation, material science foundation, jewelry structure and mosaic technology, etc.	Metal processing technology, jewelry carving wax technique	GIC Jewelry Craft Technician Training Certificate Ministry of Labor and Social Security, precious metal jewelry, hand-made
			Professional compulsory courses: metal processing technology, jewelry carving wax technique, jewelry inlay technique, craftsmanship technique, wood grain gold craft technique, etc.	Jewelry inlay technique	GIC gem setting technician training certificate
				Enamel craftsmanship	GIC Enamel Basic Craft Course Certificate
				Wood grain gold craft technique	GIC wood grain gold jewelry craft course training certificate
Jewelry Quality Management Position Group	Jewelry production management	Career development skills	Professional elective courses: ISO900 quality certification quality management, jewelry management and so on.	None	None
Jewelry and jade business posts	Jewelry sales	Career development skills	Professional elective courses: jewelry marketing,	Jewelry marketing	Jewelry Salesperson, Ministry of

			jewelry e-commerce, business negotiations, etc.		Labor and Social Security
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### 3. Conclusion

The purpose of jewellery design and craftsmanship is to provide more high-skilled and high-quality jewellery design and processing application talents for the society, to provide the most beneficial talent guarantee for the jewelry design and production industry chain, and finally to meet the increasing aesthetic needs of people. The jewellery design and craft major of higher vocational colleges should improve the talent training standards of the jewellery industry in the era, and combine the international certification qualification standards as teaching guidelines to explore more suitable, high-standard, verifiable jewellery design and craft professional talents training. Mode and curriculum system, in the process of teaching, through the certification exams, business applications, professional competition to enhance the quality of personnel training. At the same time, we will strengthen the construction of the required courses for the integration of the curriculum and the qualifications, and establish a certification course group to achieve the professional skills of students, effectively improve the teaching effect, enhance the employment level of students, and improve the professional migration ability of students in the industry. The industry provides sustainable high-skilled and high-quality applied talents to maintain the normal development of the jewelry industry.

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