Self-Assessment Report for an International ASIIN Program Accreditation

for the Bachelor's Degree of Industrial Design

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About the SAR: A Brief Overview

Dear ASIIN Team,

Thank you for giving us the opportunity to participate in the International ASIIN Program Accreditation. We are very pleased to submit the Self-Assessment Report for an International ASIIN Program Accreditation for the bachelor's degree in industrial design. A brief overview of our University, School, and Programme is introduced as follows:

As one of the higher education institutions in China, Shanghai University of Engineering Science integrates engineering, economics, management, art, design, and other disciplines. SUES is one of the first batches of pilot universities under the Outstanding Engineer Education and Training Program of the Ministry of Education, the pioneer of Emerging Engineering Education and High-level Application-oriented Universities in Shanghai. Since 2024, SUES has been nominated to be a doctoral degree-awarding institution in Shanghai. The detailed introduction of SUES can be found on the website: https://en.sues.edu.cn/.

To proactively adapt to the need for industrial design in Shanghai and nationwide as well as implement the strategy of invigorating China through science and education, SUES and companies around the Yangtze River Delta Area have decided to leverage their respective strengths to establish an industry-university-research cooperation alliance. In 1998, they jointly founded the School of Art and Design, Shanghai University of Engineering Science, which was established with the programme of applied photography art in 1978 and the Department of Advertising and Video Technology. Since 2013, it has been granted MFA school and been developed into a multi-disciplinary and characteristic school. Currently, the school consists of eight Programmes, including product design, arts and technology, visual communication, photography, digital media design, environmental art design, industrial design, and advertising. Currently, 1500 students have enrolled. The detailed introduction of the school can be found on the website: https://yssj.sues.edu.cn/eng/

The department began enrolling students in a four-year undergraduate program in 2009 and is qualified to receive a Bachelor of Industrial Design degree. Leveraging the distinctive disciplines of "sea, land, and air" transportation at Shanghai University of Engineering Science, the Programme emphasizes both "specialization" and "broad-based" professional skills development. The detailed introduction of the Department can be found on the website: https://yssj.sues.edu.cn/eng/15973/list.htm.

Graduates of the Programme have solid knowledge of mathematics, engineering, design and social sciences, professional knowledge of industrial design and related practical skills. They have skills in computer application, English communication, teamwork, aesthetic, and innovative training. They can apply the knowledge acquired to practical problems and be competent for jobs in the field of Industrial design. The curriculum is divided into nine modules: General course; Industrial Design Fundamentals; Informatics; Mathematics and Physics; Foreign Language; Industrial Design Professional Courses; Elective; Practical Training; Bachelor Thesis/ Capstone Project. The core courses are centered on professional knowledge and practical skills related to

industrial design, especially in ergonomics, design psychology, 3d modeling, and open-source programming. Since 2018, the department has been implementing the "First-Class Discipline Construction" and was approved as the "Shanghai Design Innovation Center" in 2021. In the talent cultivation process, it consistently emphasizes the cooperative education model of industry, academia, research, and enterprise. It has established cooperative relationships with more than 10 well-known domestic and international enterprises, including the Shanghai Industrial Design Association, Shanghai Catering Association, Shanghai Graphics Society, Haiwoshi Furniture (Shanghai) Co., Ltd., Gaobo Aviation, Shanghai Benteng Electric Co., Ltd., and SAIC Datong.

We have exerted every effort to prepare the SAR in accordance with the SUBJECT-SPECIFIC CRITERIA (SSC) of TC01, along with the related template and guidelines. Through this preparation process, we have a full understanding of the International ASIIN Program Accreditation. This understanding has been instrumental in enhancing our professional teaching standards and improving the quality of talent training within our department.

Thanks again!

Kind regards,

Department of Industrial Design

ASIIN Programme Self-Assessment Report

Section A of the SAR includes tables in which basic data concerning the accreditation procedure.

Section B contains basic data concerning the submitted study programmes.

Section C contains the Self-Assessment section organised according to the ASIIN Criteria.

A About the Accreditation Procedure

General data

Website of the Higher Education Institution	www.sues.edu.cn
Faculty/Department offering the Degree Programme	School of Art and Design Department of Industrial Design

Seals applied for

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)
工业设计	Industrial Design	ASIIN Seal for a bachelor's degree programme	/	TC 01

B Characteristics of the Degree Programme

Name （Chinese）	工业设计
Name （English）	Industrial Design
Final degree	Bachelor
Corresponding level of the EQF	6
Duration	8 semesters
ECTS 学分	240 ECTS
Mode of Study	Full time
University website	https://en.sues.edu.cn/
First time of offer	Sep. 01, 2009
Intake rhythm	Fall semester
Intake Capacity per cohort	75
Tuition fee	5000 元/年
College	Art and Design School
College website	https://yssj.sues.edu.cn/eng/
Program Director:	Professor Gao Zhu
Phone	18301775716
Email	gao65zhu@163.com

C Self-assessment for the ASIIN-seal

1 The Degree Programme: Concept, content & implementation

1.1Objectives and learning outcomes of a degree programme

1.1.1 Objectives

The Programme closely aligns with the development and demands of the industrial design industry, adopting the educational philosophy of "integrating arts and engineering, merging production and education." Guided by the university's positioning as a "high-level local application-oriented university" and leveraging the strengths of the "Sea, Land, and Air" transportation disciplines, the Programme aims to cultivate engineering applied talents with patriotism, interdisciplinary knowledge, and industry-academia integration. By integrating mechanical, electronic, electrical, automotive engineering, materials, artificial intelligence, and design-related disciplines, the Programme emphasizes practical teaching components, combining classroom instruction with market-specific projects to develop students' abilities to solve complex design application problems in transportation, intelligent commercial kitchen systems, smart home design, and more.

After four years of study, students on this Programme are expected to establish a solid foundation of mathematics, natural sciences, humanities, and social sciences, as well as possess a wide range of basic professional knowledge. They should be able to conduct the investigation, design, implementation, testing, and maintenance tasks of industrial design to solve practical problems in this field. They should also acquire professional knowledge and skills in industrial design, especially in vehicle design, smart commercial kitchen systems engineering, or smart Home Design, and follow the trends of industrial design development. Students should master computer application skills, be proficient in understanding English documents related to Industrial Design, have the ability to communicate in English, and obtain the certificate of China's College English Test Band 4 (CET-4). They should have the ability to work in and manage a team. They should have the ability to synthesize social, health, safety, legal, cultural and environmental factors, understand beauty in design through 2D / 3D modeling, dynamic interaction, color materials and other perspectives, and embody innovation awareness. Students will be able to use the acquired knowledge to solve various industrial design challenges, be competent for various practical tasks, and have excellent continuous learning capabilities and good career prospects.

1.1.2 Learning outcomes

(1) Basic scientific literacy, engineering skills, computer, and information application skills

- The ability to use computer software and the internet, such as Adobe PS/AI/InDesign, Rhino, Key shot and etc.

- The ability to master common methods of literature, information and data retrieval and have the ability to acquire and utilize information.
- The ability to combine professional knowledge with computers, such as computer-aided design, AI-assisted design, simulation, and modeling.
- The ability to understand and apply mathematics and natural sciences to solve practical design problems.
- The ability to understand and participate in general design processes and meet potential job and technical requirements.
- The ability to track the development trend and application prospects of modern design and technology.

(2) Industrial design expertise and capabilities

- The ability to apply the expertise learned flexibly to design practice.
- The ability to take into account the social, health, safety, legal, management and cultural environment in practice, such as the ability to seek truth from facts of industrial design practice.
- The ability to apply the relevant knowledge and principles of the industrial design profession, solve real problems, and come up with innovative design solutions.
- The ability to select suitable scientific methods to study and analyze complex design problems in the process of industrial design, and obtain innovative and effective conclusions through the synthesis of information.

(3) Industrial design and professional practice

- The ability to come up with solutions to complex problems in industrial design.
- The ability to design suitable design systems, and can reflect innovative thinking in the design process, taking into account social, economic, cultural, environmental and health factors.

(4) Ability in expanded industrial design or related fields

- Master professional knowledge in cutting-edge fields related to design.
- Ability to expand professional knowledge, tracking trends in professional and related fields.
- Ability to accumulate relevant knowledge and engage in in-depth learning.
- Ability to develop comprehensive qualities in interdisciplinary subjects related to the course.

(5) International communication ability

- Have sufficient expertise in English to be able to communicate with foreign counterparts and to study abroad.
- Have a sufficient foreign language and intercultural background to be able to

work and collaborate abroad or with a multinational company.

(6) Teamwork and management skills

- Having mental health, personal integrity.
- Having good legal awareness and social responsibility.
- Having team spirit and management ability.
- The ability to work in a competitive environment and challenging job.

(7) Innovation and Aesthetic Ability

- Have innovative thinking and the ability to design.
- Ability to use innovative methods to come up with aesthetic designs in the stages of insight and concept generation.
- Ability to synthesize social, health, safety, legal, cultural and environmental factors, understand beauty in design through 2D vision, 3D modeling, dynamic interaction, color materials and other perspectives
- Ability to embody innovation awareness.

Students enrolled in Industrial Design are expected to develop competencies in natural sciences, computer and information technology, international communication, foundational knowledge and practical applications of industrial design, teamwork, and engineering management. The training objectives outlined in Section 1.1.1 and the six learning outcomes detailed in Section 1.1.2 are derived from the industrial design training plan. Notably, these learning outcomes encompass all six educational objectives from TC01's SSC and align well with each other. For instance, TC01's SSC describes engineering design capabilities as follows:

- The ability to conceive designs for machinery, devices, EDP programmes or processes correspondent to the status of their knowledge and to develop them according to specified requirements.
- A practically orientated understanding of design methods and the ability to apply them in a competent manner.

In the relevant section, we outline the following competencies:

- The ability to apply the relevant knowledge and principles of industrial design, solve real design problems, and come up with innovative solutions.
- The ability to select scientific methods to study and analyze complex design problems in the process of industrial design and obtain reasonable and effective conclusions through the synthesis of information.

1.1.3 Objectives-Module-Matrix

This section elaborates on the seven learning outcomes outlined in section 1.1.2, detailing the knowledge, skills, and competences required. It aligns these with specific module objectives and course modules, forming the objective-module matrix depicted in Table 1-1. Notably, the industrial design curriculum is structured around nine modules crafted to support these

learning outcomes. Further details on these modules can be found in Section 1.3.1.

Table 1-1 Objective matrix of Industrial Design Programme

Expected Learning Outcomes	Objectives / Corresponding Modules
Basic scientific literacy, engineering ability, computer and information applications **Knowledge:** ● Master mathematics, natural sciences, information technology fundamentals, and computer-related knowledge. **Skills:** ● Ability to apply Mathematical Knowledge to Understand and Express Engineering Real-world Problems. ● Ability to build basic models to solve various practical problems in Technology and Engineering Applications. **Competences:** ● Capable of observing, analyzing, and solving technical problems from the perspectives and thinking modes of mathematics and information. ● Capable of continuously analyzing, synthesizing, computing, judging, and reasoning engineering phenomena based on the characteristics of mathematics and Information technology to solve design problems.	**Objectives:** Master basic knowledge of mathematics, natural sciences, and information technology to lay a solid foundation for subsequent courses. Ability to apply acquired knowledge and methods to solve complex design problems. **Modules:** Module 2 Mathematics and Physics Module 3 Informatics
Industrial design expertise and capabilities **Knowledge:** ● Master design fundamentals and professional knowledge in fields of materials, processes, structures, mechanical engineering, design principles, and methods. **Skills:** ● Possess relevant basic engineering and professional knowledge . ● Analyze and design various phenomena and requirements. ● Master general knowledge, methods, and skills to solve problems encountered in design practices. **Competences:** ● Mastering mechanical, electronic, material-related concepts and basic principles. ● Possessing basic Knowledge of Design Principles and Methods.	**Objectives:** Master a Wide Range of Basic Professional Knowledge to Lay a Solid Foundation for Later Professional Courses. **Modules:** Module 5 Industrial Design Fundamentals Module 8 Practical Training courses

● Continuously Analyzing, Summarizing, Judging, and Reasoning Design to Solve Design Problems.	
Ability in industrial design and professional Practice **Knowledge:** ● Master professional knowledge in design and engineering, especially in the fields of transportation vehicles, smart commercial kitchen systems, and smart home design. ● Possess specialized knowledge in comparing integrated system design solutions. **Skills:** ● Ability to utilize professional knowledge in analyzing and solving practical design and engineering problems, providing solutions for specific engineering issues, designing engineering systems, industrial products, product service systems, units (components), or processes. ● Ability to predict and simulate complex design and engineering problems. **Competences:** ● Be able to conceive and design mechanical, equipment, and entrepreneurial development plan programs or processes corresponding to industrial design knowledge, and develop them according to specified requirements. ● Be capable of investigating, designing, and analyzing complex engineering problems in related fields, and proposing solutions that meet the specific requirements of engineering and users. ● Be able to understand design methods and effectively apply their abilities.	**Objectives:** Possess expertise in solving common problems in the field of industrial design, being able to carry out the investigation, design, implementation, testing, and maintenance tasks of industrial design; and being able to solve practical problems in this field. **Modules:** Module 6 Industrial Design Professional courses Module 8 Practical Training courses Module 9 Bachelor Thesis
Ability in expanded industrial design or related fields **Knowledge:** ● Master professional knowledge in cutting-edge fields related to design. **Skills:** ● Ability to expand professional knowledge, tracking trends in professional and related fields. ● Ability to accumulate relevant knowledge and engage in in-depth learning.	**Objectives:** Master cutting-edge new professional knowledge and skills in the field of design, being able to track the development trends in relevant professional fields and achieve further self-development. **Modules:**

Competences： ● Ability to develop comprehensive qualities in interdisciplinary subjects related to the course. ● Being able to apply professional knowledge extensively.	Module 7 Electives: Module 8 Practical training courses: Module 9 Bachelor Thesis:
Ability in international communication **Knowledge:** ● Master a foreign language and passing the National College English Test Level Four (CET-4). ● Master core knowledge in English major. **Skills:** ● Being able to read professional literature in English, communicate with others in English, and discuss professional issues. **Competences:** ● Possess English language proficiency. ● Being able to work in related fields nationwide. ● Being able to engage in cross-cultural communication.	**Objectives:** Mastering cross-cultural and international cooperation and communication skills that adapt to social development and internationalization. **Modules:** Module 4 Foreign language Module 7 Electives: Module 9 Bachelor Thesis:
Ability in teamwork and management **Knowledge:** Master knowledge of modern Chinese history, basic principles of Marxism, patriotism, humanistic spirit, physical education, and military training. **Skills:** ● Understand social phenomena and pay attention to and adapt to social development. ● Have the ability to communicate and collaborate with others. ● Possess team spirit. ● Promote physical/mental health, and self-improvement. **Competences:** ● Develop a sound personality and good psychological qualities. ● Have correct views on life, values, ethics, and laws, ● Have humanistic qualities and a sense of social responsibility.	**Objectives:** Understanding the current social patterns and norms in China, having good social behavior, team spirit, and humanistic care. Comprehensive development in moral, intellectual, physical, and psychological aspects. **Modules:** Module 1 General Courses Module 5 Electives
Innovation and Aesthetic Ability **Knowledge:** ● Master the cross-disciplinary basic theories of product design, such as knowledge of color, materials, technology, culture, and law.	**Objectives:** Synthesizing social, health, safety, legal, cultural and environmental factors, understand beauty in design

● Be familiar with the entire process of product development from design to manufacturing. **Skills:** ● Proficiently use various design software and tools. ● Master various design skills like material processing and hand drawing. ● The ability to demonstrate design achievements through multiple means. **Competences:** ● Possess innovative thinking and aesthetic capabilities. ● Be able to perceive market and user needs, propose innovative design concepts. ● Be able to solve complex design problems.	through 2D / 3D modeling, dynamic interaction, color materials and other perspectives, and embody innovation awareness. **Modules:** Module 5 Industrial Design Fundamentals Module 7 Electives Module 8 Practical Training courses Module 9 Bachelor Thesis

1.1.4 Assessment and Demand

(1) Program Evaluation

The programme successfully passed the year 2016 and 2023 undergraduate teaching evaluation conducted by Shanghai Municipal Ordinary Institutions of Higher Learning, with a successful outcome.

(2) Employment and Market Demand

Our graduates are highly sought after in the job market due to their robust practical skills, a solid grounding in professional knowledge, adaptability, innovative mindset, and comprehensive capabilities. The primary employment sectors for our Industrial Design graduates include manufacturing, service, and educational companies and institutions. There is a high level of professional alignment, with an employment rate exceeding 95% in recent years. The signing rate has been stable, reaching a 100% rate in some years, as depicted in Table 1-2 and Table 1-3.

Table 1-2 Employment Status of Industrial Design Graduates Over the Past Three Years

Year	2020	2021	2022	2023	2024
Number of Graduates	25	25	22	31	59
Employment Rate (%)	96	96	100	97	98

Table 1-3 Industry Category

Industry	Percentage
Administrative and Clerical Staff	1.7%
Legal Professionals	1.7%
Engineering Technicians	11.9%
Teaching Staff	1.7%
Financial Service Personnel	1.7%
Economic Operations Staff	3.4%
Scientific Researchers	1.7%
Commercial and Service Personnel	5.1%
Literary and Artistic Staff	6.8%
Media, Publishing, and Cultural Professionals	1.8%
Other Technical Professionals	8.74%
Other	54.24%

Note: "Other" category includes chemical raw materials manufacturing, architectural decoration, leather products manufacturing, other services and manufacturing sectors, as well as industries that appear in multiple categories such as software and information technology services and general equipment manufacturing.

(3) Graduate Survey

The graduate survey results demonstrate that our program's curriculum is well-structured and closely aligned with market demands. Graduates exhibit strong adaptability post-graduation, and their academic achievements have fully met the intended goals. Students are generally satisfied with the educational and teaching efforts and their outcomes, providing positive feedback. The excellence rate in student teaching evaluations was 100% for the academic year 2019-2020, and despite a slight decline due to pandemic-related online teaching from 2021 to 2023, it remained above 85%.

The College of Art and Design conducts annual surveys, follows up with graduates, and visits enterprises to track graduate performance, compiling an annual graduate survey tracking report. Employers' evaluations of our graduates' work, post-graduation

promotions, and salary packages all contribute to a favorable overall social assessment. Over the past three years, employers have expressed considerable satisfaction with the moral character, professionalism, knowledge structure, professional skills, adaptability, communication skills, teamwork, and cultural literacy of our graduates. The overall satisfaction from employers is broken down as follows: "Very Satisfied" at 67.8%, "Satisfied" at 30.3%, and "Moderately Satisfied" at 1.7%, with no dissatisfaction reported. This indicates that the programmatic of our graduates have garnered recognition and high praise from their employers. More than half of the graduates find their employment closely related to their field of study, and over half are content with this alignment, feeling that their chosen profession matches their expectations. This further confirms the broad acceptance of our program's objectives and learning outcomes. For additional insights from the questionnaire survey on graduates and employers, please refer to **Appendix A-1**. The survey results indicate that graduates are pursuing careers nationwide with high confidence in their industries, and employers generally hold a positive view of our graduates' quality, as detailed in Table 1-4.

Table 1-4 Employer Satisfaction with Industrial Design Graduates in 2023

Extremely Satisfied	67.8%
Satisfied	30.3%
Moderately Satisfied	1.7%
Dissatisfied	0.0%

1.1.5 Process of the talent training formulation and revision

The talent training plan serves as the essential framework for organizing various teaching activities and is a foundational document for the school’s management, monitoring, and evaluation of teaching quality. To ensure the quality of the talent training formulation, standardize the processes involved in developing the talent training, and guarantee the achievement of talent cultivation goals, the school has established the "Regulations on the Management of talent training Formulation at Shanghai University of Engineering Science" and the "Regulations on the Quality Evaluation and Continuous Improvement Work Management of talent training at Shanghai University of Engineering Science", please refer to **Appendix A-2**. These regulations provide clear guidelines for the creation and revision of training plans. The talent training for this Programme is collaboratively developed by the college, professional departments, industry experts, and enterprise specialists. The vice

president responsible for teaching oversees quality monitoring through the professor committee and professional committee (the lists of the professor committee and education committee can be found in **Appendix A-3)**.

Details of the training plan for the Industrial Design Programme can be found in **Appendix A-4**.

1.2 Name of the degree programme

The Industrial Design major has been enrolled in the four-year undergraduate program since 2009, with the qualification of granting a bachelor's degree and currently has three specializations:(1) Vehicle Design, (2) Smart Commercial Kitchen System Engineering, and (3) Smart Home Design. The industrial design major is the first cooperative education demonstration major of the school. It carried out the construction of first-class disciplines of the school from 2018 and was approved as the Shanghai Design Innovation Center in 2021. In the process of talent cultivation, the program has always emphasized the cooperation between industry, academia, research and enterprises, adhering to the concept of "integration of industry and education, and simultaneous promotion of art and industry", and exploring a cross-application type industrial design talent training mode based on the concepts of "combining engineering and art, creativity and technology, and classroom and market". Based on the regional background of the school and majors, it emphasizes the organic connection between talent cultivation and social service, as well as serves the regional development strategies, such as the integration of Yangtze River Delta, rural revitalization, and Shanghai Design Capital. The degree title is consistently presented in both its original Chinese and English versions across all required outputs. This aligns with the current practice where dual-language certificates are accessible via the Academic Services System.

1.3 Curriculum

1.3.1 Content

According to the training objectives, all courses cover six competency areas across 8 semesters. Figure 1 presents the structure of the curriculum.

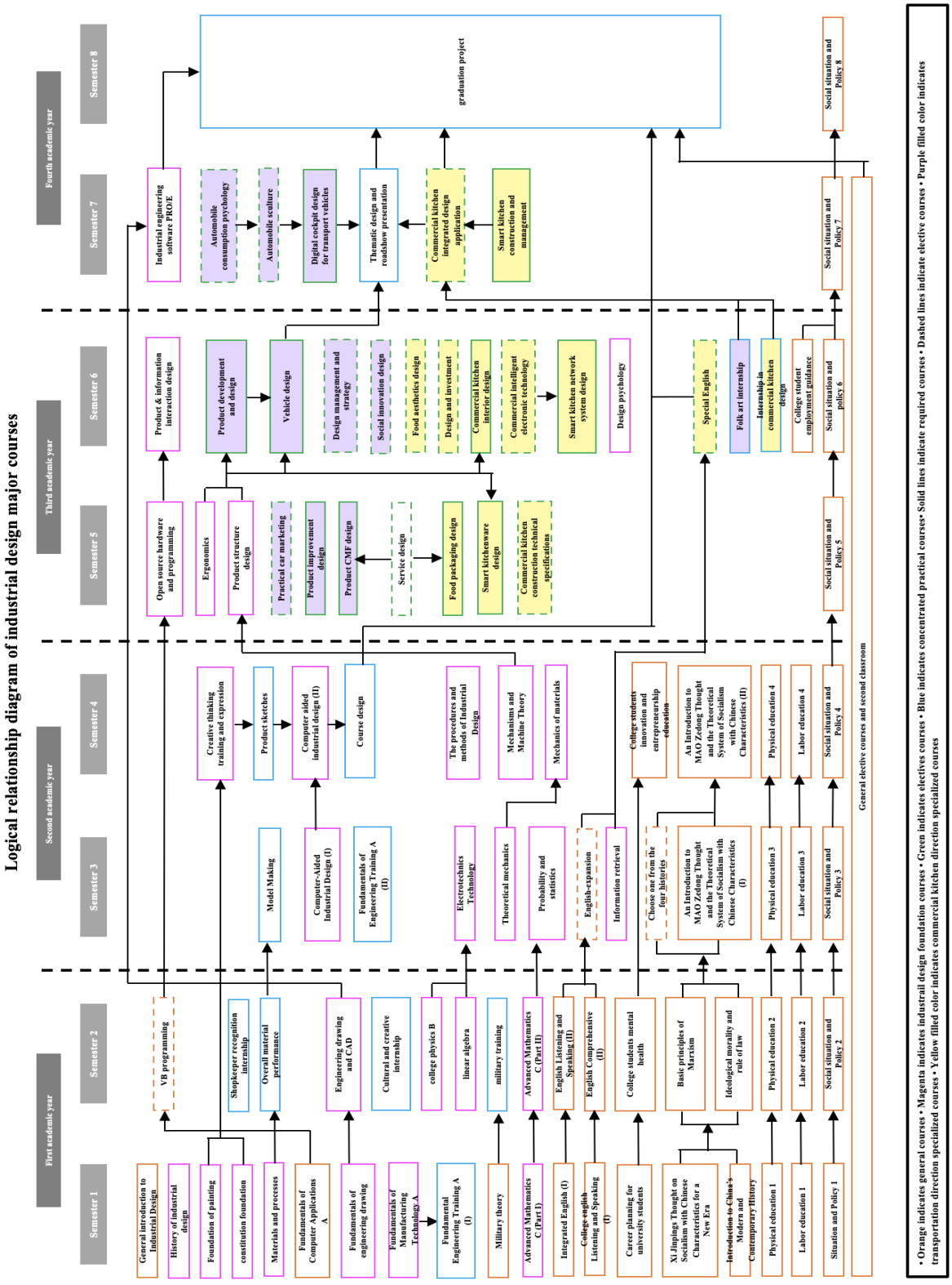

Figure 1 the logical relationship of major courses

The expected learning outcomes and corresponding courses are listed as follows:

Module 1 General Education Courses

- **Expected Learning Outcomes:** Cultivate students' humanistic literacy, social skills, and teamwork spirit. Engage in physical exercise to maintain physical health. Master basic knowledge of humanities and social sciences, possess good humanistic qualities, and take on professional, social, and environmental responsibilities: participate in practical activities and group activities for self-improvement; Communicate effectively, adapt to new environments and societies.
- **Basic Requirements:** As team members, students should actively participate in physical exercise to maintain health, promote self-realization and teamwork spirit; Engage in social practice activities, understand the principles of humanities and social sciences, adapt to social development, and take responsibility for the environment and society.
- **Corresponding Courses:** Introduction to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, Outline of Modern Chinese History, Current Situation and Policies, Labor Education, Career Planning for College Students, Military Theory, Basic Principles of Marxism, Ideological and Ethical Cultivation and Legal Basis, Psychological Health of College Students, Introduction to Mao Zedong Thought and the Theory of Socialism with Chinese Characteristics, Employment Guidance for College Students, History of the Communist Party of China, History of New China, History of Reform and Opening Up, History of Socialist Development, College English, Innovative Thinking and Entrepreneurship Education, Physical Education, General Elective Courses.

Module 2 Mathematics and Physics

- **Expected Learning Outcomes:** Master basic knowledge and principles of natural sciences, deepen understanding of natural sciences, enhance scientific literacy in problem-solving, and lay a solid foundation for subsequent courses.
- **Basic Requirements:** Ability to apply basic theoretical knowledge of natural sciences to analyze scientific problems in engineering practice.
- **Corresponding Courses:** Fundamentals of Engineering Drawing, Higher Mathematics, Linear Algebra, University Physics, Theoretical Mechanics, Probability Theory and Mathematical Statistics, Mechanics of Materials, etc.

Module 3 Informatics

- **Intended learning outcomes:** Master basic knowledge of information technology and computer science and be able to apply computer and information technology tools to effectively solve project practical problems.
- **Basic requirements:** Ability to use computer and information technology methods to solve practical problems in scientific and technological fields related to the major of study.
- **Corresponding courses:** information retrieval, VB programming, C language programming.

Module 4 Foreign language course

- **Intended learning outcomes:** Having the ability to communicate across cultures necessary for

international cooperation, society is better adapted to development and internationalization.

- **Basic requirements:** master English language, pass the National College English Test (CET-4), can read professional literature, professional foreign language communication.
- **Corresponding courses:** College English Comprehensive, College English Listening, English Development Stage Courses.

Module 5 Industrial Design Fundamentals

- **Expected Learning Outcomes:** Master basic knowledge related to information technology and industrial design, proficiently use information technology and basic design tools, effectively solve practical problems in the field of industrial design and lay a solid foundation for future learning.
- **Basic Requirements:** Ability to use information technology and basic design tools to solve practical problems in the scientific and technological fields related to the Programme.
- **Corresponding Courses:** Computer-Aided Industrial Design, Design Programs and Methods, Creative Thinking Training and Expression, Ergonomics, Product Structure Design, Design Psychology, etc.

Module 6 Industrial Design Professional Courses

- **Expected Learning Outcomes:** Master professional knowledge and skills in industrial design and related fields, analyze and solve complex engineering problems.
- **Basic Requirements:** Master professional knowledge and skills in industrial design and its sub-disciplines, understand professional knowledge involved in interdisciplinary and new fields, possess professional skills for relevant work and the ability to transform and optimize existing systems.
- **Corresponding Courses (three specializations):**
  - Vehicle Design: Product Development and Design, Product CMF Design, Product Improvement Design, Vehicle Modeling Design, Vehicle Digital Cockpit Design, Service Design, Social Innovation Design, etc.
  - Smart Commercial Kitchen Systems Engineering: Product Development and Design, Product CMF Design, Commercial Kitchen Interior Design, Intelligent Kitchen Network System Design, Commercial Kitchen Construction Technical Specifications, Intelligent Kitchenware Design, etc.
  - Smart Home Design: Product Improvement Design, Product CMF Design, Interior Design, Decoration Materials and Construction, Product Development and Design, Smart Home Control System, Modern Furniture Design, Home Display Design, etc.

Module 7 Elective course

- **Expected learning outcomes:** Master cutting-edge new expertise and skills in design-related fields, be able to track trends in related areas of the profession, and complete further self-development.

- **Basic Requirements:** Knowledge and skills at the forefront of the industrial design field, track trends in professional fields, gain comprehensive qualities in the interdisciplinary disciplines related to this course and be able to apply the expertise learned widely.
- **Corresponding courses (three options):**
  - Vehicle design: Understanding flying, Automotive Marketing pragmatism, Service Design, Social Innovation Design, Design & Investment, Design Management & Strategies, Automotive Culture, Automotive Consumer Psychology, etc.
  - Intelligent commercial kitchen system engineering (option 2): Food packaging design, service design, commercial kitchen construction specifications, smart kitchenware design, design and investment, commercial smart electronics technology, food aesthetic design, etc.
  - Smart home design: Smart Home Control Systems, Modern Home Design, Smart Lighting and Lamp Design, Smart Cleaning Design, Interior Aesthetic Design, Home Cabinetry, etc.

Module 8 Practical Teaching Courses

- **Expected Learning Outcomes:** Cultivate students' abilities in design practice, engineering applications, and innovation. Through practical training, students learn how to apply theoretical knowledge of design to analyze and solve design practice problems.
- **Basic Requirements:** Integrate theoretical knowledge and practical skills to solve real-world problems, consolidate basic theoretical knowledge, deepen understanding of industrial design application areas, and enhance innovation capabilities.
- **Corresponding Courses:** Comprehensive Material Performance, Product Sketching, Course Design, Specialized Design and Roadshow Presentation, Cultural and Creative Internship, Military Training, Extracurricular Activities.

Module 9 Bachelor's Thesis

- **Expected Learning Outcomes:** Ability to combine knowledge and skills to analyze and solve design practice problems, execute and complete design tasks.
- **Basic Requirements:** Under the guidance of the supervisor, students should complete graduation design tasks, write a thesis, and pass the defense.
- **Corresponding Courses:** Graduation Design (Thesis).

For the detailed hours and credits of courses in each competency area, please refer to **Appendix A-5.** The percentage of credits in each competency area to the entire training plan is shown in Figure 2.

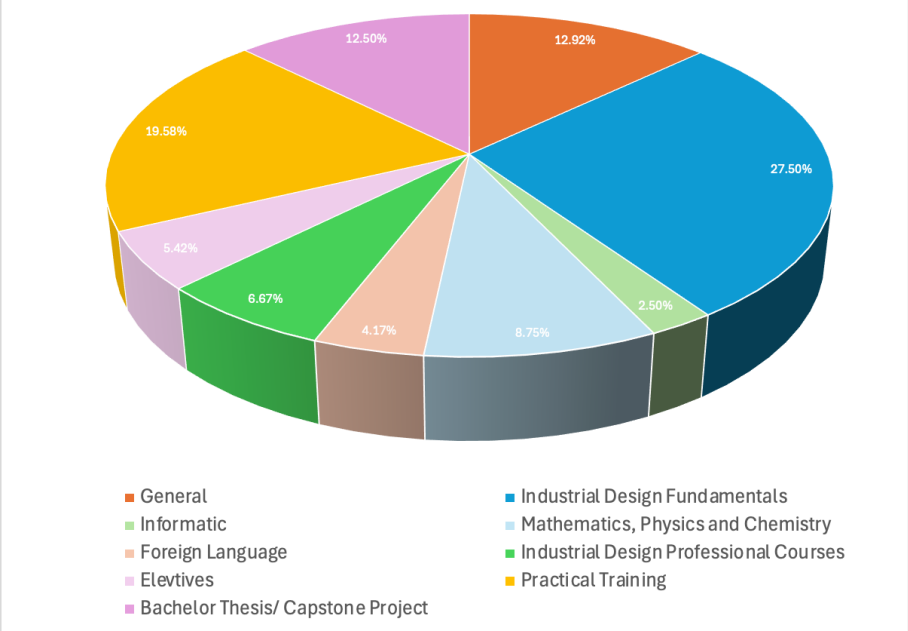

Figure 2 Distribution of Credits Across Various Competency Areas

1.3.2 Structure of the programme

The undergraduate training plan for this Programme is a four-year program. Overall, the curriculum system is divided into nine competency areas, with the study content of different competency areas interconnected in chronological order. In terms of credit distribution and hours allocated to each competency area, general education courses and public foundational courses are scheduled in the 1st to 4th semesters, including English, philosophy (humanities and political thought), and physical education, which familiarize students with relevant English, humanities, and law, thereby enhancing students' cross-cultural communication skills and humanistic literacy.

General courses are arranged in the 1st to 4th semesters to acquaint students with basic knowledge and skills, laying the groundwork for subsequent professional courses. For example, advanced mathematics is scheduled in the 1st to 2nd semesters, linear algebra and probability theory and mathematical statistics in the 2nd to 3rd semesters, and university physics in the 2nd semester. Informatics are arranged in the 1st to 3rd semesters to enable students to acquire knowledge and skills in computer science and information technology.

Industrial design fundamentals are arranged in the 1st to 7th semesters, such as industrial design history, materials and processes, design programs and methods, product structure design, and ergonomics, laying the foundation for the study of subsequent professional courses. Professional design courses are scheduled in the 5th to 7th semesters, including core courses of this Programme. These courses are crucial in the entire curriculum system, deepening and expanding professional knowledge and

applications in the field of industrial design. Elective courses are scheduled in the 5th to 7th semesters to broaden interdisciplinary knowledge and skills, meeting students' personal and professional interests. Practical teaching courses run through all semesters, scheduled in the 5th to 8th semesters, enabling students to promptly apply theoretical knowledge to design practices. The bachelor's thesis is scheduled for the 8th semester, with most topics derived from the supervisor's research projects or actual engineering projects of companies. Practical teaching courses and the bachelor's thesis help students accumulate a wealth of practical engineering experience, enhancing their competitiveness in employment. According to the course structure, students will ultimately earn 240 ECTS credits after eight semesters of study.

1.3.3 Student mobility

The Industrial Design program emphasizes global engagement through diverse mobility initiatives, as detailed in the attached appendix. Outgoing student numbers fluctuated significantly over the past five years, notably dropping to 1 in 2020 and rising to 28 in 2023, see **Table 1-5**. Due to COVID impacts, the national pandemic-related travel restrictions and health concerns limited mobility in 2020–2022. Despite challenges, the program sustained opportunities through hybrid formats, such as the online Industry-Academia Collaboration Program.

Important international programs include semester exchanges (e.g., 3+1 Dual Degree Program in Milan), short-term intensives (e.g., Kyushu Sangyo University's 15-day summer program), and skill-focused partnerships (e.g., Chiba University's disaster prevention design workshop). These programs cultivate cross-cultural competencies, technical expertise, and industry readiness, aligning with ASIIN's standards for global talent development. Detailed information about the mobility programme please refer to **Appendix A-6**.

Table 1-5 Summary of Student Mobility

Year1	Incoming Students (Total)	Outgoing Students (Total)
2024	0	22
2023	0	28
2022	0	2
2021	1	3
2020	1	1

Students may apply for credit recognition and grade conversion for courses completed at partner universities abroad. Before departure, students must submit a pre-approved Exchange Course Selection Form, mapping overseas courses to SUES equivalents, including core, elective, or general courses. Upon return, the faculty converts grades using standardized tables and submits the Credit Recognition Form to the Academic Affairs Office for final validation. Details related to course credit recognition and grade conversion for oversea study & exchange students and a sample of learning agreement please refer to **Appendix A-6.**

1.3.4 Periodic Review of the Curriculum

According to the "Shanghai University of Engineering Science Teaching Syllabus and Course Introduction Management Regulations", please refer to Appendix A-6, the undergraduate industrial design curriculum will conduct periodic evaluation work to ensure that the course content and teaching quality continue to meet educational objectives and industry standards, while also adapting to the needs of disciplinary development and technological progress. This evaluation work adheres to the principles of educational value, scientific rigor, and objectivity, ensuring that the evaluation process is comprehensive in covering all aspects of the curriculum and is fair and reasonable.

The evaluation content includes the clarity of course objectives, the timeliness of teaching content, the effectiveness of teaching methods, the sufficiency of teaching resources, the practicality of student feedback, and the adaptability to industry demands. The evaluation process is divided into six stages: preparation, data collection, expert review, analysis and summary, revision suggestions, and implementation of revisions. The evaluation working group will widely collect opinions and suggestions from teachers, students, and industry experts through various means such as questionnaires, interviews, and classroom observations. The expert review panel will conduct an in-depth analysis of the collected data, identify the strengths and weaknesses of the curriculum, and propose constructive revision suggestions. These suggestions will be specifically implemented into the course teaching to promote the continuous optimization of the curriculum.

To ensure the continuity and effectiveness of the evaluation work, this method stipulates that the periodic evaluation of the curriculum will be conducted once per semester. The evaluation results will directly affect the revision of the curriculum, the improvement of teaching methods, and the allocation of teaching resources, ensuring that teaching activities are always centered around improving teaching quality and meeting the development needs of students.

1.4 Admission requirements

1.4.1Admission requirements

Those who enter SUES to study for a bachelor's degree must take the National College Entrance Examination of the People's Republic of China or the unified college entrance examination held by relevant provinces and cities. Applicants who meet the following conditions are eligible to apply: 1) Comply with the Constitution and laws of the People's Republic of China; 2) Have graduated from high school or have an equivalent education level; 3) Be in good health (Capable of completing academic studies).

For International applications, non-native English speakers must demonstrate language competency by passing the university’s online English proficiency test. Applicants submitting valid IELTS (minimum overall score: 5.5) or TOEFL iBT (minimum score: 60) results are exempt from this requirement. This policy ensures clarity and fairness while streamlining the admissions process for qualified candidates.

1.4.2 Admission procedure

The enrollment of Chinese universities is determined by each province and city based on the number of candidates and their exam scores. According to the scores, candidates are divided into the first batch, second batch, and third batch, in descending order of scores. Overall, most Programmes at Shanghai University of Engineering Science are admitted in the second batch, but the admission scores for the Industrial Design Programme have reached the level of the first batch in some cities in China. During the admission phase, the admissions department comprehensively evaluates candidates in terms of morality, intelligence, and physical fitness based mainly on their exam scores for preferential admission. The typical admission process includes allocation, review, pre-admission, admission inspection, and issuance of admission notices. Upon enrolling at SUES, new students are required to provide their admission notice and identification documents, then follow the recommendations in the registration instructions to register at the corresponding department. The typical enrollment registration process includes confirming enrollment, paying tuition fees, registering for student status, and receiving study tools and supplies.

1.4.3 Admission Transparency

The admission and enrollment process for new students at SUES strictly follows relevant procedural documents and maintains a high level of transparency. According to the "Education Law of the People's Republic of China," the enrollment and admission work of ordinary higher education institutions in China follows the mechanism of "school responsibility, admissions office supervision." Here, the "admissions office" refers to the provincial admissions office where the candidates are located, not the university

admissions office. In other words, whether to admit candidates who have passed the ideological and moral assessment, abide by laws and regulations, passed the physical examination, and whose unified exam scores meet the cutoff line for the same batch, and meet the school's requirements for adjustment, is determined by the higher education institution itself. The university has issued and implemented regulations such as the "Implementing Measures of Shanghai University of Engineering Science for Recruitment Publicity" (please refer to **Appendix A-7**, "Regulations of Shanghai University of Engineering Science for Admission" (please refer to **Appendix A-8**), and "Implementing Rules of Shanghai University of Engineering Science for Admission Supervision" (please refer to **Appendix A-9**) to standardize the enrollment process and improve promotional channels. Higher education institutions are responsible for explaining to non-admitted candidates and handling other outstanding issues. The provincial admissions offices of the candidates organize the submission of qualified electronic student records to higher education institutions and supervise the implementation of national enrollment policies, adjustments to enrollment plans, and compliance with policies and regulations.

1.5 Workload and credits

1.5.1 Study Time

At SUES, completing 16 contact hours of theoretical module courses (marked L or L&P in the curriculum) is equivalent to one Chinese credit. For practical training courses (marked with P in the curriculum), completing one week (equivalent to 30 contact hours) of learning is equivalent to one Chinese credit (excluding the graduation thesis). This distinction reflects the hands-on nature of practical courses, which demand more time for skill development and project-based learning.

Chinese credits are calculated based only on contact hours, while the European Credit Transfer and Accumulation System (ECTS) credits take into account both contact hours and self-study hours. From the perspective of ECTS credits, the workload of a student is the sum of their contact hours and self-study hours. When converting Chinese credits to ECTS credits, self-study time are calculated based on pre-learning before classes, reviewing course materials after lectures, completing assignments, participating in online supplementary courses, and Q&A sessions for clarification. This aligns with the European Credit Transfer System (ECTS) requirements, which consider both contact and self-study hours when calculating credits.

According to the ECTS, one academic credit corresponds to 30 hours of total student workload. To determine self-study time, we systematically subtract all scheduled contact hours (including lectures, tutorials, laboratory sessions, and examinations) from this total workload. This methodology ensures precise alignment with international standards while maintaining transparency in workload distribution across the

curriculum. The study hours and credits of each module course in industrial design are detailed in **Appendix A-5.** The course outline for each course can be found in **Appendix A-10 to 18.**

To validate workload appropriateness, we conduct structured post-evaluation surveys **(see Appendix A-19)** where students rate courses after final grading across key dimensions: content relevance, instructional support, and workload reasonableness. This data, collected anonymously each semester, quantitatively measures perceived effort distribution and identifies potential imbalances—ensuring alignment with ECTS standards and informing continuous curriculum refinements.

1.5.2 Credit system

The learning outcomes of students are mainly reflected in the form of credits. Each undergraduate student must obtain the equivalent of 240 ECTS credits in China after completing four years of study, which is an average of 30 ECTS credits per semester. The contact hours for each semester are relatively balanced, ensuring that there is no structural pressure on students' learning outcomes and teachers' teaching quality. Exam results are analyzed by the teaching staff, while students' satisfaction, such as study time, will be surveyed to determine the actual workload of students each semester, ensuring that the actual workload matches the planned workload. Figure 3 presents sample course evaluation results.

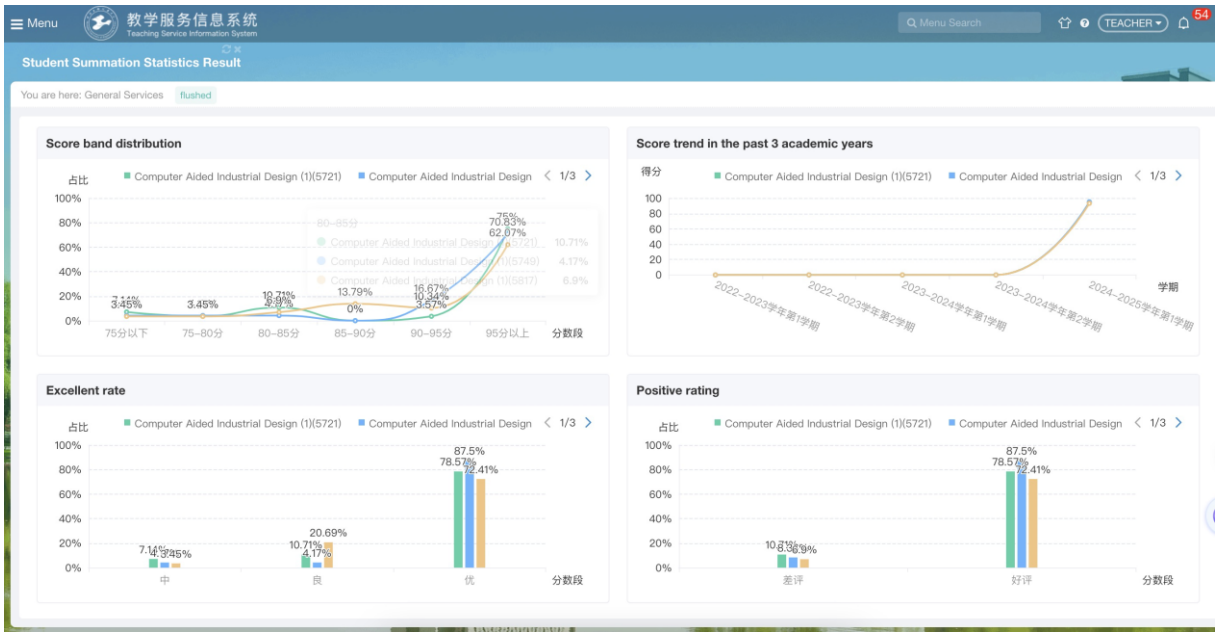

Figure 3: Results of Case Course Evaluation

1.6 Didactics and Teaching Methodology

The basic courses of natural sciences and subject foundation courses are mainly taught in large classes (approximately 80 students), while professional courses are usually taught in small classes (around 40 students). Some courses include both theoretical content and in-class experiments (marked as L&P in the curriculum), with practice typically conducted in batches and groups. Elective courses can be chosen by students based on their interests and developmental needs.

In addition to classroom teaching, practical training is also an important component of undergraduate education. The School of Art and Design of this Programme has a Design Practice (Experiment) Center, which includes seven practice modules: Art Workshop, Media Workshop, Design Foundation Laboratory (CMF), Art Foundation Studio, Competitive Feature Laboratory (Subject Laboratory), Master Studio, and Collaborative Creative Center, all equipped with good experimental conditions. SUES's School of Art and Design has also established more than 100 off-campus internship bases to provide students with ample practical internship opportunities. Additionally, students can choose to participate in practical learning through the in-research projects of professional teachers on campus. Each student must participate in professional basic experiments, professional comprehensive experiments, comprehensive course design, innovation and entrepreneurship training, internships, graduation labor practices, and bachelor's thesis.

The programme’s pedagogy integrates evidence-based methodologies to cultivate professional competencies. For instance, project-based learning (PBL) and studio critiques are frequently applied to Industrial Design Professional and Practical Training Courses. PBL bridges theory and industry demands through sponsored projects, while studio critiques cultivate professional-level iterative design skills. Flipped classrooms have been frequently used in Industrial Design Fundamentals and Electives Courses, prioritizing higher-order cognitive engagement.

Besides, Online teaching methods are widely used in the teaching of this programme. Most courses have corresponding course websites on the SUES's online teaching platforms, such as Fanya Chaoxing and Treenity platforms. Please refer to **Appendix A-20** for samples of online course. The established teaching management information platform and open online teaching course websites can provide students with abundant learning resources, stimulating independent learning and enhancing their self-learning abilities.

2 Exams: System, concept and organisation

2.1 System

Whether a student qualifies for a bachelor's degree is evaluated through various examinations established by the university. Specifically, students complete theoretical courses, practical courses (including course design, experiments, and hands-on work),

and a bachelor's thesis as outlined in the training plan and course schedule.

For students facing challenges due to regional language differences or disparities in educational backgrounds, the university provides comprehensive support through course instructors, academic advisors, and counselors. This assistance helps students overcome communication barriers and address gaps in foundational knowledge, ensuring that every student receives personalized guidance to enhance their academic performance.

All components undergo rigorous assessments. According to the "Regulations on Granting Bachelor's Degrees to Full-time Undergraduate Graduates of Shanghai University of Engineering Science" (please refer to **Appendix B-1**), students in this major may be awarded a bachelor's degree if they meet the following criteria:

- Strong understanding of the fundamental knowledge, skills, and competencies of the major, capable of engaging in preliminary scientific research or technical work.
- Officially registered students who have completed all required courses within the designated study period and earned the necessary credits, with a final GPA of at least 1.8.
- Passed the National College English Test Band 4 (CET4) with a score of at least 425 (excluding students from art, sports, Hong Kong, Macau, Taiwan, international students, preparatory classes, and internal high school classes).
- For candidates admitted through non-English foreign language examinations, the English requirement can be replaced by passing scores from the Ministry of Education's Level 4 examinations in Japanese, German, French, or Russian.

In summary, students must pass various assessments to qualify for a bachelor's degree. The examination system consists of three parts: course-based assessment, foreign language assessment, and bachelor's thesis evaluation：

- Course-based assessment is a key part of teaching. It evaluates students' mastery and application of knowledge while assessing teaching effectiveness. The "Regulations on Course-Based Assessment Management at Shanghai University of Engineering Science" outlines the relevant provisions, please refer to **Appendix B-2**.
- The foreign language assessment requires students to pass the CET4. The "Regulations on Granting Bachelor's Degrees to Full-time Undergraduate Graduates of Shanghai University of Engineering Science" specify the foreign language examination requirements.
- The bachelor's thesis is essential for achieving the university's educational goals and is crucial for fostering students' innovative abilities, practical skills, and

entrepreneurial spirit. In the thesis evaluation, students must independently complete tasks and prepare their theses under the guidance of their supervisors. The "Management Measures for Undergraduate Graduation Design (Thesis) at Shanghai University of Engineering Science" details the relevant provisions regarding the bachelor's thesis, as outlined in **Appendix B-3.**

2.2 Concept

2.2.1 Forms of curriculum-based assessment

Forms of course assessment include written exams, online exams, oral exams, comprehensive exercises, course designs or lab experiments, course reports, or Programme assignments. Assessment scores are based on a percentage system or a 5-level (A, B, C, D, F) 10-level (A, A-, B+, B, B-, C+, C, C-, D, F) system. The conversion standards between the percentage system and the 5-level 10-level system can be found in the "Shanghai University of Engineering Science Credit System Enrollment Management Regulations", please refer to **Appendix B-6**.

The university employs a variety of assessment forms, including oral examination, written exams, course papers, final assignments, and traditional exams. For instance, courses like English speaking and listening, as well as practice-oriented subjects requiring defense, often incorporate oral examinations. Professional courses and electives allow students to choose alternative forms of evaluation based on their strengths and preferences, such as video presentations, display boards, or research papers. This diversity ensures that assessments are both fair and aligned with course objectives.

2.2.2 Curriculum-based assessment criteria

Examination courses mainly consist of written assessments with a duration of 120 minutes and scores recorded in a percentage system. The overall assessment scores for examination courses are generally determined by a combination of final exams and regular assessment scores. Regular assessment scores can be determined by a combination of assignments, experiments, attendance, and other teaching activities designed by the course instructor. The specific content and proportions are determined by the department (teaching research office or course team), approved by the college (department), and communicated to students through the "Course Teaching Outline." The assessment for inspection courses is a 90-minute written exam recorded in a 5-level 10-level system. Social practices, internships, lab courses, and course designs are assessed using a 5-level 10-level system. The assessment for graduation projects (thesis) is recorded in a 5-level system. For the evaluation of examination and inspection courses, please refer to **Appendix B-7,** the assessment result report for course assessments.

The specific components of examination forms and overall assessment scores have been clearly specified in the course teaching outline. Therefore, students can know the specific examination forms and overall assessment scores of the course immediately after enrollment.

Course assessment results will be recorded as an overall evaluation score in the student's file, including regular performance and final exam scores. In principle, regular performance scores account for 30%-50% of the course's overall evaluation score, while final exam scores account for 50%-70% of the course's overall evaluation score. A total score of 60 or above indicates a pass. Only with a passing or higher overall evaluation score can students receive credits for the corresponding course.

Students' physical education course grades consist of four components: theoretical exams, physical fitness tests, specialized sports tests, and regular performance. The breakdown is as follows: theoretical exam score accounts for 10%, physical fitness test 40%, specialized test 40%, and regular performance 10%. For male students, the physical fitness test includes a 1000m run, 50m sprint, and standing long jump. For female students, the physical fitness test includes an 800m run, 50m sprint, standing long jump, and sit-ups. Specialized sports refer to specific activities such as basketball, volleyball, soccer, etc. The theoretical exam is a 1-hour online exam.

Appendix B-7 provides separate score reports for course exams and makeup exams. The "Shanghai University of Engineering Science Credit System Enrollment Management Regulations" (please refer to **Appendix B-6**) also provides the conversion methods between grade points, credit points, and average credit points. The conversion methods for course assessment results, scores, and grade points are shown in Table 2-1.

Table 2-1 Grade Conversion Method

Percentile results	Grade	Grade point
100 ~ 90	A	4.0
89 ~ 85	A-	3.7
84 ~ 82	B+	3.3
81 ~ 78	B	3.0
77 ~ 75	B-	2.7
74 ~ 71	C+	2.3
70 ~ 66	C	2.0

65 ~ 62	C-	1.5
61 ~ 60	D	1.0
60 以下	F	0.0

The eighth semester will arrange a 16-week bachelor's degree graduation thesis, requiring students to independently complete the task and write the thesis under the guidance of a supervisor. The bachelor's degree graduation thesis follows the "Shanghai University of Engineering Science Graduation Project (Thesis) Management Measures", please refer to **Appendix B-3**. The thesis title, tasks for students to complete, and the schedule are all detailed in the thesis task book, please refer to **Appendix B-8**. Once the thesis topic is selected, students can obtain all information through the task book. During the thesis process, students are required to maintain contact with the supervisor through online and offline means and submit a written progress report with Programme issues to be addressed at least once a week. The supervisor is expected to provide progress evaluations and answers to the issues in the report submitted by the student to ensure timely completion of the thesis and guarantee its accuracy and rationality. The score for the bachelor's degree thesis will be determined through a combination of defense and thesis evaluation. The thesis evaluation will be independently conducted by the supervisor and the reviewer, each providing a separate score for the student. The supervisor's score and the reviewer's score account for 30% of the total thesis score each, while the defense score accounts for 40% of the total thesis score. (Refer to the graduation project assessment report, please refer to **Appendix B-9**.

Teachers are required to review the exam papers based on the "Shanghai University of Engineering Science Teacher's Exam Grading Requirements", please refer to **Appendix B-10.** The main teaching team will match the assessment content with the learning outcomes specified in the course outline for this specific assessment round, evaluate the achievement of the learning objectives in the course module by correlating assessment content with learning outcomes through score weights and scores for each assessment point. This is done to determine whether the learning outcomes have been achieved and write a course teaching analysis form (please refer to **Appendix B-11**), providing suggestions for continuous improvement of the course content, teaching methods, and teaching approaches. Students can check the results of all courses by logging into the teaching system using their student ID and password. The student's grade inquiry interface is shown as in Figure 4.

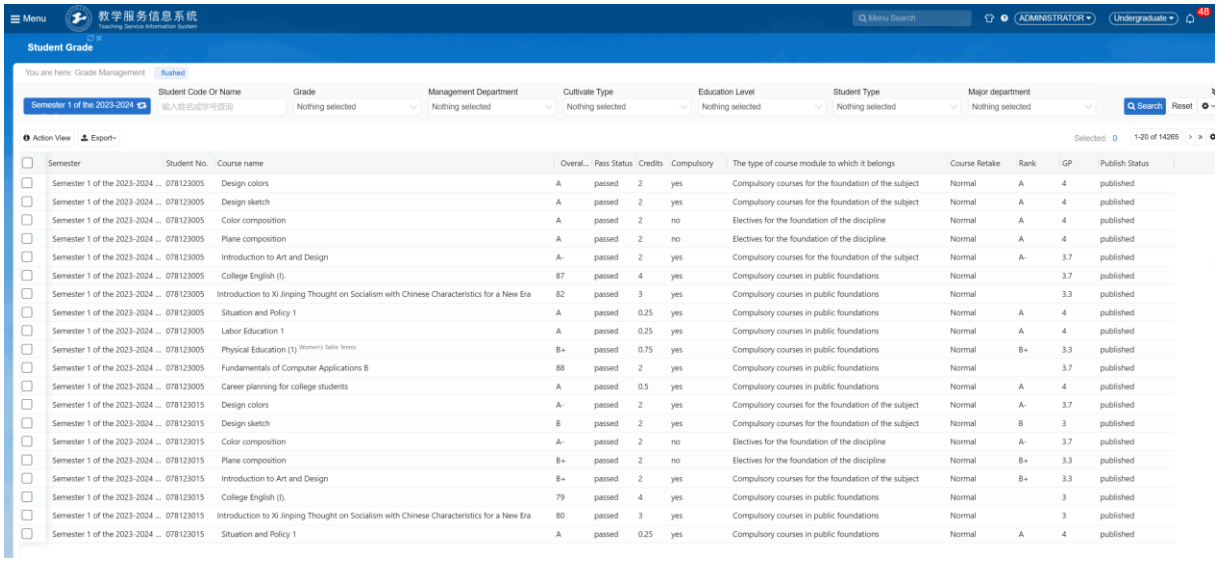

Figure 4 Student Grade Inquiry Interface

2.3 Exam organisation

2.3.1 Exam arrangement

To facilitate exam preparation for students, exams are usually scheduled during the mid-term (9th week) and final exam (17th week) of each semester. The centralized exams during exam weeks are arranged by the Academic Affairs Office with unified time and location. The exam times for some elective courses may be arranged by the respective teachers themselves, but must be completed within the semester, and the exam schedule and location will be published in the teaching management system.

Exams are organized according to the SUES Examination Management Measures. The management measures with detailed rules in the **Appendix B-12**. To ensure equitable assessment conditions, we implement accommodation for students with documented learning disabilities or special needs. These include priority seating in distraction-reduced zones, ground-floor venue allocation for accessibility, personalized support (e.g., dedicated attendants for time management or reading assistance), and dedicated access routes supervised by trained volunteers. All provisions are activated upon formal request through our Disability Support Office, with confidentiality strictly maintained.

For exams graded by multiple teachers, they will collectively adhere to the reference answers and grading standards set by the examiners' group to ensure fairness in grading. There will be a mutual exchange of exam papers for calibration and review. After grading procedure, teachers will refine instructional strategies by analyzing grade analysis report (**Appendix B-13**), which evaluates the achievement of teaching objectives through metrics such as attendance rates, regular assignment completion, and final project outcomes. Identified issues, including workload imbalance (e.g., overlapping deadlines) and inconsistent class participation, will guide targeted improvements, such

as adjusted task scheduling and enhanced interactive activities. These measures aim to ensure sustainable enhancements in teaching quality through continuous feedback and iterative adjustments.

2.3.2 Make-up Exams

The arrangement of make-up exams is coordinated by the Academic Affairs Office in conjunction with the relevant school (department/center), and the make-up exams are scheduled to take place before the start of the next semester. Students who did not achieve a passing grade of 60 points in the regular exams, as well as those who were unable to participate in the exams due to illness, are allowed to take the make-up exams upon providing necessary medical certificates and obtaining approval from the school after verification.

Also, the number of retake opportunities for required courses is limited by the number of times the course is offered within its academic cycle, and students must pass within six years to earn credits and a degree. Elective courses offer more flexibility, allowing students to either retake the course or choose another equivalent course. This policy ensures that students maintain academic continuity while adjusting their study plans according to individual circumstances. However, students who unjustifiable missed the regular final exams are not allowed to take the make-up exams. If a student's make-up exam score still does not reach 60 points, they may retake the course in the following academic year.

3 Resources

3.1 Staff and Staff Development

3.1.1 Staff

The School of Art and Design has a faculty team with a reasonable age and educational background structure, comprehensive qualities, and deep academic achievements. The school currently has a total of 96 staff members, including 74 full-time teachers, 8 professors, 25 associate professors, 34 Ph.D. degree holders, with a Ph.D. rate of 45.9%, and 33 teachers with senior professional titles, accounting for 44.5%. Among the faculty, 22 teachers have overseas study backgrounds, 2 are talents from the Pujiang Program, 3 are from the Morning Light Program, 1 is a leading figure in Changning District, and 1 is an outstanding talent in Songjiang District.

The Industrial Design Programme has established a high academic level, diverse educational background structure, and reasonably structured age group faculty team. There are 22 full-time teachers in the Industrial Design Programme, including 2 professors, 8 associate professors, and 12 lecturers, with 65% of young teachers under

the age of 45. Among them, 18 teachers hold a Ph.D. degree, 3 hold a master's degree, and the proportion of teachers with a master's degree or above is 95.5%. There are 14 faculty members with overseas experience, including individuals recognized as "Shanghai's Scarce Artistic Talent," "Young Oriental Scholars," "Shanghai Senior Craftsman," "G60 Innovative Talent," "Leading Figure in Changning District's Fashion and Creative Industry," "Outstanding Talent in Songjiang District," "Morning Light Scholar," and "Pujiang Talent." For detailed resumes of faculty in Industrial Design Programme, please refer to **Appendix C-1.**

3.1.2 Staff Teaching and Research

The Industrial Design Programme offers over 40 professional courses, each taught by 2 or more lead teachers, forming teaching teams around the courses. High-level teachers lead professional courses and foundational courses, with 100% leading teachers holding the lecturer title or higher, 100% holding a master's degree or higher, 83.3% holding a Ph.D., and all professors teaching undergraduate courses. In recent years, the Programme has undertaken 9 teaching reform and curriculum development projects related to industrial design and other disciplines, including winning 3 provincial and ministerial-level teaching achievement awards and 6 university-level teaching awards, publishing 3 teaching papers, 3 reference books, and 44 academic papers. For details on provincial and ministerial-level curriculum development projects, university-level and above quality courses, university-level and above excellent teaching achievement awards, published professional textbooks, and monographs, please refer to **Appendix C-2.** Over the past three years, the faculty team has undertaken a total of 18 university-level or above research projects, including 1 project from the Ministry of Education's Youth Humanities and Social Sciences Research Program, 1 project from Shanghai's Art Science Planning General Project, 1 project from Shanghai's Philosophy and Social Science Planning Youth Project, and 15 enterprise collaborative design and development projects, with a total research funding of 990,000 RMB, providing ample practical project resources for course teaching and graduation design. For samples of research results, national and provincial-level research projects, and scientific and technological achievements, please refer to **Appendix C-3**. In recent years, students have won over 120 national, provincial, and professional association design awards in competitions such as the China Design "Red Star Award," National University Industrial Design Competition, Milan Design Week - China University Design Discipline Faculty and Student Outstanding Works Exhibition, and "Hui Chuang Qing Chun" National Student Innovation Design Competition.

3.1.3 Staff Workload

In the Industrial Design Programme, the teaching workload for each teacher is clearly defined based on the teaching team. Apart from dual-role teachers, each teacher is

required to complete 320 teaching hours per year. Additionally, each teacher must fulfill designated office hours for answering questions and providing self-study guidance. Senior title teachers are required to have a minimum of 256 hours of office hours and 20 days of self-study guidance, while intermediate title teachers should have a minimum of 512 hours of office hours and 30 days of self-study guidance. In addition to necessary theoretical teaching, every teacher must provide sufficient guidance, homework correction, and innovation and entrepreneurship guidance to students. Serving as academic advisors and guiding students in scientific innovation projects for certified programs are important criteria for teacher promotion. These measures ensure that every student in the Programme receives adequate guidance on courses and extracurricular assignments, helps students complete the requirements of the training program, acquire various skills needed in the Programme, and achieve the training objectives specified in the program. To enhance students' international communication abilities, the Programme has English-speaking teachers and offers some bilingual courses to create a conducive environment for professional English learning and communication for students.

3.1.4 Staff Development

(1) Relevant Training

The school has established a Teacher Development Center, mainly engaged in teaching research, teaching resource development, teaching assessment, and teacher development work. This institution includes a management office, affiliated with the Academic Affairs Office. The aim is to provide services for improving teachers' teaching abilities, promoting teaching reform and innovation, and continuously enhancing teaching quality through teacher training, teaching exchanges, teaching evaluation, teaching research, and teaching consultation. Various forms of teaching training, teaching forums, teaching demonstrations, and other activities have been organized, and multiple internal and external educational experts and teaching masters have been invited to give lectures.

- **Pre-Service Training for New Teachers:**

According to the "Shanghai University of Engineering Science Teacher Qualification Management Measures" and the "Implementation Measures for Staff Training at Shanghai University of Engineering Science," teachers who are new to teaching, recently transferred from other positions within the university to teaching positions, or transferred from non-educational departments to teaching positions are required to participate in pre-service training organized by the school. Additionally, the Shanghai Education Commission has arranged a comprehensive training program lasting three months for teachers with less teaching experience to improve their ethical standards,

professional dedication, and teaching quality. The training covers professional ethics, psychological well-being, and other educational requirements. Teachers are expected to abide by relevant regulations during the training period. After obtaining the teaching qualification, new teachers are required to pass the assessment conducted by the school to be eligible to teach undergraduate courses.

The assessment of course teaching qualifications is organized by the college (department/center). A panel of experts composed of the college (department/center) professors committee and relevant course backbone teachers evaluates the teaching demonstration of applicants to determine their teaching qualifications. Teachers recognized as "having course teaching qualifications" can independently teach the course, while those recognized as "basically having course teaching qualifications" need to further enhance their teaching abilities. The college (department/center) should assign course mentors to assist them in teaching the course.

- **Mentorship System**

To enhance the training of young teachers, each college (department/center) is required to assign a mentor with an associate professor title or above to guide every newly appointed young teacher. The mentorship system aims to provide guidance in developing course teaching plans, annual learning plans, lesson preparation, teaching methods, and improving teaching quality. New teachers are expected to establish correct educational philosophies, cultivate good moral character under the guidance of their mentors, and quickly familiarize themselves with teaching processes, teaching and research methods, and skills.

- **Personal Career Planning for Teacher**

To strengthen the faculty team and enhance the overall competitiveness of the school, the school has implemented "Personal Career Planning for Teachers" since 2009. This plan provides clear guidelines for individual research disciplines, key research directions, research goals (including short-term, medium-term, and long-term goals), further education and social practice plans, teaching plans, research project applications, etc. Additionally, the school has introduced the "Management Measures for In-Service Teachers Pursuing Academic Degrees at Shanghai University of Engineering Science," encouraging young teachers to pursue academic degrees while improving the overall competence of the faculty team and enhancing the training system for teachers and management staff to develop and improve the business capabilities of young teachers and managers.

- **Education and Training Activities**

Utilizing winter break, summer break and regular holidays, the school regularly organizes various advanced education and training activities for in-service teachers to

support their professional development, introduce and train them in advanced educational concepts. Over the past three years, professional teachers have participated in over 330 professional training programs covering various aspects such as design skills, professional ethics, ideological and political education, personal development, research training, capacity expansion, and industry-education integration. They have received training completion certificates such as the "31st National Design Master Class" and "Summer Teacher Training Completion Certificate," indicating a positive trend in teachers' professional development. Furthermore, the school emphasizes and implements teacher teaching incentive programs and young teacher training plans, organizing training for young teachers to participate in various youth teaching competitions. Details of industrial design teachers' work in enterprises, part-time jobs, domestic training, and international exchange experiences can be found in **Appendix C-4**.

(2) Relevant Funding

The Shanghai Education Commission provides various levels and forms of financial support, including domestic and international study tours, industry-academia collaboration, and experimental team building, to enhance the professional academic research and teaching capabilities of teachers at SUES. Under the "Shanghai University Young Teacher Training Aid Program," young teachers receive financial support for research activities, with a grant amount of 50,000 RMB. Additionally, funds are provided for professionals to study abroad, with an annual grant of approximately 150,000 RMB per person. Each year, 2-3 teachers at the university receive this support. The university offers research start-up funds for newly appointed teachers with a doctoral degree, providing 30,000 RMB per person. Since 2015, the school has implemented three talent programs - "Zhan Chi Plan," "Teng Fei Plan," and "Zhi Hong Plan" - with funding amounts ranging from 120,000 to 400,000 RMB.

3.2 Student Support and Student Services

3.2.1 Academic Affairs Office

The daily management and training of undergraduate teaching are mainly the responsibility of the Academic Affairs Office and the Office of Teaching Quality Management. The Academic Affairs Office consists of the Academic Affairs Division, Educational Technology Division, Information Center, Cultivation Division, Practice Division, Admissions Office, and Textbook Division. External teachers and students need to first log in to the university education system, then click on the school's Teaching Management Information System website; School faculty can log in to the website with their account and password, and those without the school faculty account and password cannot log in. Each college under the school has a dedicated Teaching Office, responsible

for teaching management under the guidance of the Vice Dean of Teaching.

3.3.2 Student Affairs Office

The Student Affairs Office is responsible for guiding and supporting students in various departments to conduct ideological and political education and management, including: promoting comprehensive quality education, enhancing student quality comprehensively, maintaining normal teaching order, fostering a good academic atmosphere and campus culture; Developing a student management system; Guiding, coordinating, and evaluating student management work in various departments; Responsible for various student rewards, loans, and subsidies; Responsible for student employment guidance and services; responsible for student dormitory management and student mental health education.

3.2.3 Student Counselor System

Each Programme has full-time undergraduate student counselors who are responsible for providing life guidance and psychological counseling to university students; Responsible for communication between the school and students' families, organizing various cultural and sports activities for students, and providing students with a healthy, safe, and dynamic learning and living environment. Counselors introduce the current status and future career directions of the Programme to freshmen, helping them establish reasonable career goals and career plans early on. Therefore, most freshmen will plan their future career development under the guidance of counselors in their first year of university life. For second and third-year students, counselors help them adjust their career plans reasonably and improve their employment goals, laying a solid foundation for their competitiveness in the future job market. For fourth-year students, counselors provide them with the latest employment information, guide them to improve interview skills, and provide comprehensive guidance and services for their life and extracurricular activities. For topics of concern to students, counselors regularly organize experience exchange meetings for students of different grades, allowing lower-grade students to receive guidance on learning and life from higher-grade students. To help undergraduate students participating in innovation and entrepreneurship training programs improve their innovation capabilities, counselors occasionally organize special skills training seminars, such as inviting experienced professional teachers or corporate technicians to teach various professional engineering software usage methods and development technologies.

3.2.4 Academic Advisor

Each undergraduate freshman has a designated academic advisor to guide their academic, professional, and career development. Academic advisors guide students in mastering learning methods and problem-solving, help them establish personal

academic and life goals, and inspire students' learning and career motivation. The unified operation of academic advisors with students of different grades allows students to fully utilize the advantages of academic inheritance. Academic advisors encourage students to actively participate in scientific research projects and/or independently apply for undergraduate research projects, innovation projects, and participate in related subject competitions. All full-time teachers can serve as academic advisors, determine students' learning needs based on their Programmes and interests, and develop effective learning strategies, providing constructive advice for students in academic research and career planning.

3.2.5 Enterprise Mentor

The school implements a system of guiding college students in entrepreneurship, encouraging students to engage in industry practices, communicate with engineers, and cultivate innovative and entrepreneurial abilities. Enterprise mentors are managers or engineers from relevant companies certified by SUES. Students can choose enterprise mentors they like based on their research interests, and enterprise mentors can also choose students. During the student's internship in the company, the enterprise mentor is responsible for guiding the student's project and maintaining communication with the academic advisor of the college for cooperative teaching.

3.2.6 Course Website

Online teaching is widely used in the teaching activities of this Programme. Most courses have corresponding course web pages on the SUES online teaching platform (sues.fanya.chaoxing.com/portal). The website content includes course introductions, course backgrounds, teaching content, syllabi, and exercises. Students can find course-related information on the website and communicate with the course instructors online, as well as email the instructors to ask questions. At agreed-upon times each week, teachers can be available in their offices to answer course-related questions for students and can also communicate with students via email at any time.

3.2.7 Internal Transfer Students and Internal Programme Transfer Platform

To fully motivate and utilize students' learning enthusiasm and effectiveness, giving students greater autonomy and choice in learning, students at the school can transfer Programmes through two methods: internal transfer students and internal Programme transfer platform. According to the relevant regulations of the "Shanghai University of Engineering Science Credit System Enrollment Management Regulations" and the "Shanghai University of Engineering Science Internal Transfer Students and Internal Programme Transfer Implementation Rules," first-year undergraduate students can apply for internal transfer students to change Programmes in the second semester, and second-year undergraduate students can apply for internal Programme transfer within

the fourth semester. Each college has a transfer work leadership group and work group responsible for leading the college's transfer work, formulating and publishing relevant methods, and organizing interviews, among other tasks. The work process includes: 1) determining the transfer plan and reporting it to the Academic Affairs Office; 2) student registration and qualification review; 3) organizing interviews and determining the list of students intending to transfer Programmes; 4) publishing the list of intended admissions; 5) submitting the list of intended admissions to the Academic Affairs Office for review; 6) admitted students report and transfer their study records.

3.2.8 Second Programme

To stimulate students' learning enthusiasm, broaden their knowledge, and cultivate versatile talents, the school implements a system of dual (minor) Programme bachelor's degrees, jointly offering cross-school minor (second Programme) bachelor's degrees with universities in the southwest region of Shanghai and universities in the Songjiang University Park area. Students who have qualified study results in their Programme, have remaining capacity for study, and meet the admission requirements for the minor they wish to pursue can apply to study for a minor (second Programme) bachelor's degree with the approval of their college, with the Programme and minor fields belonging to different disciplines.

3.3 Funds and equipment

3.3.1 Laboratories

The School of Art and Design maintains a robust laboratory system to support the Industrial Design Programme, ensuring alignment with ASIIN standards for practical training and innovation. Sixteen specialized laboratories (1,430.5 m^2 total) serve industrial design, including the Sino-UK Intelligent Sustainable Packaging Design Joint Lab, Product & Information Interaction Design Studio, and Material and Process Labs, equipped with advanced tools for prototyping, digital modeling, and sustainable design. These facilities are equipped with advanced tools for prototyping, digital modeling, and sustainable design, such as 3D printers, CNC machines, and VR/AR systems to enable hands-on experimentation in material science, user interaction, and intelligent product development.

The Design Practice Center, established in 1998, under the school's Laboratory Asset Management Office and college leadership, oversees laboratory safety, equipment maintenance, and resource allocation. Strict adherence to safety protocols-including mandatory safety training, fire drills, and compliance with institutional regulations (e.g., Shanghai University Laboratory Safety Admission Regulations)- guarantees a secure environment. Standardized procedures govern equipment maintenance, calibration, and shared access, prioritizing functionality and longevity.

School labs directly support curriculum objectives in prototyping, ergonomic analysis, and sustainable innovation. Dedicated personnel maintain equipment availability, with real-time updates and open-sharing policies ensuring uninterrupted access for student projects. Key infrastructure details and safety guidelines are documented in **Appendix C-5** and **C-6**. Annual fixed asset inventories include registration, daily supervision, and management; any surplus or deficit requires documented analysis submitted to the Asset Management and Security Division. **Appendix C-6** provides inspection record samples. Through these measures and regular quality inspections, the Lab demonstrates compliance with ASIIN requirements for technical competency, industry-aligned practical training, and continuous development.

3.3.2 Research Platforms

The Industrial Design Programme is established in 2009, with three specialized tracks: Vehicle Design, Smart Commercial Kitchen Systems, and Smart Home Design. Aligned with SUES's "Sea, Land, and Air" transport strengths and Shanghai's G60 industrial corridor, the program emphasizes applied innovation through industry-academia collaboration. Partnerships with 10+ leading enterprises, including Haworth Furniture, SAIC Datong, and the Shanghai Industrial Design Association, ensure curriculum relevance to regional industrial needs.

Provincial/ministerial research platforms anchor the program, notably the Shanghai Design Innovation Center (2021) and Shanghai Creative Product Design Engineering Research Center, driving interdisciplinary projects in sustainable design, smart systems, and user experience. Strategic alliances with institutions like the University of Liverpool John Moores (e.g., Sino-UK Intelligent Sustainable Packaging Lab) and domestic industry leaders foster global competency and technical innovation.

Fifteen school-enterprise collaborative innovation centers, such as the Transport Vehicle & Digital Cockpit Design Center and Smart Kitchen System Design Center, integrating industry challenges into coursework and enabling students to tackle real-world design problems. Faculty-led research institutes and master studios provide mentorship and advanced technical training. Student outcomes are demonstrated through participation in national competitions (e.g., Challenge Cup, Internet+ Innovation) and projects detailed in **Appendix C-7**, showcasing design innovation aligned with ASIIN's competency-based standards.

3.3.3 International Collaboration and Platform

The Industrial Design Programme prioritizes global engagement via strategic partnerships and dual-degree programs with leading institutions, such as Liverpool John Moores University (UK) and Royal Melbourne Institute of Technology (Australia). K Key initiatives feature the Sino-UK Intelligent Sustainable Packaging Joint Lab and doctoral

co-supervision programs, integrating cutting-edge sustainable design and smart systems research into curricula. Since 2019, the programme hosts international forums (e.g., Cross-Media Arts and Design International Forum) and joint exhibitions, fostering academic exchange and aligning pedagogy with global standards.

To enhance international competencies, dual-degree/credit-transfer options (see **Appendix A-6**) enable students to acquire cross-cultural design expertise. Faculty development involves English training and bilingual courses, ensuring accessibility for international students. Annual exchanges, like the 2023 Chiba University cohort (19 students/faculty), reinforce practical exposure to global design practices.

These efforts directly support ASIIN's emphasis on internationalization, evidenced by improved graduate employability in multinational firms and participation in global competitions (see **Appendix C-8)**. Integrating overseas resources into coursework and research ensures the programme meets international benchmarks in innovation, sustainability, and industry relevance.

3.3.4 Enterprise practice platform

The Programme develops industry-aligned competency through 14 off-campus internship bases (see **Appendix C-9**), including partnerships with High Bo Aerospace, Shanghai Benteng, and Shanghai Aican Robotics. These bases provide hands-on training in aerospace systems, smart home design, and robotics, reinforcing the programme's focus on applied innovation. Internships feature curricula jointly developed by SUES faculty and industry experts, emphasizing real-world problem-solving in product development, user experience, and sustainable design. Each base employs a dual-mentorship system: enterprise instructors oversee safety protocols and operational training, while university faculty manage project timelines and academic integration. This ensures students gain 300+ annual practical hours, with practical credits constituting 31.14% of total programme credits.

Financial support exceeds 2,000 RMB annually per student, covering materials, travel, and prototyping. This enables high-impact projects—such as designing ergonomic cockpit interfaces or optimizing smart kitchen systems—aligning with ASIIN's industry-ready competency emphasis. These platforms foster technical skills, teamwork, project management, and ethical design practice for global design sectors. Detailed internship outcomes and partner contributions are documented in **Appendix C-9.**

3.3.5 Library and information resource platform

The library extensive resources supporting the Industrial Design Programme, including over 1.91 million print volumes, 3,300 journals, and 47 specialized databases. Digital resources encompass 1.65 million e-books and 63,800 e-journals, accessible via VPN and

mobile platforms like "Chaoxing Mobile Library." Discipline-specific collections focus on art and design, with 3,000+ industrial design-related books and 30+ journals covering product design, materials, psychology, and design history. The library's information sharing space features 3D printers and multimedia tools, directly supporting student projects and research.

The School of Art and Design maintains dedicated reading rooms with 4,902 books (600+ industrial design-focused) and industry journals, managed through standardized borrowing systems. Computer resources include 950 campus terminals with labs offering programming, CAD, and VR/AR software. University IT infrastructure ensures connectivity through 10G core bandwidth, campus-wide Wi-Fi, and smart card integration.

Key platforms like the Course Center host 2,500+ online courses enabling blended learning for core industrial design modules. The Graduation Project Management System streamlines thesis supervision from topic selection to defense, ensuring industry-standard alignment. Digital tools including 3D printing and virtual reality labs enhance technical training. All facilities comply with accessibility standards. This infrastructure, coupled with rigorous resource management, meets ASIIN requirements for curriculum delivery, research innovation, and student competency development. Detailed platform descriptions are provided in **Appendix C-10.**

3.3.6 Teaching and facilities

This programme utilizes three teaching venues: school teaching buildings, engineering training centers, and college practice/laboratory centers. The school teaching buildings contain 180 large classrooms (60-120+ capacity), accommodating ~5,000 students simultaneously. Among these, 13 smart classrooms include:

- 32-person nano-blackboard rooms
- 32-person touch-screen rooms (discussion tables)
- Individual-seat touch-screen rooms
- Interactive recording classrooms
- Dual-screen seminar rooms

Classrooms feature modular furniture, multiple interactive tablets, smart systems, and auto-recording. Standard rooms have multimedia computers/projectors. Instructors control devices via network systems. Smart classrooms integrate subsystems for specialized courses/flipped classrooms, emphasizing student-centered collaborative learning.

The Assets and Laboratory Management Department maintains teaching buildings

through dedicated duty rooms, ensuring facility functionality. Campus-wide multimedia classroom scheduling via the Teaching Management Information System enhances resource utilization, allowing faculty to book spaces for undergraduate teaching.

The School of Art and Design provides 16 specialized laboratories for teaching/external collaboration, plus faculty offices. Multiple meeting rooms host seminars and visiting scholar lectures. Industrial Design laboratories are accessible for student-led academic/experimental research, please refer to **Appendix C-6.**

3.3.7 Other External Collaborations

The Industrial Design Programme supports the national "dual carbon" strategy, continuously optimizes its disciplinary direction, and strengthens cooperation and exchanges with enterprises. It has successively carried out industry-academia-research collaborations with many enterprises such as Shanghai Huamei Elevator, Gaobo Aviation, Shanghai Aiyi Information Technology, Shanghai Benteng Electric, Shanghai Caijin Packaging, Shanghai Industrial Design Association, and Shanghai Catering Association. It engages in in-depth discussions and exchanges with these partner enterprises in terms of faculty development, talent cultivation, university-enterprise cooperation, and integration of production and education, achieving mutual talent cultivation, resource sharing, and promoting effective linkage between the education chain and the industrial chain.

The list of external collaboration enterprises and agreements for external internship practice teaching bases for this Programme can be found in **Appendix C-9.**

3.3.8 Teaching Investment in the Past Five Years

The Industrial Design Programme maintains sufficient and guaranteed funds for undergraduate teaching basic expenses, laboratory construction, etc., ensuring adequate teaching funds for normal teaching activities. In the past five years, the investment in the Programme has reached 2.34 million yuan, See Table 3-1. Due to the COVID-19 lab investments dropped since 2020 shifted priorities to online resources. Strategic reallocation balanced austerity with growth, maintaining academic quality through blended learning and targeted investments.

Income variability primarily stems from **two factors**: (1) Pandemic-related disruptions (2020–2022) caused a **decrease** in government grants and revenue; (2) Strategic funding cycles: the College of Fashion and Consumer Goods Modern Industry received substantial initial government grants in 2023 for infrastructure development, with planned annual reductions thereafter. SUES's primary income sources include institutional allocations (tuition fees, operational budgets), ensuring sustainable operations despite cyclical fluctuations.

Table 3-1 Income and expenditure

Item (RMB 10,000)		2020	2021	2022	2023	2024
Expenditure	Practice and practical training	1.0	1.0	1.1	1.4	2.5
	Graduation projects	0.7	0.7	0.7	0.9	1.6
	Laboratory construction funds	30.0	5.0	30.0	10.0	7.0
	Laboratory consumables	2.0	3.0	5.0	3.0	3.0
	Book and material expenses	2.0	2.0	1.0	3.0	2.0
	College Innovation Fund (Design Competition)	1.5	1.5	1.5	2.0	3.0
	College of Fashion and Consumer Goods Modern Industry				60.0	20.0
	Application for ASIIN				10.0	12.3
	Smart Commercial Kitchen System Design				3.0	
Income	University funding	37.2	13.2	39.3	93.2	51.4

4 Transparency and Documentations

4.1 Module descriptions

Detailed information regarding the heads of each module, teaching methods, workload, credit hours, anticipated learning outcomes, suitability, entry and examination prerequisites, forms of assessment, and the calculation of final grades is readily available in the school's information portal and teaching management system, see **Appendix A-10 to A-18**. Both students and staff can log in to the management system using their student or staff ID and password through the information portal. Once inside the management system, students and teachers can review their current and past learning or teaching tasks for all semesters. Students are also able to review details of courses they have completed and those they have yet to complete. Senior students and thesis supervisors can access the thesis project management system to submit thesis materials and conduct grading. Staff and students on Campus (or VPN) may access the teaching management system using their unique student or staff ID numbers, see **Figure** 5.

Figure 5 Login Interface for the Information Portal System

The learning outcomes are publicly disseminated through multiple official channels, including the university website's academic programme section (see **Figure** 6)and the departmental WeChat official account (see **Figure** 7). These platforms can provide detailed, bilingual (Chinese/English) descriptions of competencies, ensuring transparency for students, faculty, industry partners, and external stakeholders.

Figure 6 Screenshots of Learning Outcomes from School Website

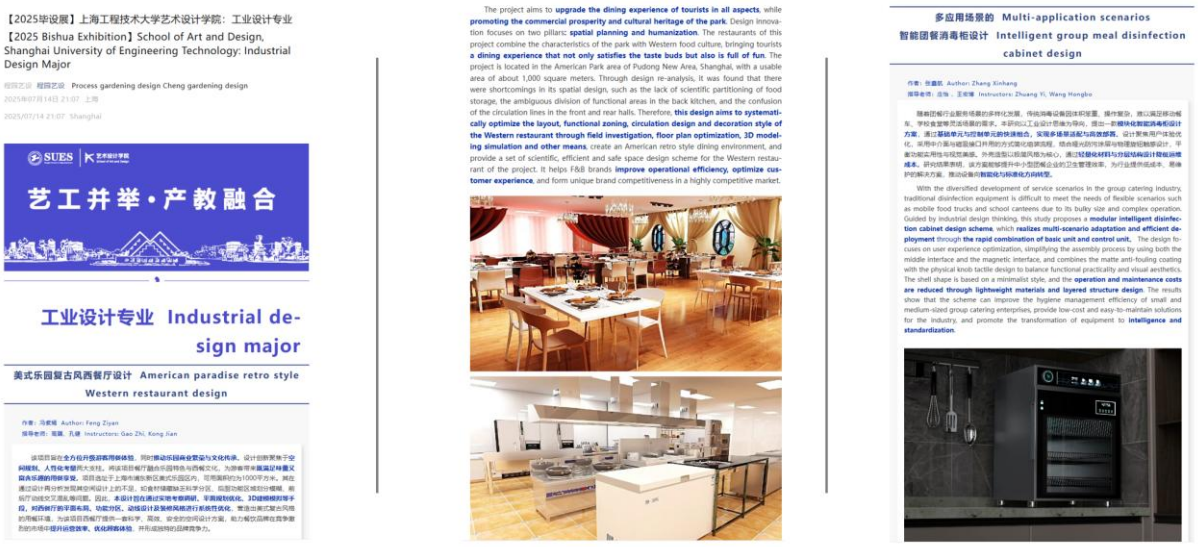

Figure 7 Screenshots of Learning Outcomes from WeChat Official Account

4.2 Diploma and Diploma Supplement

Appendix D-1 contains samples of the graduation and bachelor's degree certificates for alumni of the Industrial Design program at SUES. Validity of these certificates is contingent upon the presence of the university's official seal and the president's signature. **Appendix D-2** presents a sample diploma supplement, while **Appendix D-3** displays a sample graduate transcript.

4.3 Relevant rules

4.3.1 Teaching Evaluation System

The college adheres strictly to the Staff Qualification Accreditation Management Measures (refer to **Appendix D-4)** for assessing the qualifications of instructors. Instructors must prepare course content in line with the standards for teaching plans and lecture notes. The teaching process is managed and assessed according to various regulations, including the Shanghai University of Engineering Science's Staff Work Standards, Academic Affairs Staff Job Responsibilities, Teaching Guidance Committee Charter, Teaching Accident Identification and Handling Regulations, Teaching Supervision Work Regulations, Teaching Management Work Regulations, Proctoring Guidelines, Teaching Award Methods, and Course Teaching Quality Evaluation Implementation Measures (accessible through the web site: https://yssj.sues.edu.cn/eng/IndustrialDesign/list.htm or https://yssj.sues.edu.cn/ASSINrz/list.htm). Further details are provided in **Appendix D-4**.

The university's academic affairs department regularly evaluates each course to gauge the performance of teachers across different aspects, encompassing peer reviews, student feedback, supervisor assessments, and leadership evaluations (collectively known as the four-party evaluations). More information can be found in **Appendix D-5**.

These evaluation forms are collected and organized by the academic affairs department, then forwarded to the respective colleges and communicated to the relevant instructors. The outcomes of the supervisor, student, leadership, and peer evaluations for each course are accessible via the teaching management system. Figure 8 and 9 display samples of the evaluation results, detailing each aspect of the assessment.

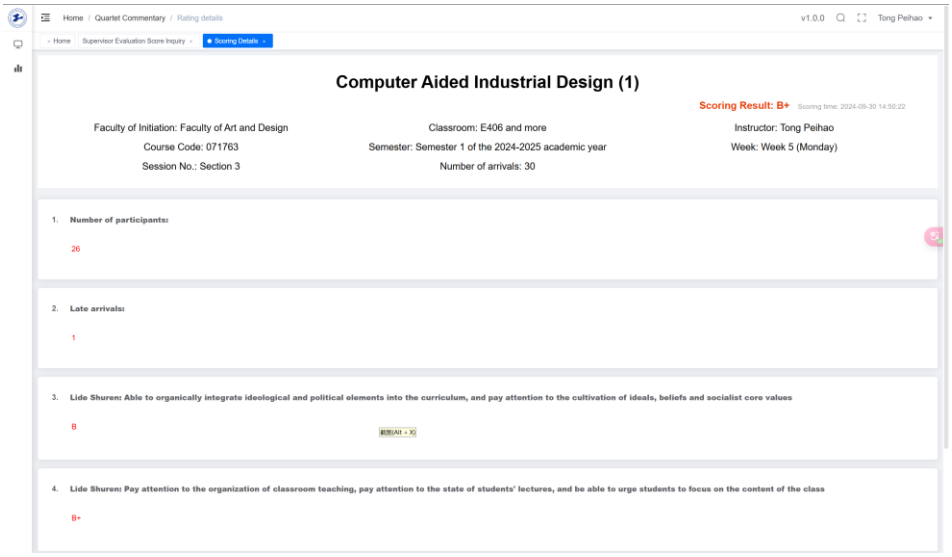

Figure 8: Colleague Assessment of Course Instruction

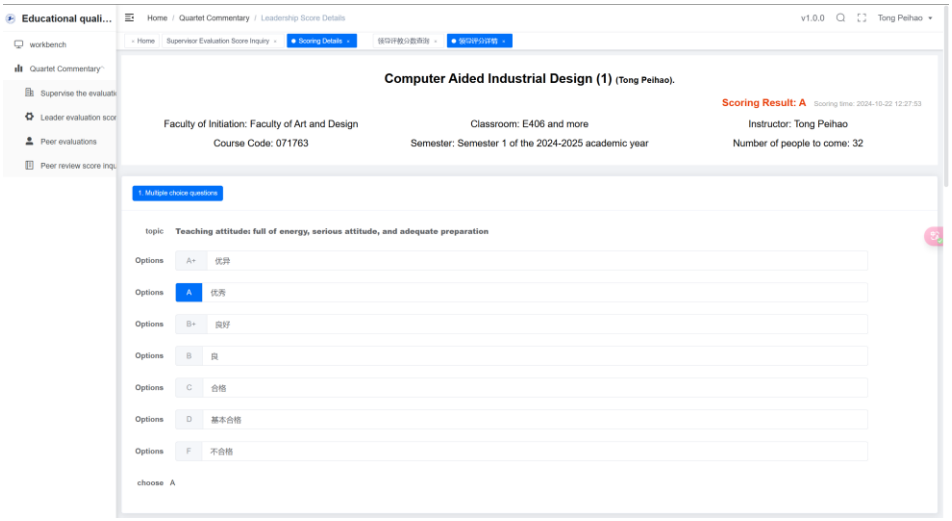

Figure 9: Student Assessment of Course Instruction

4.3.2 Student Admissions Assessment

Since 2011, our university's admission scores have exceeded the national first-class undergraduate cutoff for the National College Entrance Examination. For details on admission policies and the admission statistics, please refer to **Appendix D-6**. We strictly adhere to the enrollment regulations outlined in the Articles of Association for Southwest Shanghai Universities, detailed in **Appendix D-6**, and have formed an admissions committee responsible for all admission-related affairs. Further information

on our university's admission policies, admission publicity and oversight procedures, and the disciplinary and conflict-of-interest policies for admission exams is available in **Appendix D-6**.

4.3.3 Further Development and Continuous Improvement

In response to the job market and the evolution of professional techniques, our School of Art and Design is deeply committed to the ongoing development of its programs. We have established a dedicated graduate tracking information system to gather and analyze feedback from alumni. Moreover, we convene annual graduate meetings during our university's anniversary to foster dialogue and enhance our teaching plans, thereby improving the level and quality of education.

To support students not fluent in Chinese in our Industrial Design program, we will enhance our faculty's oral language skills and introduce more bilingual courses. We will also bolster Chinese language training for students applying to study in China, aiming to help them quickly adjust to the campus life and academic environment at SUES.

5 Quality Management: Quality Assessment and Development

5.1 Measures of quality improvement for the degree programme

5.1.1 Internal Quality Assessment

Each semester, the programme conducts routine teaching inspections to evaluate various aspects of teaching quality, including classroom instruction, practical sessions, graduation project processes, teaching order, lesson plans, examination papers, and other foundational teaching materials, with the aim of identifying and addressing any issues in the teaching management process. For instance, each semester starting, our university's Academic Affairs Office conducts spot checks on the previous semester's examination papers, assessing them in three areas: scores, analysis, and improvement measures, to standardize examination papers. The college also analyzes teachers' exam results and student performance each semester, offering suggestions to enhance teaching quality.

5.1.2 External Quality Assessment

The university utilizes a feedback system to gather opinions from employers and has introduced external oversight - undergraduate course evaluation organized by the Shanghai Municipal Education Commission. According to the report, the Industrial Design program at SUES received an "excellent" rating, praised for interdisciplinary integration, faculty quality, and industry alignment, see **Appendix E-1**. However, gaps were noted in online course development, experimental course standardization, and

teaching research outputs. Recommendations include diversifying online platforms, recruiting industry experts, and increasing funding for smart technologies. Improvement measures prioritize structured online courses, lab upgrades, and annual graduate feedback mechanisms to align training with market needs.

This approach fosters a collaborative teaching quality evaluation mechanism involving higher authorities, employers, teachers, and students, integrating both internal and external evaluations. We consider the input from the Ministry of Education, employers, and external experts as external evaluation, while the perspectives of teachers, students, and the school itself are seen as internal evaluation.

5.1.3 Continuous Improvement

The Industrial Design program uses a structured cycle method to turn feedback into concrete improvements. For example: When lab resource gaps were found in 2022-2023, we invested over 7 times more in equipment by 2023-2024 and added mandatory hands-on training. To fix faculty shortages, we hired 5 industry-expert lecturers and increased Ph.D. teaching staff by 11.4%. Since 2023, the programme launched three specialized tracks: Transportation Design, Smart Kitchen Systems, and Smart Home Design. During 2025, we're introducing AI-focused design courses to address technology gaps in the curriculum.

The industry advisory committee and major employers directly shape the programme, such as the curriculum, through quality assessment of Industrial Design major each year. This annual analyses triggers actions such as specialization split since 2023 and increasing AI-related courses in 2025. Alumni career data further validates program relevance.

Our school continuously tracks progress through student surveys (>85% satisfaction) and teaching audits to refine these changes. After every course evaluation, instructors communicate improvement plans to incoming students. Market demand trends (like smart kitchen tech growth) are shared to contextualize changes.

5.2 Tools, Methods and Data

5.2.1 Student Enrollment and Graduation Rates

As per the standard study duration at Shanghai University of Engineering Science, students typically study for 4 years, with a maximum of 6 years. Students who do not graduate within this period will receive a discontinuation certificate or be dismissed. Table 5-1 details the number of students and graduates from 2019 to 2024. With consistent start and end times for both spring and autumn semesters, the annual schedule is predictable. Graduate destinations are detailed in Table 5-1.

Table 5-1: Graduate Destinations

Past 5 Years	2019	2020	2021	2022	2023	2024
Number of Students	26	26	26	27	34	62
Number of Graduates	23	25	25	22	31	59
Graduation Rate	88%	96%	96%	81%	92%	95%
Employment Rate of Graduates	100%	100%	100%	100%	97%	98%
Percentage of Graduates Continuing Studies in China	17%	12%	4%	5%	19%	18%
Percentage of Graduates Studying Abroad	0%	20%	4%	5%	7%	3%
Other Graduates Percentage (Employment)	83%	68%	92	90%	74%	73%

5.2.2 Student Assessment

To graduate, students must acquire 240 ECTS credits. Any failed courses are noted, and those who do not pass exams are granted chances for re-sits or course retakes. Passing the College English Test Band 4 fulfills the English proficiency requirement. Students lacking the required 240 ECTS credits will not be conferred a degree. A sample transcript is provided in **Appendix D-3**. Our school facilitates learning for students with disabilities by providing accessible amenities, including disabled-friendly restrooms and ramps.

5.2.3 Continuous Assessment and Statistics of Examination Results

At the conclusion of each course exam, staff must submit an analysis of students' examination results and course teaching, proposing suggestions for continuous improvement to enhance the quality of teaching and student learning outcomes. Students who do not pass their course exams will be assigned an academic advisor for supervision and guidance. Table 5-2 outlines the core courses for the Industrial Design Programme in 2024.

Table 5-2 Core Courses for the Industrial Design Programme in 2024

No	Module	Course name	Credits	Hours	Exam type	Average score
1	Industrial Design Fundamentals	Computer Aided Industrial Design (1)	3	90	Final project	81.97

2	Industrial Design Fundamentals	Open Source Hardware and Programming	3	90	Final project	84.37
3	Industrial Design Professional Courses	Product CMF design	3	90	Final project	85.20
4	Practical Training	Model Making	4	120	Final Project	85.45
5	Electives	Service Design	3	90	Final Project	83.35

5.2.4 Student Evaluations of Teaching Quality

Student evaluations are a vital component of the teaching evaluation system. Students are required to complete a teacher teaching quality evaluation from prior to course registration each semester. These evaluations inform improvements in teaching methods and are correlated with the instructor's performance assessment. The teaching quality evaluation form is detailed in **Appendix E-2.**

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