Appendix E-1　Industrial Design Program Assessment

Shanghai University of Engineering and Science Undergraduate Program Assessment Report

Specialty: Industrial Design

June 2023

I. Objectives and process of professional evaluation

Specialization is the foundation of undergraduate education and teaching work in schools, and the level of specialization construction directly affects the quality of talent cultivation in schools. In order to implement the Central Committee of the Communist Party of China and the State Council on "deepening the overall program of education evaluation reform in the new era".

In accordance with the requirements of the Notice on the Implementation of the "Double Ten Thousand Plan" for the Construction of First-class Undergraduate Specialties (Letter of the Office of Education and Higher Education [2019] No. 18) and the Implementation Plan for the Audit and Evaluation of Undergraduate Education and Teaching in General Institutions of Higher Learning (2021-2025) (Teaching Supervision [2021] No. 1), we are going to strengthen the construction and management of undergraduate specialties, deepen the connotation construction of specialties, highlight the characteristics of specialties, and promote specialties to actively build a self-awareness, self-discipline, self-inspection and self-correction quality culture. In order to strengthen the construction and management of undergraduate majors, deepen the connotation construction of majors, highlight the characteristics of majors, and promote majors to actively build a quality culture of self-awareness, self-reflection, self-discipline, self-examination and self-correction; to strengthen the connotation and characteristic development of majors, and to closely connect with the future needs of economic development and industries; to stimulate the endogenous motivation of majors, and to improve the level of running the majors and quality of talent cultivation, the professional assessment is hereby conducted.

The purpose of this assessment is: firstly, to promote the rational positioning of majors, promote teaching reform, guide majors to run out of characteristics, and improve the quality of talent cultivation; secondly, to strengthen the professional self-assessment work, improve the self-quality assurance mechanism, and realize the regular monitoring of teaching quality; thirdly, to promote the professional structure adjustment and optimization of the university, and to better serve the local economic and social development. The assessment mainly evaluates the basic conditions of the major, including the major's cultivation objectives, cultivation requirements, main disciplines, core courses, practical teaching, teaching management and so on. The assessment focuses on the positioning of talent training objectives, establishment of quality standards and effectiveness of professional construction of the assessed majors, especially focusing on the indicators of faculty construction and teachers' commitment to teaching work.

According to the Indicator System for the New Round of Undergraduate Specialty Evaluation in Shanghai Universities, the expert group carefully reviewed the Self-evaluation Report, the Profile Sheet and related materials of the specialty, met with the teaching leaders of the school and the specialty, listened to and exchanged explanations on the operation of the specialty from the school and the college, interviewed undergraduates and teachers of the specialty courses, examined the specialty laboratories, examined the examination papers of the major courses, randomly checked the graduation design reports, and reviewed relevant teaching management documents and records at the school and college levels. The expert group also examined the graduation design reports, and reviewed the relevant teaching management documents and records at the university and college levels. On the basis of the opinions and suggestions of the experts, the expert group finally formed this Professional Evaluation Report.

II. Comprehensive professional evaluation

The industrial design program of School of Art and Design, University of Shanghai for Engineering and Technology, began to enroll four-year undergraduates with the qualification of conferring bachelor's degree in engineering in 2009, and is the first batch of cooperative education demonstration majors of the university, which is currently set up in three major directions: the

direction of carrier tool design, the direction of intelligent commercial kitchen system engineering, and the direction of intelligent home design. The size of full-time enrollment gradually grows from 144 students in 2019 to 253 students in 2022. The program received the undergraduate program standard assessment by Shanghai Education Evaluation Institute in 2016 and the audit assessment by the Ministry of Education in the same year, and the assessment results were both passed. In the last round of assessment, the expert group mainly focused on the following issues: professional establishment, construction of professional quality standards, the relationship between school sponsors and majors, and the support of scientific research and pedagogical research to teaching.

Rectification suggestions were made in the following aspects. In this assessment, by reading the three documents provided by the school, including the Self-evaluation Report, Brief Fact Sheet, and Supporting Materials of the program, the evaluator believes that the program has carried out active rectification and achieved certain results.

Although this specialty belongs to the School of Art and Design in establishment, it makes better use of the resources of the whole university, better cross-fertilizes the contents of related specialties such as mechanics, electronics and electrics, automobile engineering, materials, artificial intelligence, design, etc., and takes the cultivation of engineering and application talents with the characteristics of discipline cross-fertilizing and combination of industry and academia as the orientation of running the school; and forms characteristic professional cultivation characteristics in the ability to solve complex design application problems such as carrier tools, smart It is worthwhile to recognize the characteristics of professional training in terms of the ability to solve complex design and application problems such as transportation tools, smart kitchen systems and smart homes by using innovative means of design and new intelligent technologies. The management of the program is also able to implement measures in the areas of student study guidance, career planning, employment guidance and psychological counseling to ensure that students meet the established requirements upon graduation.

Compared with the new round of professional evaluation index system, the specialty can meet the corresponding requirements in all indicators. The comprehensive level of the professional teaching team is high, and the structure of the teaching staff is relatively reasonable; the professional leaders are very dedicated and committed, with high professional grasp and academic management ability. The school has established a long-term mechanism for building teacher ethics and an assessment system, which is well implemented by the professional teachers. Professional teachers are able to ensure the quality of teaching in accordance with the requirements of the main teaching process. Professional teachers and counselors provide students with hierarchical, multi-dimensional and serialized guidance with satisfactory results.

Classrooms, professional laboratories and internship bases, library materials and other aspects can meet the needs of professional construction and development. The university has teacher development projects to encourage teachers to actively visit schools at home and abroad, practice industry-academia-research, and pre-service training for young teachers, which can meet the development needs of teachers. The organization of faculties and departments is sound, the rules and regulations are perfect and the operation is effective.

III. Professional shortcomings and suggestions for improvement

1. Students

Major problems:

（1） In terms of the comprehensive quality training of students, it is necessary to strengthen the efforts and launch various forms of activities, especially the integration and intersection of

disciplines in the context of engineering, to strengthen the cultivation of the ideas of new engineering and new liberal arts; and to incorporate design thinking into the engineering-oriented courses to help students overcome the fear of difficulties.

（2）We will further improve the interaction between teaching and learning, and make the "first lesson of the school year" a good start from the time students enter the school, so as to establish the idea of "success"; we will strengthen the various forms of online and offline teaching and learning, so as to effectively avoid the potential impact of emergencies (such as epidemics); we will provide "zero" online courses in the past three years, which is a shortcoming that needs to be remedied urgently. The number of online courses offered in the past three years is "zero", which is a shortcoming that needs to be remedied urgently.

Recommendations for improvement:

During the assessment process, the expert group noted that the program and the teachers and students of the art product design program of the same college have a lot of joint cooperation projects, which can be summarized in the self-assessment report from the perspective of "professional integration and collaborative innovation", sharing resources and achievements, and jointly organizing teams to participate in high-level competitions to enhance the professional level and visibility; at the same time, attention should be paid to the differentiation and respective characteristics of the program to form its own characteristics. At the same time, they should pay attention to the differentiation of majors and their respective characteristics, so as to form their own characteristics.

2. Learning Objectives

Major problems:

(1) The relevance and logic of the self-assessment report's professional positioning, construction planning and training objectives need to be further strengthened, and the "planning" needs to clearly express the planning and development expectations and future vision in terms of hardware and software; it should also be quantifiable, evaluable and acceptable as far as possible.

(2) The cultivation objectives should increase the specific expression of the professional ability and the expression of the possibility of student employment, and the three special directions of transportation tools, intelligent commercial kitchen system and intelligent home may also be given certain expression, in addition, the possibility of other employment status and job expectations should also be expressed appropriately.

Suggestions for improvement:

It is necessary to further summarize the influence and supportive role of the overall advantages and resources of the school's disciplines of air, land and sea transportation engineering on the industrial design profession, make a systematic and comprehensive study of the professional positioning, construction planning and cultivation objectives, corroborate and support each other, and further sort out the three logically, and make a more reasonable, clearer and more concise expression.

3. Graduation requirements

Major problems:

（1） The knowledge and competencies required of graduates are clearly stated, but the management details of re-examination and implementation measures are not specific enough and need to be strengthened in terms of evaluability.

（2） The evaluation system for the fulfillment of graduation requirements needs to be further improved to make it more evaluable and comparable, so as to more effectively promote the

improvement of teaching quality.

Suggestions for improvement:

In addition to a clear and open statement of the graduation requirements in management, a clearer statement of the comprehensive human resources quality of the three-dimensional integration of knowledge, abilities and qualities that students should have and their related requirements; strengthen the regular inspection and evaluation of the achievement of graduation requirements at all stages and in all segments, make the corresponding documents, and improve the relevant documents of the quality of teaching and learning based on the results of the evaluations, and organize the supporting materials more adequately.

4. course system

Major problems:

（1） Practical teaching, especially the construction of experimental courses, needs to be further strengthened; in fact, through the field visit, the practical aspects of the program are very professional and high level, but it is not well reflected in the assessment data, mainly because a complete experimental course system has not yet been formed, and it is expected to be strengthened.

（2） The social development situation and new demands facing the program are changing rapidly, and it is recommended that, on the basis of the characteristics of the three professional directions, attention should be paid to the generalizability and expansion of professional competence in order to meet the possibility of wide-mouth employment.

Recommendations for improvement:

The program has formed a curriculum logic chain of "general education + disciplinary platform courses + professional foundation courses + professional courses (3 directions) + internship and practice courses + graduation design", which can better support the graduation requirements of the program and the supporting relationship is relatively clear; it is suggested that through this assessment, the relationship and links of the links should be further sorted out to achieve a dynamic balance among the elements, especially the standardization and effectiveness of the experimental links. It is recommended that through this assessment, the relationships and links of each link should be further sorted out to achieve a dynamic balance among the elements, especially the standardization and effectiveness of the experimental link.

5. Continual improvement

Major problems:

（1） The cultivation objectives and characteristics of the program are highly contemporary and cutting-edge, so there is a need to further strengthen the establishment of uninterrupted research activities on professional development, especially industry development trends related to the cultivation objectives, to keep pace with the times, and to maintain the dynamism and effectiveness of continuous improvement.

（2） We will further do a good job in tracking graduates, carry out targeted research on the degree of achievement of cultivation goals for the three characteristic directions, dynamically carry out continuous improvement of the specialty, and insist on releasing an annual report on the quality of undergraduate majors with evidence and analysis.

Suggestions for improvement:

Strengthen the research on curriculum system, course articulation and teaching materials and methodology, and make dynamic and timely continuous improvement according to the graduation requirements to reach the evaluation situation; strengthen the tracking and feedback mechanism as

well as various social evaluation mechanisms with the participation of all parties outside the higher education system, pay attention to the trends of domestic and international professional development, and pay close attention to the new changes in social needs.

6. Teachers

Major problems:

（1） Teaching and research work needs to be strengthened urgently, and the supporting materials show that the past three years, only three teachers of this specialty have published their research papers publicly.

Table 3 teaching research papers, no one won the national, municipal, school-level quality courses, key courses, bilingual courses, all-English course construction projects, at least 80% of the teachers in the past three years to participate in teaching research, half of the teachers formally published teaching and research papers" requirements have a certain distance, the fieldwork situation is better than the material, please with the Please coordinate with the Product Design Program.

（2） Since "transportation tools, intelligent commercial kitchen system, intelligent home" is taken as the cultivation characteristics, it is recommended to hire experts in these fields as part-time teachers to strengthen the effective cultivation of professional characteristics and timely understanding of social development, and to strengthen the positive role of scientific research to feed the teaching.

Recommendations for improvement:

Firstly, it is recommended to hire experienced experts in related industries as part-time teachers as soon as possible, and to go through the formalities and formulate work tasks and corresponding honorariums according to the relevant requirements, and to be included in the sequence of teaching staff; secondly, please further coordinate with the product design program to strengthen the teaching research and curriculum construction.

7. Support condition

Major problems:

（1）At present, the materials show that: the standard of daily teaching expenses per student, although basically meets the assessment requirements, of which 10,010 yuan in 2021, slightly lower than the standard; combined with the situation of the location of the school and the advantages of the specialization of the characteristics of the school, it is recommended to appropriately increase the cost of daily running expenses of teaching per student per year.

（2） In the past three the breakdown of special funds for professional construction is not yet available, and it is expected that it will be filled up in time; in fact, the experiments of the industrial design profession are more dependent on modern intelligent technology, and the investment in corresponding equipment and technology should be strengthened, and the construction of the three professional characteristic directions also urgently needs professional facilities as a guarantee, and it is suggested to increase the investment and further strengthen the cooperation between the industry, academia and research and the joint construction.

（3） Overall teaching resources are fair, but there are "zero" online courses, which needs to be improved.

Recommendations for improvement:

Firstly, from the self-assessment report, it shows that the situation of both the per capita daily teaching fund and the special fund for professional construction is not very satisfactory, but the site visit is better than what is listed in the materials, so please further sort out the way of statistics

and verify the funding situation with the competent authorities; secondly, further study the teaching materials and teaching methods, research effective improvement measures, strengthen the curriculum construction and teaching research, and utilize the stronger scientific research to feed back the teaching and enrich the form of lectures in order to cope with the Secondly, we will further study the teaching materials and methods, study effective improvement measures, strengthen curriculum construction and teaching research, and utilize our strong scientific research strength to feed teaching and enrich the forms of teaching in order to meet the requirements of social development.

IV. Conclusions of the assessment

The expert group discussed and unanimously agreed that the results of the evaluation of the undergraduate program of industrial design in Shanghai University of Engineering and Science.

Result: excellent.

Group of Experts：

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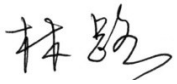
Lu Lin	Shanghai Normal University	Professor	
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